

CHAPTER 18 - ENVIRONMENTAL HEALTH

SUBCHAPTER 18A - SANITATION

SECTION .0100 – HANDLING, PACKING, AND SHIPPING OF CRUSTACEA MEAT

Rules .0101 - .0133 of Title 15A Subchapter 18A of the North Carolina Administrative Code (T15A.18A.0101 - .0133); has been transferred and recodified from Rules .0701 - .0733 Title 10 Subchapter 10B of the North Carolina Administrative Code (T10.10B .0701 - .0733), effective April 4, 1990.

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History Note: Authority G.S. 130A-230;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. September 1, 1991; September 1, 1990; December 1, 1987; July 1, 1985, 1980;
Repealed Eff. October 1, 1992.

15A NCAC 18A .0133 REFERENCE

History Note: Authority G.S. 130A-230;
Eff. February 1, 1976;
Amended Eff. July 1, 1977;

Readopted Eff. December 5, 1977;
Amended Eff. July 1, 1985;
Repealed Eff. September 1, 1990.

15A NCAC 18A .0134 DEFINITIONS

The following definitions shall apply to this Section; however, nothing in this Section shall be construed as expanding or restricting the definitions in G.S. 106-129 and G.S. 106-130:

- (1) "Adulterated" as defined in G.S. 106-129 shall include the following:
 - (a) any cooked crustacea or crustacea meat that does not comply with the rules in this Section;
 - (b) any cooked crustacea or crustacea meat that exceeds the bacteriological standards in Rule .0182 of this Section; or
 - (c) any cooked crustacea or crustacea meat that has been deemed to be an imminent hazard.
- (2) "Clean" means free from dirt, debris, dust, marks, stains, waste materials, litter, or foreign material.
- (3) "Code date" means the date legibly placed on the container to indicate the date that the product was packed.
- (4) "Cook" means to prepare or treat raw crustacea by heating.
- (5) "Critical control point" means a point, step, or procedure in a food process at which a control can be applied and a food safety hazard can, as a result, be prevented, eliminated, or reduced to acceptable levels.
- (6) "Critical limit" means the maximum or minimum value to which a biological, chemical, or physical parameter shall be controlled at a critical control point to prevent, eliminate, or reduce to an acceptable level the occurrence of the identified food safety hazard.
- (7) "Crustacea meat" means the meat of crabs, lobster, shrimp, or crayfish.
- (8) "Division" means the Division of Marine Fisheries.
- (9) "Easily cleanable" has the same meaning as defined in the 2017 U.S. Food Code. This definition is incorporated by reference not including subsequent amendments and editions. A copy of the reference material can be found at <https://www.fda.gov/food/fda-food-code/food-code-2017>, at no cost.
- (10) "Food-contact surface" means the parts of equipment, including auxiliary equipment, that may be in contact with the food being processed, or that may drain into the portion of equipment with which food is in contact.
- (11) "Food safety hazard" means any biological, chemical, or physical property that may cause a food to be unsafe for human consumption.
- (12) "Foreign" means any place or location outside the United States.
- (13) "Fresh crustacea" means a live, raw, or frozen raw crab, lobster, shrimp, or crayfish that shows no decomposition.
- (14) "Good repair" means maintained in order to function as designed and without defect.
- (15) "HACCP plan" means a written document that delineates the procedures a dealer follows to implement food safety controls.
- (16) "Hazard analysis critical control point (HACCP)" means a system of inspection, control, and monitoring measures initiated by a dealer to identify microbiological, chemical, or physical food safety hazards that are likely to occur in shellfish products produced by the dealer.
- (17) "Imminent hazard" has the same meaning as defined in G.S. 130A-2.
- (18) "Internal temperature" means the temperature of the product as opposed to the ambient temperature.
- (19) "Misbranded" as defined in G.S. 106-130 shall include any container of cooked crustacea or crustacea meat that is not labeled in compliance with the rules in this Section.
- (20) "Most probable number (MPN)" means a statistical estimate of the number of bacteria per unit volume and is determined from the number of positive results in a series of fermentation tubes.
- (21) "Operating season" means the season of the year during which a crustacea product is processed.
- (22) "Pasteurization" means the process of heating every particle of crustacea meat in a hermetically-sealed container to a temperature of at least 185° F (85° C) and holding it continuously at or above this temperature for at least one minute at the geometric center of a container in equipment being operated in compliance with the Process Validation Study Report. The term includes any other process that has been found equally effective by the Division.
- (23) "Pasteurization date" means a code legibly placed on the container to indicate the date that the product was pasteurized.

- (24) "Process Validation Study Report" means a report of tests that shows a piece of equipment can produce time-temperature results as required by the rules of this Section, and the procedures required to achieve such results.
- (25) "Processing" means any of the following operations when carried out in conjunction with the cooking of crustacea or crustacea meat: receiving, refrigerating, air-cooling, picking, packing, repacking, thermal processing, or pasteurizing.
- (26) "Repacker" means a facility that repacks cooked crustacea meat into other containers.
- (27) "Responsible individual" means the individual present in a cooked crustacea facility who is the apparent supervisor of the cooked crustacea facility at the time of the inspection. If no individual is the apparent supervisor, then any employee is the responsible individual.
- (28) "Retort" means a pressure vessel used to cook raw crustacea.
- (29) "Sanitize" has the same meaning as defined in 21 CFR 110.3, which is incorporated by reference including subsequent amendments and editions. A copy of the reference material can be found at <https://www.ecfr.gov/current/title-21/chapter-I/subchapter-B/part-110/subpart-A/section-110.3>, at no cost.
- (30) "Thermal processing" means the heating of previously cooked crustacea or crustacea meat to a desired temperature for a specified time at the geometric center of a container in equipment being operated in compliance with the Process Validation Study Report.

History Note: Authority G.S. 106-129; 106-130; 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. October 1, 1992;
Amended Eff. August 1, 2000; August 1, 1998; February 1, 1997;
Readopted Eff. April 1, 2022.

15A NCAC 18A .0135 PERMITS

- (a) It shall be unlawful to operate a processing facility without first obtaining a Crustacea Permit and Certificate of Compliance from the Division of Marine Fisheries.
- (b) Application for a permit shall be submitted in writing to the Division. Application forms may be obtained from the Division, P.O. Box 769, 3441 Arendell Street, Morehead City, NC 28557.
- (c) No permit shall be issued by the Division until an inspection by the Division shows that the facility and equipment comply with applicable rules of this Section. The owner or responsible person shall sign the completed inspection sheet to acknowledge receipt of the inspection sheet.
- (d) The permit shall be posted in a conspicuous place in the facility.
- (e) All permits shall expire on March 31 of each year and are non-transferrable.
- (f) Plans and specifications for proposed new construction, expansion of operations, or changes in operating processes shall be submitted to the Division for review and approval prior to beginning construction or making a change.
- (g) A permit may be revoked or suspended in accordance with 15A NCAC 03O .0504.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. October 1, 1992;
Readopted Eff. March 15, 2023.

15A NCAC 18A .0136 APPLICABILITY OF RULES

The rules in this Section shall apply to the operation of all facilities and persons permitted in Rule .0135 of this Section and all other businesses and persons that buy, sell, transport, or ship cooked crustacea or crustacea meat that has not been transformed into another product.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. October 1, 1992;
Amended Eff. April 1, 1997;
Readopted Eff. August 23, 2022.

15A NCAC 18A .0137 GENERAL REQUIREMENTS FOR OPERATION

- (a) During the operating season the processing portion of the facility shall be used for no purpose other than the processing of cooked crustacea or crustacea meat.
- (b) Retail sales of cooked crustacea or crustacea meat shall not be made from any processing portion of the facility.

(c) Accurate records of all purchases and sales of crustacea and crustacea meat shall be maintained for one year. The records shall be available for inspection by the Division of Marine Fisheries.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. October 1, 1992;
Amended Eff. April 1, 1997.
Readopted Eff. April 1, 2022.

15A NCAC 18A .0138 SUPERVISION

(a) The owner or responsible individual shall supervise the processing operation and be responsible for compliance with the rules of this Section, including compliance with personal hygiene requirements as set forth in Rule .0153 of this Section.

(b) No unauthorized individuals shall be allowed in the facility during the periods of operation. For the purpose of this Rule, "unauthorized individual" shall mean an individual that is not designated and trained by the owner or responsible individual to perform specific processing tasks in the facility.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. October 1, 1992.
Readopted Eff. April 1, 2022.

15A NCAC 18A .0139 FACILITY FLOODING

(a) If the facility floors are flooded, processing shall be discontinued until flood waters have receded and the facility and equipment are cleaned and sanitized.

(b) Any cooked crustacea or crustacea meat that may have been contaminated by flood waters shall be deemed adulterated and disposed of in accordance with G.S. 113-221.4 and Rule .0181 of this Section.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 113-221.4; 143B-289.52;
Eff. October 1, 1992;
Readopted Eff. April 1, 2022.

15A NCAC 18A .0140 FLOORS

Floors shall be of concrete or other impervious material, constructed so that they are easily cleanable and shall be sloped so that water drains.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. October 1, 1992;
Readopted Eff. May 1, 2021.

15A NCAC 18A .0141 WALLS AND CEILINGS

(a) Walls and ceilings shall be constructed of smooth, easily cleanable, non-corrosive, impervious material.

(b) Insulation on cooked crustacea cooler walls shall be covered to the ceiling with a smooth, easily cleanable, non-corrosive, impervious material.

(c) Doors and windows shall be tightly fitted and maintained in good repair so as to keep insects and weather out of the facility.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. October 1, 1992;
Readopted Eff. May 1, 2021.

15A NCAC 18A .0142 LIGHTING

(a) Natural or artificial lighting shall be provided in all parts of the facility. Minimum lighting intensities shall be as follows:

- (1) 50 foot-candles on working surfaces in the picking and packing rooms and areas.
- (2) 10 foot-candles measured at a height of 30 inches above the floor throughout the rest of the processing portion of the facility.

(b) Light bulbs within the processing portion of the facility shall be shatterproof or shielded to prevent product contamination in case of breakage.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. October 1, 1992;
Readopted Eff. May 1, 2021.

15A NCAC 18A .0143 VENTILATION

All rooms and areas shall be ventilated.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. October 1, 1992;
Readopted Eff. May 1, 2021.

15A NCAC 18A .0144 INSECT CONTROL

All outside openings shall be screened, provided with wind curtains, or be provided with other methods to eliminate the entrance of insects. All screens shall be kept in good repair. All outside doors shall open outward and shall be self-closing. The use and storage of pesticides shall comply with all applicable State and federal laws and rules.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. October 1, 1992.
Readopted Eff. April 1, 2022.

15A NCAC 18A .0145 RODENT AND ANIMAL CONTROL

Measures shall be taken by the owner or responsible individual to keep animals, fowl, rodents, and other vermin out of the facility. The storage and use of rodenticides shall comply with all applicable State and federal laws and rules.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. October 1, 1992;
Readopted Eff. April 1, 2022.

15A NCAC 18A .0146 PREMISES

- (a) Premises under the control of the owner shall be kept clean at all times. Waste materials, rubbish, other articles, or litter shall not be permitted to accumulate on the premises.
- (b) Measures shall be taken to prevent the harborage and breeding of insects, rodents, and other vermin on premises.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. October 1, 1992;
Readopted Eff. May 1, 2021.

15A NCAC 18A .0147 WATER SUPPLY

- (a) The water supply used shall be in accordance with 15A NCAC 18A .1720 through .1728.
- (b) Water samples for bacteriological analysis shall be collected at least annually by the Division of Marine Fisheries and submitted for analysis to the State Laboratory of Public Health or other laboratory that is certified in accordance with 10A NCAC 42C .0102, which is incorporated by reference including subsequent amendments.
- (c) Cross-connections with unapproved water supplies are prohibited. Hot and cold running water under pressure shall be provided to food preparation, utensils, and handwashing areas and any other areas in which water is required for cleaning. Running water under pressure shall be provided in sufficient quantity to carry out all food preparation, utensil washing, hand washing, cleaning, and other water-using operations.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. October 1, 1992;
Readopted Eff. April 1, 2022.

15A NCAC 18A .0148 ICE

- (a) Ice shall be obtained from a water supply approved by the Division of Marine Fisheries pursuant to Rule .0147 of this Section and shall be stored and handled in a manner to prevent contamination and keep the ice clean.

(b) All equipment used in the handling of ice shall be used for no other purpose and shall be cleaned and sanitized at least once each day the facility is in operation.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. October 1, 1992;
Readopted Eff. April 1, 2022.

15A NCAC 18A .0149 PLUMBING

- (a) Plumbing fixtures shall be located to facilitate the flow of processing activities and to prevent the splashing of water on food-contact surfaces or cooked crustacea and crustacea meat.
- (b) Fixtures, ducts, and pipes shall not be suspended over working areas.
- (c) Handwash lavatories shall be located so that the supervisor can observe that employees wash and sanitize their hands before beginning work and after each interruption.
- (d) Handwash lavatories shall be provided in the following locations:
 - (1) packing room or area;
 - (2) toilet or lounge area; and
 - (3) picking room.
- (e) At least one handwash lavatory shall be provided for every 20 employees among the first 100 employees and at least one handwash lavatory shall be provided for every 25 employees in excess of the first 100 employees.
- (f) Additional lavatories required by Paragraph (e) of this Rule shall be located in the picking room.
- (g) A container shall be located near each handwash lavatory in the picking room and packing room or area to sanitize hands in a solution containing at least 100 parts per million (ppm) of available chlorine or other equally effective bactericide. A testing method or equipment shall be available and used to test chemical sanitizers to ensure minimum prescribed strengths.
- (h) Soap and single service towels in protected dispensers shall be available near the handwash lavatories. Other hand drying devices that are found equally effective by the Division of Marine Fisheries may be used.
- (i) All pre-cool rooms, picking rooms, packing rooms or areas, and cooking areas shall be provided with hose bibs and wash down hoses. Storage racks shall be provided to keep the hoses elevated off the floor when not in use.
- (j) An automatically regulated hot-water system shall be provided to furnish a sufficient volume of hot water with a temperature of at least 130° F (54.5° C) to carry out all processing operations.
- (k) All handwash lavatories and sinks shall be equipped with mixing faucets.
- (l) A three-compartment sink with drainboards, large enough to wash the largest utensils used in the facility, shall be located in the picking room near the delivery shelf. One three-compartment sink, with drainboards, shall be provided for every 50 employees or fraction thereof.
- (m) The floor drains in coolers shall not be connected directly to a sewer in processing or repacking facilities constructed after October 1, 1992.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. October 1, 1992;
Readopted Eff. April 1, 2022.

15A NCAC 18A .0150 SEWAGE DISPOSAL

All sewage and other liquid wastes shall be disposed of in a public sewer system or in the absence of a public sewer system, by an on-site method approved by the Division of Marine Fisheries.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. October 1, 1992;
Readopted Eff. May 1, 2021.

15A NCAC 18A .0151 TOILETS

- (a) Toilets shall be provided by the owner or responsible person in the facility.
- (b) Toilet tissue shall be provided by the owner or responsible person in a holder.
- (c) Toilet room doors shall not open directly into processing areas of the facility and shall be self-closing.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. October 1, 1992;

Readopted Eff. April 1, 2022.

15A NCAC 18A .0152 SOLID WASTE

- (a) Cooked crustacea scrap and other putrescible wastes shall be removed from the premises at least daily. Other solid wastes shall be removed from the premises at least weekly.
- (b) Scrap containers shall be removed from the picking room immediately after filling and placed in storage areas approved by the Division of Marine Fisheries.
- (c) Scrap containers shall be non-corrosive and cleaned at least daily.
- (d) Scrap containers shall be cleaned in an area approved by the Division.

*History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. October 1, 1992;
Readopted Eff. April 1, 2022.*

15A NCAC 18A .0153 PERSONAL HYGIENE

- (a) All employees shall wash their hands with soap and running water before beginning work and again after each interruption. Signs to this effect shall be posted in visible places in the facility by the owner or responsible individual, such that the signs can be seen by employees.
- (b) All individuals handling cooked crustacea or crustacea meat shall sanitize their hands before beginning work and again after each interruption.
- (c) All individuals employed or engaged in the handling, picking, or packing of cooked crustacea or crustacea meat shall wear clean, washable outer clothing.
- (d) Employees shall not eat food, drink, or use tobacco in any form in the areas where cooked crustacea or crustacea meat are stored, processed, or handled.
- (e) Any individual known to be a carrier of any disease that can be transmitted through the handling of cooked crustacea or crustacea meat or who has an infected wound or open lesion on any exposed portion of the body shall be prohibited from handling cooked crustacea or crustacea meat.
- (f) Hair restraints shall be worn by all employees who handle cooked crustacea or crustacea meat.
- (g) The arms of employees who pick or pack cooked crustacea or crustacea meat shall be bare to the elbow or covered with an arm guard that is easily cleanable and capable of being sanitized.
- (h) Employees who pick and pack cooked crustacea or crustacea meat shall have clean fingernails free from nail polish and that are short enough to not extend past the fingertips. Employees shall not wear jewelry other than easily cleanable rings. The use of absorbent wraps or absorbent finger cots shall not be permitted.

*History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. October 1, 1992;
Readopted Eff. April 1, 2022.*

15A NCAC 18A .0154 EMPLOYEES' PERSONAL ARTICLES

Employees' street clothing, aprons, gloves, and personal articles shall not be stored in rooms or areas described in Rule .0159(b) of this Section.

*History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. October 1, 1992;
Readopted Eff. May 1, 2021.*

15A NCAC 18A .0155 SUPPLY STORAGE

Shipping containers, boxes, and other supplies shall be stored in a storage room or area. The storage room or area shall be kept clean.

*History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. October 1, 1992;
Readopted Eff. May 1, 2021.*

15A NCAC 18A .0156 EQUIPMENT AND UTENSIL CONSTRUCTION

All processing equipment and utensils shall be smooth, easily cleanable, durable, and kept in good repair. The food-contact surfaces of equipment, utensils, and processing machinery shall be accessible for cleaning, non-toxic, non-corrosive, non-absorbent, and free of open seams.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. October 1, 1992;
Readopted Eff. April 1, 2022.

15A NCAC 18A .0157 FACILITY AND EQUIPMENT SANITATION

(a) The walls and floors in the picking and packing areas shall be kept clean while operating and shall be sanitized at least daily and whenever there is evidence of contamination, such as splatter of crustacea meat or juices.

(b) All food-contact surfaces shall be washed, rinsed, and sanitized prior to starting operation each day and whenever there is evidence of contamination, such as splatter of crustacea meat or juices.

(c) Reusable picking containers and knives shall be washed, rinsed, and sanitized each time crustacea meat is delivered to the packing room.

(d) Sanitizing methods shall be as follows:

- (1) by steam in a steam chamber or box equipped with an indicating thermometer located in the coldest zone, with exposure to a temperature of 170° F (77° C) for at least 15 minutes or to a temperature of 200° F (93° C) for at least five minutes.
- (2) by immersion for at least one minute in the third compartment in clean hot water at a temperature of at least 170° F (77° C). A thermometer accurate to 3° F (1.5° C) shall be available to the compartment. Where hot water is used for bactericidal treatment, a booster heater that maintains a water temperature of at least 170° F (77° C) in the third compartment at all times when utensils are being washed shall be provided. The heating device may be integral with the immersion compartment.
- (3) by immersion for at least one minute in, or exposure for at least one minute to a constant flow of, a solution containing not less than 100 ppm chlorine residual. Utensils and equipment that have to be washed in place shall be washed, rinsed, and sanitized.
- (4) by other equivalent products and procedures approved in 21 CFR 178.1010 "Sanitizing solutions", which is hereby incorporated by reference including any subsequent amendments and editions. A copy of the reference material can be found at https://www.ecfr.gov/cgi-bin/retrieveECFR?gp=1&SID=17d119b223f9451322279713caa2e6ab&ty=HTML&h=L&mc=true&n=pt21.3.178&r=PART#se21.3.178_11010, at no cost. A testing method or equipment shall be available and used to test chemical sanitizers to ensure minimum prescribed strengths.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. October 1, 1992;
Readopted Eff. April 1, 2022.

15A NCAC 18A .0158 EQUIPMENT STORAGE

Equipment and utensils that have been cleaned and sanitized shall be stored in a manner to protect against contamination and keep the equipment and utensils clean.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. October 1, 1992;
Readopted Eff. April 1, 2022.

15A NCAC 18A .0159 SEPARATION OF OPERATIONS

(a) Facility design shall provide for continuous flow of raw materials and product to prevent contamination by exposure to areas involved in earlier processing steps, refuse, or other areas subject to contamination.

(b) The following processes shall be carried out in separate rooms or areas:

- (1) raw crustacea receiving or refrigeration;
- (2) crustacea cooking;
- (3) cooked crustacea air-cool;
- (4) cooked crustacea refrigeration;

- (5) picking;
- (6) packing;
- (7) picked crustacea meat refrigeration;
- (8) pasteurizing or thermal processing;
- (9) machine picking;
- (10) repacking; and
- (11) other processes when carried out in conjunction with the cooking of crustacea or crustacea meat.

*History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. October 1, 1992;
Amended Eff. April 1, 1997;
Readopted Eff. May 1, 2021.*

15A NCAC 18A .0160 RAW CRUSTACEA RECEIVING AND REFRIGERATION

- (a) Only fresh crustacea shall be accepted for processing.
- (b) Within two hours of receipt at the facility, crustacea shall be cooked or placed in a refrigerated area maintaining a temperature of 50° F (10° C) or below.

*History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. October 1, 1992;
Readopted Eff. May 1, 2021.*

15A NCAC 18A .0161 CRUSTACEA COOKING

- (a) The cooking area or room shall be under a roof located between the area for receiving raw crustacea and the air-cool room and shall be vented to assure the removal of steam.
- (b) Crustacea shall be cooked in accordance with the following:
 - (1) Crabs shall be cooked under steam pressure until the internal temperature of the center-most crab reaches 235° F (112.8° C). Temperature shall be measured with an accurate, indicating thermometer having a range of 170-270° F (77-132° C).
 - (2) Other crustacea shall be cooked until the internal temperature of the center-most crustacean reaches 180° F (83° C) and is held at this temperature for one minute. Temperature shall be measured with an accurate, indicating thermometer. Crayfish shall be culled and cleaned prior to cooking.
 - (3) Nothing in this Rule shall prohibit any other cooking process that has been found equally effective and approved by the Division of Marine Fisheries.
- (c) The retort shall be constructed to permit a working pressure of at least 20 pounds per square inch (psig). Steam inlet and venting shall provide a uniform and complete distribution of steam. Venting shall be sufficient to permit complete elimination of air from the retort. Drains and vents shall be located at least two feet above mean high tide.
- (d) The retorts shall be equipped with:
 - (1) an accurate, indicating thermometer with a range that will include 170-270° F (77-132° C) and located with the sensor extending into the heat chamber;
 - (2) an operating pressure indicator, at least three inches in diameter, with a 0-30 psig range and located adjacent to the indicating thermometer; and
 - (3) a safety valve operational at 18-30 psig, located in the upper portion of the retort, protected from tampering, and designed to prevent injury to the operator.
- (e) The boiler shall be of such capacity as to maintain 45 to 100 psig during cooking. The steam line from the boiler to the retort shall be at least one and one-fourth inch inside diameter.
- (f) Overhead hoists shall be equipped with chain bags or other means of preventing foreign material from falling onto the cooked product.
- (g) Retort cooking baskets shall be of stainless steel or equally impervious, non-corrosive material, and shall be designed to allow for equal steam disbursement, ease of handling, dumping, and cleaning.
- (h) All construction or replacement of retorts after October 1, 1992 shall be "flow-through" type and open directly into the air-cool room or a protected passageway into the air-cool room.
- (i) All construction of new or replacement retorts shall require a Process Validation Study Report approved by the Division prior to use based upon documentation of the ability to produce time-temperature results as required by the rules of this Section.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. October 1, 1992;
Readopted Eff. April 1, 2022.

15A NCAC 18A .0162 COOKED CRUSTACEA AIR-COOL

- (a) Cooked crustacea, after removal from the retort, shall be moved immediately to the cooked crustacea air-cool area to be air cooled to ambient temperature without being disturbed. Cooked crustacea shall be stored in the original cooking basket.
- (b) The construction and arrangement of the air-cool room shall be designed to provide protection from contamination of the cooked crustacea. The air-cool room shall open directly into the cooked crustacea cooler or other protected area.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. October 1, 1992;
Readopted Eff. April 1, 2022.

15A NCAC 18A .0163 COOKED CRUSTACEA REFRIGERATION

- (a) The cooked crustacea cooler shall be large enough to store all cooked crustacea and maintain a minimum temperature of 40° F (4.4° C). The cooler shall open directly into the picking room or into a clean, enclosed area leading into the picking room.
- (b) Cooked crustacea shall be stored at a temperature between 33° F (0.5° C) and 40° F (4.4° C) ambient air temperature if not immediately processed. The cooler shall be equipped with an accurate, operating thermometer.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. October 1, 1992;
Readopted Eff. May 1, 2021.

15A NCAC 18A .0164 COOKED CRUSTACEA PICKING

- (a) The picking operation shall be conducted in accordance with the rules of this Section such that crustacea meat does not become adulterated.
- (b) All cooked crustacea shall be picked before a new supply is delivered to the picking table.
- (c) Picked crustacea meat shall be delivered to the packing room at least every 90 minutes or upon the accumulation of five pounds per picker, whichever is sooner.
- (d) Paper towels used at the picking table shall be discarded after initial use.
- (e) If provided, bactericidal solutions at picking tables shall be maintained at 100 ppm chlorine solution or an equivalent bactericidal solution. A testing method or equipment shall be available and used to ensure minimum prescribed strengths of the chlorine solution or equivalent bactericidal solution.
- (f) Handles of picking knives shall not be covered with any material.
- (g) Crustacea shall be cooked and picked in the same permitted facility unless a written plan for interfacility shipment has been filed with the Division. The plan shall address and be approved based on the following:
 - (1) time-temperature requirements;
 - (2) shipping destination;
 - (3) handling;
 - (4) labeling;
 - (5) records;
 - (6) processing;
 - (7) sanitation; and
 - (8) HACCP plan.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. October 1, 1992;
Temporary Amendment Eff. July 1, 2000;
Temporary Rule Expired on March 12, 2001;
Amended Eff. August 1, 2002;
Readopted Eff. April 1, 2022.

15A NCAC 18A .0165 PACKING

- (a) Crustacea meat shall be packed in a container and iced and cooled to an internal temperature of 40° F (4.4° C) or below within two hours of receipt in the packing room.
- (b) The storage of ice in the packing room shall be in an easily cleanable, non-corrosive, non-toxic container.
- (c) Blending or combining of any of the following shall be prohibited:
 - (1) fresh crustacea meat;
 - (2) frozen crustacea meat;
 - (3) pasteurized crustacea meat; and
 - (4) crustacea meat packed in another facility.
- (d) Clean shipping containers shall be provided by the owner or responsible individual for storing and shipping of packed crustacea meat.
- (e) The return of overage of crustacea meat to a picker shall be prohibited.
- (f) Washing of picked crustacea meat shall be under running potable water. The crustacea meat shall be drained prior to packing.
- (g) Any substance added to cooked crustacea or crustacea meat shall be approved for use by the U.S. Food and Drug Administration and labeled according to federal and State rules and regulations.
- (h) Only those individuals responsible for packing the crustacea or crustacea meat shall be allowed in the packing room or area.

History Note: *Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;*
Eff. October 1, 1992;
Readopted Eff. April 1, 2022.

15A NCAC 18A .0166 PICKED CRUSTACEA MEAT REFRIGERATION

- (a) The refrigeration room or ice box shall be of sufficient size so that a full day's production, with ice, can be stored such that the crustacea meat does not become adulterated. The refrigeration room or ice box shall be equipped with an accurate, operating thermometer.
- (b) Ice boxes shall be easily cleanable, non-corrosive, and non-toxic with an impervious lining and a drain.
- (c) Picked crustacea meat shall be stored at 40° F (4.4° C) or below.

History Note: *Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;*
Eff. October 1, 1992;
Readopted Eff. April 1, 2022.

15A NCAC 18A .0167 DELIVERY WINDOW OR SHELF

A delivery window or a non-corrosive shelf shall be provided between the picking room and packing room or area. The delivery window shall be equipped with a shelf completely covered with smooth, non-corrosive metal or other material approved by the Division of Marine Fisheries and sloped to drain towards the picking room.

History Note: *Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;*
Eff. October 1, 1992;
Readopted Eff. May 1, 2021.

15A NCAC 18A .0168 SINGLE-SERVICE CONTAINERS

- (a) Single-service containers used for packing or repacking cooked crustacea and crustacea meat shall be made from food-safe materials approved by the United States Food and Drug Administration.
- (b) Containers shall not be reused for packing or repacking cooked crustacea and crustacea meat.
- (c) No person shall use containers bearing a permit number other than the number assigned to the facility.
- (d) Each container or lid shall be legibly impressed, embossed, or lithographed with the name and address of the original packer, repacker, or distributor. The original packer's or repacker's permit number preceded by the state abbreviation shall be legibly impressed, embossed, or lithographed on each container or lid.
- (e) Each container or lid shall be permanently and legibly identified with a code date.
- (f) All containers and lids shall be stored and handled in a manner to prevent contamination and keep them clean, sanitized by a procedure as stated in Rule .0157 of this Section, and drained prior to filling.

(g) All containers shall be sealed so that tampering can be detected. The words "Sealed For Your Protection" or equivalent shall be legibly displayed on the container or lid.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. October 1, 1992;
Amended Eff. August 1, 1998; February 1, 1997;
Readopted Eff. April 1, 2022.

15A NCAC 18A .0169 FREEZING

- (a) If crustacea or crustacea meat is to be frozen, the code date shall be followed by the letter "F."
- (b) Frozen crustacea or crustacea meat shall be stored at a temperature of 0° F (-18° C) or less.
- (c) The frozen storage rooms shall be equipped with an accurate, operating thermometer.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. October 1, 1992;
Amended Eff. August 1, 2002; April 1, 1997;
Readopted Eff. May 1, 2021.

15A NCAC 18A .0170 SHIPPING

Cooked crustacea and crustacea meat shall be shipped between 33° F (0.5° C) and 40° F (4.4° C). Frozen crustacea products shall be shipped at 0° F (-18° C) or below.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. October 1, 1992;
Readopted Eff. May 1, 2021.

15A NCAC 18A .0171 WHOLE CRUSTACEA OR CRUSTACEA PRODUCTS

Whole crustacea, claws, or any other crustacea products shall be prepared, packaged, and labeled in accordance with the rules of this Section.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. October 1, 1992;
Readopted Eff. May 1, 2021.

15A NCAC 18A .0172 COOKED CLAW SHIPPING CONDITIONS

- (a) Vehicles used to transport cooked claws shall be mechanically refrigerated, enclosed, tightly constructed, kept clean, and equipped with an operating thermometer.
- (b) Cooked crab claws shall be stored and transported between 33° F (0.5° C) and 40° F (4.4° C) ambient air temperature.
- (c) All vehicles shall be approved by the Division of Marine Fisheries prior to use.
- (d) Cooked claw shipping containers shall be marked for intended use, cleaned, and sanitized prior to use and shall meet the requirements in Rule .0156 of this Section.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. October 1, 1992;
Readopted Eff. May 1, 2021.

15A NCAC 18A .0173 REPACKING

- (a) Crustacea meat for repacking that is processed in North Carolina shall comply with Rules .0134 through .0187 of this Section. Crustacea meat for repacking that is processed outside of North Carolina shall comply with Rule .0182 of this Section.
- (b) Upon request of the Division of Marine Fisheries, the repacker shall provide the Division a current written list of all sources of crustacea meat used for repacking.
- (c) Repacking of crustacea meat:
 - (1) Crustacea meat shall not exceed 40° F (4.4° C) during the repacking process.

- (2) Repacking shall be conducted separately by time or space from the routine crustacea meat picking and packing process.
- (3) The food contact surfaces and utensils utilized in the repacking process shall be cleaned and sanitized prior to repacking and thereafter on 30-minute intervals during repacking.
- (4) Repacked crustacea meat shall be maintained at or below 40° F (4.4° C).
- (5) Blending or combining of any of the following shall be prohibited:
 - (A) fresh crustacea meat.
 - (B) frozen crustacea meat.
 - (C) pasteurized crustacea meat.
 - (D) crustacea meat packed in another facility.
- (6) Crustacea meat shall not be repacked more than one time.
- (7) All empty containers from which crustacea meat was removed and repacked shall be rendered unusable.
- (d) Labeling of repacked crustacea meat:
 - (1) Each container shall be legibly embossed, impressed, or lithographed with the repacker's or the distributor's name and address.
 - (2) Each container shall be legibly embossed, impressed, or lithographed with the repacker's certification number followed by the letters "RP."
 - (3) Each container shall be permanently and legibly identified with a code indicating the repack date.
 - (4) Each container shall be sealed so that tampering can be detected.
 - (5) Each container of foreign crustacea meat that has been repacked outside of North Carolina and shipped into North Carolina shall be labeled in accordance with federal labeling requirements.
- (e) Records shall be kept for all purchases of crustacea meat for repacking and sales of repacked meat for one year. The records shall be available for inspection by the Division.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. October 1, 1992;
Amended Eff. August 1, 2002; April 1, 1997;
Readopted Eff. August 23, 2022,

15A NCAC 18A .0174 PASTEURIZATION PROCESS CONTROLS - THERMOMETERS

- (a) All pasteurizing equipment shall have a time-temperature recording thermometer with a temperature controller (combined or separately) and an indicating thermometer. The thermometers shall be located to give a true representation of the operating temperature of the water bath. The recording thermometer chart shall be at least a 12-hour chart and at least 10 inches in diameter.
- (b) The recording thermometer shall be installed so that it will be protected from vibration and from striking by loading operations or facility traffic. The thermometer mechanism shall be protected from moisture under prevailing conditions. The thermometer case shall not be opened during the pasteurizing cycle, except for temperature check or for emergency or repair. A record shall be made when the thermometer case has been opened.
- (c) The recording thermometer shall have a range of at least 120-220° F (48.9-104.4° C). It shall be accurate within plus or minus 1° F between 160° F (71° C) and 200° F (93° C). The chart shall be scaled at a maximum of 2° F intervals in the range of 160° F (71° C) and 200° F (93° C).
- (d) The indicating thermometer shall be a thermometer with an accuracy and readability of plus or minus 1° F between 160° F (71° C) and 200° F (93° C). The thermometer shall be protected against damage.
- (e) The recording thermometer shall be equipped with a spring-operated or electrically operated clock. The recorded elapsed time as indicated by the chart rotation shall not exceed the true elapsed time as shown by an accurate watch. The rotating chart support shall be provided with pins upon which the chart shall be affixed by puncturing the chart.
- (f) The pasteurization unit shall not be operated without a recording thermometer chart in place, the pen in contact with the chart, and an inked record being made of the operating time-temperature cycle. Falsification of a thermometer chart by an individual with access to or that is an operator of a pasteurization unit shall constitute failure to comply with the requirements of this Paragraph. A permanent file of the used thermometer charts shall be maintained by the pasteurizer and kept available for inspection by the Division of Marine Fisheries for a period of one year. The following information shall be recorded within the confines of the pen markings after the pasteurization cycle has been completed:
 - (1) date of pasteurization;
 - (2) quantity of each batch pasteurized (pounds of crustacea meat or number and size of containers);

- (3) processor's code of each pack;
 - (4) if the pasteurizer processes crustacea meat for someone else, then the packer's name, address, and permit number shall be recorded. A copy of the recording chart shall be provided to the owner of the crustacea meat;
 - (5) notation of mechanical or power failure or opening of the recording thermometer case for adjustment or repair during the pasteurizing cycle;
 - (6) after the temperature in the water bath has been reached and during the holding time, as set forth in Rule .0176 of this Section, the reading of the indicating thermometer and the time of reading shall be recorded on the chart; and
 - (7) signature of the pasteurizer operator.
- (g) A constant flow steam control valve is required, if steam is used as a source of heat.
- (h) The water bath shall be provided with effective agitation to maintain a uniform temperature.
- (i) Other technologies shall be approved by the Division if they are shown to provide equivalent data, information, and records as required in this Rule.

*History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. October 1, 1992;
Amended Eff. April 1, 1997;
Readopted Eff. April 1, 2022.*

15A NCAC 18A .0175 PREPARATION OF CRUSTACEA MEAT FOR PASTEURIZATION

The preparation of crustacea meat for pasteurization shall be in compliance with the following:

- (1) crustacea meat shall be prepared in compliance with Rules .0134 through .0183 of this Section;
- (2) the containers of crustacea meat shall be sealed as quickly as possible after the crustacea meat is picked; and
- (3) the sealed containers of crustacea meat shall be placed in ice and refrigerated immediately after sealing until pasteurized.

*History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. October 1, 1992;
Amended Eff. April 1, 1997;
Readopted Eff. April 1, 2022.*

15A NCAC 18A .0176 PASTEURIZATION OF CRUSTACEA MEAT

(a) All pasteurization operations shall require a Process Validation Study Report approved by the Division of Marine Fisheries prior to operation based upon documentation of the ability to produce time-temperature results as required by the rules of this Section.

(b) The pasteurization of crustacea meat shall be conducted in compliance with the following procedures:

- (1) the minimum pasteurization specifications shall be heating every particle of crustacea meat in a hermetically-sealed container to a temperature of at least 185° F (85° C) and holding it continuously at or above this temperature for at least one minute at the geometric center of a container in equipment being operated in compliance with the Process Validation Study Report. A copy of the procedures for operating the pasteurizing equipment shall be posted adjacent to the pasteurization vat. The pasteurizer shall keep the report on file and shall provide the Division a copy of such report;
- (2) alteration of the equipment or loading of containers shall require a new Process Validation Study Report;
- (3) the containers of crustacea meat shall be cooled to 50° F (10° C) or below within three hours of the completion of pasteurization; and
- (4) refrigerated storage shall be provided for the cooled crustacea meat and shall maintain a storage temperature at or below 38° F (3.3° C).

*History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. October 1, 1992;
Amended Eff. August 1, 1998;
Readopted Eff. April 1, 2022.*

15A NCAC 18A .0177 LABELING OF PASTEURIZED CRUSTACEA MEAT

Labeling of pasteurized crustacea meat shall be in compliance with the following:

- (1) the label used shall legibly identify the contents of the container as pasteurized crustacea meat;
- (2) each container shall be permanently and legibly identified with a code indicating the batch and day of processing;
- (3) the words "Perishable-Keep Under Refrigeration" or equivalent shall be legibly displayed on the container; and
- (4) the original packer's or repacker's permit number preceded by the state abbreviation shall be legibly impressed, embossed, or lithographed on each container. Each container shall be legibly impressed, embossed, or lithographed with the name and address of the original packer, repacker, or distributor.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. October 1, 1992;
Readopted Eff. April 1, 2022.

15A NCAC 18A .0178 INTERFACILITY PASTEURIZATION PROCEDURES

No person shall initiate interfacility pasteurization of crustacea meat without prior written approval by the Division of Marine Fisheries. Interfacility pasteurization of crustacea meat shall be in compliance with the following:

- (1) crustacea meat shall be packed, labeled, and refrigerated in compliance with Rules .0134 and .0136 through .0182 of this Section and shall originate only from a facility permitted in accordance with Rule .0135 of this Section. Records shall be maintained to identify each batch of crustacea meat pasteurized;
- (2) crustacea meat shall be shipped in an enclosed, easily cleanable vehicle at a temperature of 40° F (4.4° C) or below; and
- (3) crustacea meat shall be pasteurized in compliance with Rules .0175 through .0177 of this Section. The pasteurizer shall provide a copy of each pasteurization chart to the original packer.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. October 1, 1992;
Readopted Eff. April 1, 2022.

15A NCAC 18A .0179 RECALL PROCEDURE

Each owner of a cooked crustacea or crustacea meat facility or repacker facility shall keep on file a written product recall procedure. A copy of this recall procedure shall be provided to the Division of Marine Fisheries.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. October 1, 1992;
Readopted Eff. May 1, 2021.

15A NCAC 18A .0180 SAMPLING AND TESTING

Samples of cooked crustacea or crustacea meat may be taken and examined by the Division of Marine Fisheries at any time or place. Samples of cooked crustacea or crustacea meat shall be furnished by the owner or operator of facilities, trucks, carriers, stores, restaurants, and other places where cooked crustacea or crustacea meat are sold.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. October 1, 1992;
Readopted Eff. May 1, 2021.

15A NCAC 18A .0181 EMBARGO OR DISPOSAL OF COOKED CRUSTACEA OR CRUSTACEA MEAT

(a) When it has been determined by the Division of Marine Fisheries that cooked crustacea or crustacea meat have not been stored, transported, handled, cooked, picked, packed, or offered for sale in compliance with this Section, the cooked crustacea or crustacea meat shall be deemed adulterated.

(b) Cooked crustacea or crustacea meat determined to be adulterated or misbranded shall be subject to embargo or disposal by the Division in accordance with G.S. 113-221.4.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 113-221.4, 143B-289.52;
Eff. October 1, 1992;
Readopted Eff. April 1, 2022.

15A NCAC 18A .0182 BACTERIOLOGICAL AND CONTAMINATION STANDARDS

- (a) Cooked crustacea or crustacea meat shall not exceed *Escherichia coli* Most Probable Number (MPN) of 36 per 100 grams of sample or exceed a standard plate count of 100,000 per gram.
- (b) Pasteurized crustacea meat shall contain no *Escherichia coli* or fecal coliform. Samples of pasteurized crustacea meat, taken within 24 hours of pasteurizing, shall not have a standard plate count of more than 3,000 per gram.
- (c) Thermally processed crustacea or crustacea meat shall not exceed *Escherichia coli* MPN of 36 per 100 grams of sample or exceed a standard plate count of 100,000 per gram.
- (d) Cooked crustacea or crustacea meat shall be handled in accordance with the rules of this Section.
- (e) Cooked crustacea or crustacea meat not complying with the standards set forth in this Rule may be deemed adulterated by the Division of Marine Fisheries according to the severity of exceedance and the expected threat to public health.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. October 1, 1992;
Amended Eff. August 1, 1998; February 1, 1997;
Readopted Eff. April 1, 2022.

15A NCAC 18A .0183 ALTERNATIVE LABELING

A durable label, such that it will not fade or deteriorate, that is permanently affixed to the container may be used to meet any labeling requirement in this Section.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. August 1, 1998;
Readopted Eff. April 1, 2022.

15A NCAC 18A .0184 THERMAL PROCESSING CONTROLS - THERMOMETERS

- (a) All thermal processing equipment shall have a time-temperature recording thermometer with a temperature controller (combined or separately) and an indicating thermometer. The thermometers shall be located to give a true representation of the operating temperature of the process. The recording thermometer chart shall be at least a 12-hour chart and at least 10 inches in diameter.
- (b) The recording thermometer shall be installed so that it will be protected from vibration and from striking by loading operations or facility traffic. The thermometer mechanism shall be protected from moisture under prevailing conditions. The thermometer case shall not be opened during the thermal processing cycle, except for temperature check or for emergency or repair. A record shall be made when the thermometer case has been opened.
- (c) The recording thermometer shall have a range of at least 120-220° F (48.9-104.4° C). It shall be accurate within plus or minus 1° F between 160° F (71° C) and 200° F (93° C). The chart shall be scaled at a maximum of 2° F intervals in the range of 160° F (71° C) and 200° F (93° C).
- (d) The indicating thermometer shall be a thermometer with an accuracy and readability of plus or minus 1° F between 160° F (71° C) and 200° F (93° C). The thermometer shall be protected against damage.
- (e) The recording thermometer shall be equipped with a spring-operated or electrically operated clock. The recorded elapsed time as indicated by the chart rotation shall not exceed the true elapsed time as shown by an accurate watch. The rotating chart support shall be provided with pins upon which the chart shall be affixed by puncturing the chart.
- (f) The thermal processing unit shall not be operated without a recording thermometer chart in place, the pen in contact with the chart, and an inked record being made of the operating time-temperature cycle. Falsification of a thermometer chart by an individual with access to or that is an operator of a thermal processing unit shall constitute failure to comply with the requirements of this Paragraph. A permanent file of the used thermometer charts shall be maintained by the thermal processor and kept available for inspection by the Division of Marine Fisheries for a period of one year. The following information shall be recorded within the confines of the pen markings after the thermal processing cycle has been completed:
 - (1) date of thermal processing;
 - (2) quantity of each batch thermally processed (pounds of crustacea meat or number and size of containers);
 - (3) thermal processor's code of each pack;

- (4) if the thermal processor processes crustacea meat for someone else, then the packer's name, address, and permit number shall be recorded. A copy of the recording chart shall be provided to the owner of the crustacea meat;
 - (5) notation of mechanical or power failure or opening of the recording thermometer case for adjustment or repair during the thermal processing cycle;
 - (6) after the temperature in the thermal process has been reached and during the holding time, as set forth in Rule .0185 of this Section, the reading of the indicating thermometer and the time of reading shall be recorded on the chart; and
 - (7) signature of the thermal process operator.
- (g) A constant flow steam control valve is required, if steam is used as a source of heat.
- (h) The thermal processing unit shall be provided with effective and uniform temperature.
- (i) Other technologies shall be approved by the Division if they are shown to provide equivalent data, information, and records as required in this Rule.

*History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. April 1, 1997;
Readopted Eff. April 1, 2022.*

15A NCAC 18A .0185 THERMAL PROCESSING OF CRUSTACEA AND CRUSTACEA MEAT

- (a) All thermal processing operations shall require a Process Validation Study Report approved by the Division of Marine Fisheries prior to operation based upon documentation of the ability to produce time-temperature results as required by the rules of this Section.
- (b) The thermal processing of crustacea or crustacea meat shall be conducted in compliance with the following procedures:
- (1) the minimum thermal processing specifications shall be the heating of previously cooked crustacea or crustacea meat to a desired temperature for a specified time at the geometric center of a container in equipment being operated in compliance with the Process Validation Study Report. A copy of the procedures for operating the thermal processing equipment shall be posted adjacent to the thermal processing unit. The thermal processor shall keep the report on file and shall provide the Division a copy of such report;
 - (2) alteration of the equipment or loading of containers shall require a new Process Validation Study Report;
 - (3) the containers of crustacea or crustacea meat shall be cooled to 50° F (10° C) or below within three hours of the completion of the thermal process; and
 - (4) refrigerated storage shall be provided for the cooled crustacea or crustacea meat and shall maintain a storage temperature at or below 36° F (2.2° C).

*History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. August 1, 1998;
Readopted Eff. April 1, 2022.*

15A NCAC 18A .0186 LABELING OF THERMALLY PROCESSED CRUSTACEA OR CRUSTACEA MEAT

Labeling of thermally processed crustacea or crustacea meat shall be in compliance with the following:

- (1) the label used shall legibly identify the contents of the container as thermally processed crustacea or crustacea meat;
- (2) each container shall be permanently and legibly identified with a code indicating the batch and day of processing;
- (3) the words "Perishable-Keep Under Refrigeration" or equivalent shall be legibly displayed on the container; and
- (4) the original packer's or repacker's permit number preceded by the state abbreviation shall be legibly impressed, embossed, or lithographed on each container. Each container shall be legibly impressed, embossed, or lithographed with the name and address of the original packer, repacker, or distributor.

*History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. April 1, 1997;
Readopted Eff. April 1, 2022.*

15A NCAC 18A .0187 INTERFACILITY THERMAL PROCESSING PROCEDURES

Interfacility thermal processing of crustacea or crustacea meat shall be in compliance with the following:

- (1) crustacea or crustacea meat shall be packed, labeled, and refrigerated in compliance with Rules .0134 through .0187 of this Section. Records shall be maintained to identify each batch of crustacea or crustacea meat thermally processed;
- (2) crustacea or crustacea meat shall be shipped in an enclosed, easily cleanable vehicle at a temperature of 40° F (4.4° C) or below; and
- (3) crustacea or crustacea meat shall be thermally processed in compliance with Rules .0184 through .0187 of this Section. The thermal processor shall provide a copy of each thermal processing chart to the original packer.

History Note: *Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;*
Eff. August 1, 1998;
Readopted Eff. April 1, 2022.

15A NCAC 18A .0188 HAZARD ANALYSIS

Each dealer shall conduct a hazard analysis to determine the food safety hazards that are reasonably likely to occur for each kind of crustacea or crustacea meat product processed by that dealer and to identify the preventative measures that the dealer can apply to control those hazards.

History Note: *Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;*
Eff. August 1, 2000;
Readopted Eff. May 1, 2021.

15A NCAC 18A .0189 HACCP PLAN

Each dealer shall have and implement a written HACCP plan. The owner or authorized designee shall sign the plan when implemented and after any modification. The plan shall be reviewed at least annually and updated if necessary. The plan shall, at a minimum:

- (1) list the food safety hazards that are reasonably likely to occur;
- (2) list the critical control points for each of the food safety hazards;
- (3) list the critical limits that must be met for each of the critical control points;
- (4) list the procedures, and frequency thereof, that will be used to monitor each of the critical control points to ensure compliance with the critical limits;
- (5) list any corrective action plans to be followed in response to deviations from critical limits at critical control points;
- (6) provide a record keeping system that documents critical control point monitoring; and
- (7) list the verification procedures, and frequency thereof, that the dealer will use.

History Note: *Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;*
Eff. August 1, 2000;
Readopted Eff. May 1, 2021.

15A NCAC 18A .0190 SANITATION MONITORING REQUIREMENTS

Each dealer shall monitor, at a minimum, the following sanitation items:

- (1) safety of water;
- (2) condition and cleanliness of food contact surfaces;
- (3) prevention of cross contamination;
- (4) maintenance of hand washing, hand sanitizing, and toilet facilities;
- (5) protection of crustacea or crustacea meat, crustacea or crustacea meat packaging materials, and food contact surfaces from adulteration;
- (6) proper labeling, storage, and use of toxic compounds;
- (7) control of employees with adverse health conditions; and
- (8) exclusion of pests from the facility.

History Note: *Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;*

Eff. August 1, 2000;
Readopted Eff. May 1, 2021.

15A NCAC 18A .0191 MONITORING RECORDS

Monitoring records of critical control points and the eight key sanitation items shall be recorded, as specified in the HACCP Plan, and signed and dated when recorded. The eight key sanitation items are set forth in 21 CFR 123.11 "Sanitation Control Procedures", which is incorporated by reference including any subsequent amendments and editions. A copy of the reference material can be found at <https://www.ecfr.gov/current/title-21/chapter-I/subchapter-B/part-123/subpart-A/section-123.11>, at no cost. The records shall be reviewed by the owner or designee within one week of recording.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. August 1, 2000;
Readopted Eff. April 1, 2022.

SECTION .0200 - SANITATION OF SCALLOPS

Rules .0201 - .0204 of Title 15A Subchapter 18A of the North Carolina Administrative Code (T15A.18A .0201 - .0204); has been transferred and recodified from Rules .0501 - .0504 of Title 10 Subchapter 10B of the North Carolina Administrative Code (T10.10B .0501 - .0504); Rules .0205 - .0231 of Title 15A Subchapter 18A of the North Carolina Administrative Code (T15A.18A .0205 - .0233); has been transferred and recodified from Rules .0601 - .0627 of Title 10 Subchapter 10B of the North Carolina Administrative Code (T10.10B .0601 - .0627; effective April 4, 1990.

15A NCAC 18A .0201	DEFINITIONS
15A NCAC 18A .0202	ADULTERATED OR MISBRANDED SCALLOPS
15A NCAC 18A .0203	GROWING AND GATHERING: SCALLOPS SHUCKED AT SEA
15A NCAC 18A .0204	SEVERABILITY
15A NCAC 18A .0205	INSPECTION AND APPROVAL
15A NCAC 18A .0206	PERMITS
15A NCAC 18A .0207	APPLICATION
15A NCAC 18A .0208	REVOCATIONS
15A NCAC 18A .0209	SEPARATION OF OPERATIONS
15A NCAC 18A .0210	LIGHTING AND VENTILATION
15A NCAC 18A .0211	FLOORS
15A NCAC 18A .0212	WALLS AND CEILINGS
15A NCAC 18A .0213	INSECT AND RODENT CONTROL
15A NCAC 18A .0214	SHUCKING BENCHES
15A NCAC 18A .0215	REFRIGERATION
15A NCAC 18A .0216	TOILET FACILITIES
15A NCAC 18A .0217	WATER SUPPLY
15A NCAC 18A .0218	HAND WASHING FACILITIES
15A NCAC 18A .0219	WASHING AND SANITIZING FACILITIES
15A NCAC 18A .0220	CONSTRUCTION OF EQUIPMENT
15A NCAC 18A .0221	PERSONAL HEALTH
15A NCAC 18A .0222	PERSONAL HYGIENE
15A NCAC 18A .0223	WASHING OF SCALLOPS
15A NCAC 18A .0224	CONTAINERS
15A NCAC 18A .0225	PACKING
15A NCAC 18A .0226	CLEANSING OF EQUIPMENT
15A NCAC 18A .0227	INTERIOR OF PLANTS
15A NCAC 18A .0228	WASTE DISPOSAL
15A NCAC 18A .0229	REPACKING
15A NCAC 18A .0230	APPEALS PROCEDURE

History Note: Authority G.S. 130A-230;
Eff. February 1, 1976;

Readopted Eff. December 5, 1977;
Amended Eff. September 1, 1990; December 1, 1987; July 1, 1985; June 30, 1980;
Repealed Eff. January 4, 1994.

15A NCAC 18A .0231 REFERENCE RULES

History Note: Authority G.S. 130A-230;
Eff. February 1, 1976;
Amended Eff. July 1, 1977;
Readopted Eff. December 5, 1977;
Amended Eff. July 1, 1985;
Repealed Eff. September 1, 1990.

SECTION .0300 – SANITATION OF SHELLFISH - GENERAL

15A NCAC 18A .0301 DEFINITIONS

The following definitions shall apply throughout Sections .0300 through .0800 of this Subchapter:

- (1) "Adulterated" means:
 - (a) any shellfish that have been harvested from polluted areas as defined in 15A NCAC 03I .0101;
 - (b) any shellfish that have been shucked, packed, or otherwise processed in a plant that has not been permitted by the Division of Marine Fisheries in accordance with these Rules or by another state shellfish control "authority" as defined in the National Shellfish Sanitation Program (NSSP) Guide for the Control of Molluscan Shellfish, Section I: Purposes and Definitions. This definition is incorporated by reference, including subsequent amendments and editions. A copy of the reference material can be found at <https://www.fda.gov/food/federalstate-food-programs/national-shellfish-sanitation-program-nssp>, at no cost;
 - (c) any shellfish that may have been contaminated by flood waters in accordance with Rule .0405 of this Subchapter;
 - (d) any shellfish that exceed the standards in Rule .0430 of this Subchapter; and
 - (e) any shellfish that have been deemed to be an imminent hazard.
- (2) "Certification number" means the unique identification number assigned by the state shellfish control agency to each certified shellfish dealer for each location. It consists of a one-to-five-digit number preceded by the two-letter state abbreviation and followed by the two-letter abbreviation designating the type of operation certified.
- (3) "Clean" means free from dirt, debris, dust, marks, stains, waste materials, litter, or foreign material.
- (4) "Critical control point" means a point, step, or procedure in a food process at which control can be applied, and a food safety hazard can as a result be prevented, eliminated, or reduced to acceptable levels.
- (5) "Critical limit" means the maximum or minimum value to which a physical, biological, or chemical parameter must be controlled at a critical control point to prevent, eliminate, or reduce to an acceptable level the occurrence of the identified food safety hazard.
- (6) "Depurate" or "depuration" means the process of reducing the pathogenic organisms that may be present in shellstock by using a controlled aquatic environment as the treatment process.
- (7) "Depuration facility" means any establishment or place where the depuration of shellfish occurs by a shellfish dealer.
- (8) "Division" means the Division of Marine Fisheries.
- (9) "Easily cleanable" has the same meaning as defined in the 2017 U.S. Food Code. This definition is incorporated by reference, not including subsequent amendments and editions. A copy of the reference material can be found at <https://www.fda.gov/food/fda-food-code/food-code-2017>, at no cost.
- (10) "Food contact surface" means the parts of equipment, including auxiliary equipment, that may be in contact with the food being processed, or that may drain into the portion of equipment with which food is in contact.
- (11) "Food safety hazard" means any biological, chemical, or physical property that may cause a food to be unsafe for human consumption.
- (12) "Good repair" means maintained to function as designed and without defect.

- (13) "HACCP plan" means a written document that delineates the procedures a shellfish dealer follows to implement food safety controls.
- (14) "Hazard analysis critical control point (HACCP)" means a system of inspection, control, and monitoring measures initiated by a shellfish dealer to identify microbiological, chemical, or physical food safety hazards that are likely to occur in shellfish products produced by the dealer.
- (15) "Heat shock process" means the practice of heating shellstock to facilitate removal of the shellfish meat from the shell.
- (16) "Imminent hazard" has the same meaning as defined in G.S. 130A-2.
- (17) "In-shell product" means non-living, processed shellfish with one or both shells present.
- (18) "Misbranded" as defined in G.S. 106-30 shall include any shellfish that are not labeled in compliance with these Rules.
- (19) "National Shellfish Sanitation Program (NSSP)" means the federal/state cooperative program recognized by the U.S. Food and Drug Administration (FDA) and the Interstate Shellfish Sanitation Conference (ISSC) for the sanitary control of shellfish produced and sold for human consumption.
- (20) "Pests" means animals or insects, including dogs, cats, birds, rodents, flies, and larvae.
- (21) "Plant" means the establishment or place where shellfish processing occurs by shellfish dealers.
- (22) "Processing" or "processed" means any activity associated with the handling, shucking, freezing, packing, labeling, or storing of shellfish in preparation for distribution. This includes the activities of a shellstock shipper, shucker-packer, repacker, reshipper, or depuration processor.
- (23) "Recall procedure" means the detailed procedure the shellfish dealer will use to retrieve product from the market when it is determined that the product is adulterated or misbranded.
- (24) "Repacking plant" means the establishment or place where a shellfish dealer, other than the original shucker-packer, repacks shucked shellfish into other containers.
- (25) "Reshipper" means a person that purchases shellfish from a shellfish dealer and sells the product without repacking or relabeling to another shellfish dealer, wholesaler, or retailer.
- (26) "Responsible individual" means the individual present at a shellfish dealer that is the supervisor or the supervisor's designee at the time of the inspection.
- (27) "Sanitize" has the same meaning as defined in 21 CFR 110.3, which is incorporated by reference including subsequent amendments and editions. A copy of the reference material can be found at <https://www.ecfr.gov/current/title-21/chapter-I/subchapter-B/part-110/subpart-A/section-110.3>, at no cost.
- (28) "SELL BY date" means a date placed on a container or tag by which a consumer is informed of the latest date the product will remain suitable for sale.
- (29) "Shellfish" means oysters, mussels, scallops, and all varieties of clams, whether shucked or in the shell, fresh, frozen, whole, or in part. The requirements of Sections .0300 through .0800 of this Subchapter shall not apply to scallops if the final product is the shucked adductor muscle only.
- (30) "Shellfish dealer" means a plant to which a Shellfish Dealer Permit and Certificate of Compliance is issued by the Division for the activities of shellstock shipping, shucking or packing, repacking, reshipping, or depuration.
- (31) "Shellstock" means any live molluscan shellfish that remain in their shells.
- (32) "Shellstock conveyance" means all trucks, vessels, trailers, or other conveyances used to transport shellstock.
- (33) "Shellstock plant" means any establishment or place where shellstock are washed, packed, or otherwise prepared for sale by a shellfish dealer.
- (34) "Shucking and packing plant" means any establishment or place where shellfish are shucked and packed for sale by a shellfish dealer.
- (35) "Use" means employ, set, operate, or permit to be operated or employed.
- (36) "Wet storage" means the storage by a shellfish dealer of shellstock from a growing area in the open status and classified as "approved" or "conditionally approved" as defined in Rule .0901 of this Subchapter, in containers or floats in natural bodies of water, or in tanks containing natural or synthetic sea water at any permitted land-based activity or facility.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. February 1, 1987;
Amended Eff. August 1, 2000; August 1, 1998; February 1, 1997; January 4, 1994; September 1, 1990;
December 1, 1987;

Readopted Eff. April 1, 2024.

15A NCAC 18A .0302 PERMITS

(a) It shall be unlawful to operate any of the following facilities without first obtaining a Shellfish Dealer Permit and Certificate of Compliance from the Division of Marine Fisheries:

- (1) depuration facilities;
- (2) repacking plants;
- (3) shellstock plants; and
- (4) shucking and packing plants.

(b) It shall be unlawful to operate as a shellfish dealer without first obtaining a Shellfish Dealer Permit and Certificate of Compliance from the Division.

(c) It shall be unlawful to operate as a reshipper without first obtaining a Shellfish Dealer Permit and Certificate of Compliance from the Division if shellfish are purchased and shipped out of state.

(d) Approval for wet storage of shellstock shall be granted only to persons permitted pursuant to this Rule.

(e) Application for a permit shall be submitted in writing to the Division. Application forms may be obtained from the Division, P.O. Box 769, 3441 Arendell Street, Morehead City, NC 28557. The application shall include the following information:

- (1) permittee's full name;
- (2) permittee's date of birth;
- (3) facility or business name;
- (4) physical address of facility;
- (5) permittee's mailing address;
- (6) season of facility operation;
- (7) permittee's signature; and
- (8) date permittee signed the form.

(f) No permit shall be issued by the Division until an inspection by the Division shows that the facility and equipment comply with all applicable Rules in Sections .0300 through .0800 of this Subchapter. The owner or responsible individual shall sign the completed inspection sheet to acknowledge receipt of the inspection sheet.

(g) All permits shall be posted in a conspicuous place in the facility.

(h) All permits shall expire on April 30 of each year and are non-transferrable.

(i) Plans and specifications for proposed new construction, expansion of operations, or changes in operating processes shall be submitted to the Division for review and approval prior to beginning construction or making a change.

(j) A permit may be revoked or suspended in accordance with 15A NCAC 03O .0504.

*History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. February 1, 1987;
Amended Eff. April 1, 1997;
Readopted Eff. March 15, 2023;
Amended Eff. March 24, 2025.*

15A NCAC 18A .0303 RELAYING PERMITS

*History Note: Authority G.S. 130A-230;
Eff. February 1, 1987;
Amended Eff. September 1, 1990;
Repealed Eff. March 15, 2023.*

15A NCAC 18A .0304 DEPURATION HARVESTING PERMITS

*History Note: Authority G.S. 130A-230;
Eff. February 1, 1987;
Amended Eff. September 1, 1990;
Repealed Eff. June 1, 2022.*

15A NCAC 18A .0305 APPEALS PROCEDURE

History Note: Authority G.S. 130A-230;
Eff. February 1, 1987;
Amended Eff. September 1, 1990;
Repealed Eff. April 1, 2024.

SECTION .0400 – SANITATION OF SHELLFISH - GENERAL OPERATION STANDARDS

Rules .0401 - .0431 of Title 15A Subchapter 18A of the North Carolina Administrative Code (T15A.18A .0401 - .0431); has been transferred and recodified from Rules .0901 - .0931 of Title 10 Subchapter 10B of the North Carolina Administrative Code (T10.10B .0901 - .0931), effective April 4, 1990.

15A NCAC 18A .0401 APPLICABILITY OF RULES

The rules in this Section shall apply to the operation of all facilities and persons permitted in Rule .0302 of this Subchapter, including shellfish dealers, shellstock plants, reshippers, shucking and packing plants, repacking plants, depuration facilities, permittees with facilities approved for wet storage, and all other businesses and persons that buy, sell, transport, or ship shellfish. These Rules shall not apply to individuals possessing shellfish for personal use.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. February 1, 1987;
Amended Eff. April 1, 1997; December 1, 1987;
Readopted Eff. April 1, 2024.

15A NCAC 18A .0402 GENERAL REQUIREMENTS FOR OPERATION

- (a) Shellfish dealers shall provide mechanical refrigeration that is capable of maintaining an ambient temperature of 45°F or less and be sized to handle one day's production. The mechanical refrigeration shall include an automatic temperature regulating control and be equipped with an accurate, operating thermometer in the refrigerated storage area. If the sole means of refrigeration is a portable unit, that unit shall be capable of operating utilizing alternating current electrical power that will allow the unit to be plugged into a power supply during transport and at the certified facility.
- (b) Food contact surfaces shall be easily cleanable, corrosion-resistant, constructed of non-toxic and food-grade materials, and shall be kept in good repair. Shellfish dealers shall only use food contact surface equipment that conforms to standards found in the guidance document within the National Shellfish Sanitation Program (NSSP) Guide for the Control of Molluscan Shellfish, Section II: Model Ordinance titled "Shellfish Industry Equipment Construction Guide", which is incorporated by reference, including subsequent amendments and editions. A copy of the reference material can be found at <https://www.fda.gov/food/federalstate-food-programs/national-shellfish-sanitation-program-nssp> at no cost.
- (c) Food contact surfaces of equipment, utensils, and containers shall be cleaned at the end of each day or operation and shall be sanitized prior to the start-up of each day's activities. Food contact surfaces shall also be cleaned and sanitized following any interruption during which the surfaces have become contaminated.
- (d) Non-food contact surfaces such as equipment, floors, walls, ceilings, and windows shall be kept clean and in good repair.
- (e) Wheelbarrows, measures, baskets, shovels, and other implements used in the handling of shellstock shall not be used for any other purpose and shall be cleaned prior to use.
- (f) Shellfish dealers shall provide a temperature measuring device accurate to +/- 2°F for use in monitoring product temperatures.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. February 1, 1987;
Readopted Eff. April 1, 2024.

15A NCAC 18A .0403 SUPERVISION AND TRAINING

- (a) The shellfish dealer shall personally supervise or shall designate a responsible individual whose principal duty shall be to supervise and be responsible for compliance with the rules of this Subchapter. No unauthorized individuals shall be allowed in any processing area of the plant during periods of operation. For the purpose of this Rule, "unauthorized individual" shall mean an individual that is not designated and trained by the shellfish dealer or responsible individual to perform specific processing tasks in the facility.

(b) The shellfish dealer shall ensure that all employees that manufacture, process, pack, or hold food obtain training in the principles of food hygiene and food safety, including the importance of employee health and personal hygiene, in accordance with 21 CFR 117.4, which is incorporated by reference, including subsequent amendments and editions. A copy of the reference material can be found at <https://www.ecfr.gov/current/title-21/chapter-I/subchapter-B/part-117/subpart-A/section-117.4> at no cost. Employees shall complete the training within 30 days following the initial hire date. The shellfish dealer or responsible individual shall maintain a record of the completed training.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. February 1, 1987;
Readopted Eff. April 1, 2024.

15A NCAC 18A .0404 CONSTRUCTION

Shellfish plants shall be sized and constructed to permit compliance with the operational provisions of Sections .0300 through .0800 of this Subchapter.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. February 1, 1987;
Readopted Eff. April 1, 2024.

15A NCAC 18A .0405 FACILITY FLOODING

- (a) Shellfish plants shall be located so that they will not be subject to flooding by high tides.
- (b) If the facility floors are flooded, processing shall be discontinued until flood waters have receded and the facility and equipment are cleaned and sanitized.
- (c) Any shellfish that may have been contaminated by flood waters shall be deemed adulterated and shall be destroyed.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 113-221.4; 143B-289.52;
Eff. February 1, 1987;
Readopted Eff. April 1, 2024.

15A NCAC 18A .0406 FLOORS

Floors shall be concrete or other equally impervious material, constructed so that they are easily cleanable, sloped so that water drains completely, and kept in good repair. The junction between floors and walls shall be sealed to render them impervious to water in areas where the floor gets wet and is used to store shellfish, process food, or clean equipment and utensils.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. February 1, 1987;
Readopted Eff. April 1, 2024.

15A NCAC 18A .0407 WALLS AND CEILINGS

- (a) Walls and ceilings in areas where shellfish are stored, handled, processed, or packaged or where food handling equipment or packaging materials are stored shall be constructed of smooth, easily cleanable, non-corrosive, impervious material. The walls and ceilings in these areas shall also be light-colored, such as white in color, so that unclean surfaces can be detected.
- (b) Doors and windows shall be tightly fitted and kept in good repair so as to keep pests and weather out of the facility.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. February 1, 1987;
Readopted Eff. April 1, 2024.

15A NCAC 18A .0408 LIGHTING

- (a) Natural or artificial lighting shall be provided in all parts of the plant. Lighting intensities shall be a minimum of 25 foot-candles on working surfaces in packing and shucking rooms and a minimum of 10 foot-candles measured at a height of 30 inches above the floor throughout the rest of the processing portion of the facility.
- (b) Light bulbs, fixtures, or other glass within the plant shall be shatterproof or shielded to prevent food contamination in case of breakage.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. February 1, 1987;
Readopted Eff. April 1, 2024.

15A NCAC 18A .0409 VENTILATION

Ventilation shall be provided to prevent odors and condensation from contaminating shellfish, food contact surfaces, or food packaging materials.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. February 1, 1987;
Readopted Eff. April 1, 2024.

15A NCAC 18A .0410 PEST CONTROL

- (a) All exterior openings shall be screened or provided with wind curtains, or other methods to prevent the entrance of pests. All screens shall be kept in good repair. All exterior doors shall open outward and shall be self-closing.
- (b) The use and storage of pesticides and rodenticides shall comply with all applicable State and federal laws and rules.
- (c) No pets or other animals shall be allowed in those portions of the facility where shellfish, food handling equipment, or packaging materials are stored, handled, processed, or packaged.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. February 1, 1987;
Readopted Eff. April 1, 2024.

15A NCAC 18A .0411 RODENT AND ANIMAL CONTROL

History Note: Authority G.S. 130A-230;
Eff. February 1, 1987;
Repealed Eff. April 1, 2024.

15A NCAC 18A .0412 PLUMBING AND HAND WASHING FACILITIES

- (a) All plumbing shall be in compliance with applicable plumbing codes.
- (b) Hand washing facilities shall be provided with running water at a minimum temperature of 100°F dispensed from a hot and cold combination faucet.
- (c) Hand washing facilities shall be provided in or adjacent to each bathroom and in shucking and packing rooms. Hand washing facilities in packing areas shall be located where supervisors can observe employee use.
- (d) Hand washing facilities shall be separate from three-compartment or other sinks used for cleaning equipment and utensils.
- (e) Soap, single service towels in protected dispensers, and an easily cleanable waste receptacle shall be available and used at hand washing facilities. Other hand drying devices may be used if approved by the Division of Marine Fisheries based upon being equally effective at drying hands without the potential for recontamination.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. February 1, 1987;
Readopted Eff. April 1, 2024.

15A NCAC 18A .0413 WATER SUPPLY

- (a) The water supply used shall be in accordance with 15A NCAC 18A .1720 through .1728, 15A NCAC 18C, or 02 NCAC 09C .0703, which are incorporated by reference, including subsequent amendments.
- (b) If the water supply is from a private source, samples for bacteriological analysis shall be collected by the Division of Marine Fisheries prior to use and after the water supply has been repaired or disinfected, and submitted for analysis to the State Laboratory of Public Health or other laboratory that is certified in accordance with 10A NCAC 42C .0102, which is incorporated by reference, including subsequent amendments.
- (c) Cross-connections with unapproved water supplies shall be prohibited. A backflow or back siphonage of a solid, liquid, or gas containment into the water supply shall be precluded by use of an air gap or backflow prevention device in accordance with applicable plumbing codes.

(d) Hot and cold running water under pressure shall be provided to food preparation, utensil, and hand washing areas and any other areas in which water is required for cleaning. Running water under pressure shall be provided in sufficient quantity to carry out all food preparation, utensil washing, hand washing, cleaning, and other water-using operations.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. February 1, 1987;
Amended Eff. September 1, 1990;
Readopted Eff. April 1, 2024.

15A NCAC 18A .0414 TOILET FACILITIES

- (a) Toilets shall be provided in the plant by the owner or responsible individual and shall be kept clean and in good repair.
- (b) Toilet tissue, in a holder, shall be provided by the owner or responsible individual.
- (c) Toilet room doors shall not open directly into a processing area and shall be tight-fitting and self-closing.
- (d) All toilet wastes and other sewage shall be disposed of in accordance with 15A NCAC 18A .1900 or 15A NCAC 02H .0200, which are incorporated by reference, including subsequent amendments.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. February 1, 1987;
Amended Eff. September 1, 1990;
Readopted Eff. April 1, 2024.

15A NCAC 18A .0415 PREMISES

- (a) The premises shall be maintained free from conditions that may constitute an attractant, breeding place, or harborage for pests such as unmowed weeds or grass, uncontained litter or waste, or unused equipment.
- (b) To prevent pests and odors, shells and other solid waste shall not be permitted to accumulate on the premises.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. February 1, 1987;
Readopted Eff. April 1, 2024.

15A NCAC 18A .0416 PERSONAL HYGIENE

- (a) All employees shall wash their hands thoroughly with soap and running water before beginning work and again after each interruption or if their hands may have become soiled or contaminated. Hand washing signs shall be posted by the owner or responsible individual at each hand washing facility in a language understood by employees.
- (b) All individuals employed or engaged in the shucking, packing, or repacking of shellfish shall wear clean, washable outer clothing. Clean plastic or rubber aprons, overalls, and rubber gloves shall be considered satisfactory.
- (c) All individuals employed or engaged in the shucking, packing, or repacking of shellfish shall wear hair restraints and have clean fingernails free from nail polish and that are short enough to not extend past the fingertips. Employees shall not wear jewelry other than easily cleanable rings. The use of absorbent wraps or absorbent finger cots shall not be permitted.
- (d) Employees shall not eat, drink, use electronic cigarettes or vaping products, or use tobacco in any form in the rooms where shellfish are stored, processed, or handled.
- (e) An individual known to be a carrier of any disease that can be transmitted through the handling of shellfish or who has an infected wound or open lesion on any exposed portion of the body shall be prohibited from handling shellfish or coming into contact with food contact surfaces.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. February 1, 1987;
Readopted Eff. April 1, 2024.

15A NCAC 18A .0417 EMPLOYEES' PERSONAL ARTICLES

Employees' street clothing, aprons, gloves, food, drink, and personal articles shall be stored in a room or locker separate from any area where shellfish are shucked or packed or any area that is used for the cleaning or storage of utensils.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. February 1, 1987;

Readopted Eff. April 1, 2024.

15A NCAC 18A .0418 SUPPLY STORAGE

- (a) Shipping containers, boxes, and other supplies shall be stored in a storage room or area. The storage room or area shall be kept clean.
- (b) Pesticides, rodenticides, chemical agents, sanitizers, and other toxic substances shall be stored separate from processing areas or food contact surfaces using spacing or partitioning so that they cannot contaminate food, equipment, utensils, and single-service articles. Each of the following categories of toxic substances shall be stored separate from one another using spacing or partitioning such that one category of toxic substance is not mistaken for another category:
 - (1) pesticides and rodenticides;
 - (2) detergents, sanitizers, and cleaning agents; and
 - (3) caustic acids, polishes, and other chemicals.
- (c) Cleaning compounds, sanitizers, and other toxic substances shall be labeled and used in accordance with the manufacturer's label directions.

*History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. February 1, 1987;
Readopted Eff. April 1, 2024.*

15A NCAC 18A .0419 HARVEST VESSELS AND VEHICLES

- (a) It shall be unlawful to use vessels or vehicles that are engaged in the commercial harvest, handling, or transport of shellstock in such a manner that allows contact of shellstock with bilge water, standing water, or other sources of contamination in the vessel or vehicle.
- (b) It shall be unlawful to allow dogs or other animals on or inside vessels or vehicles that are engaged in the commercial harvest or transport of shellstock.
- (c) It shall be unlawful to discharge human waste overboard from vessels or vehicles used in the harvesting of shellstock.

*History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. February 1, 1987;
Readopted Eff. June 17, 2024.*

15A NCAC 18A .0420 TRANSPORTING SHELLFISH

- (a) All shellfish storage areas in trucks, vessels, trailers, and other conveyances used for transporting shellfish shall be enclosed, tightly constructed to eliminate the entrance of pests, kept clean, and shall be subject to inspection by the Division of Marine Fisheries.
- (b) It shall be unlawful to transport shellstock and in-shell product unless shipped under mechanical refrigeration and the shipping conveyance is pre-chilled and maintained at an ambient temperature of 45°F or below. The storage area of the shipping conveyance shall be equipped with an accurate, operating thermometer.
- (c) It shall be unlawful to transport shucked shellfish unless maintained under temperature control of 45°F or below.

*History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. February 1, 1987;
Amended Eff. May 1, 1994;
Readopted Eff. June 17, 2024.*

15A NCAC 18A .0421 RECORDS

- (a) All shellfish dealers who conduct any business of buying, selling, or shipping shellfish shall keep an accurate, daily record that shall show the names of all persons from whom shellfish are received, the address of any shellfish dealer from whom shellfish are received, the location of the source of shellfish, and the names and addresses of all persons to whom shellfish are sold or shipped with the exception of retail sales. For the purpose of this Rule, "retail sale" shall be defined as the sale of shellfish directly to end consumers. These records shall be kept on file for a minimum of one year for fresh shellfish, and a minimum of two years for frozen shellfish. All records shall be open to inspection by the Division of Marine Fisheries at the dealer facility at any time during business hours.
- (b) All shellfish dealers who receive shellstock from licensed harvesters shall record the following information at the time of receipt:

- (1) harvester name;
 - (2) harvest area;
 - (3) time of the start of harvest;
 - (4) quantity and type of shellfish received;
 - (5) time shellfish were received; and
 - (6) time shellfish were mechanically refrigerated.
- (c) Each shellfish shipment shipped by a shellfish dealer shall be accompanied by a shipping document that includes:
- (1) name, address, and certification number of shipping dealer;
 - (2) name and address of major consignee;
 - (3) type and quantity of shellfish product;
 - (4) date and time of shipment;
 - (5) documentation that shipping conveyance is pre-chilled at 45°F or below prior to shipment; and
 - (6) temperature of shellstock recorded by shipping dealer at time of shipment.
- (d) A dealer receiving a shellfish shipment from another shellfish dealer shall record the temperature of the shipping conveyance and the temperature of the shellfish product received. These records shall be kept on file for a minimum of one year for fresh shellfish, and a minimum of two years for frozen shellfish. All records shall be open to inspection by the Division at the dealer facility at any time during business hours.
- (e) Within 72 hours of any purchase or sale of shellfish, each purchase or sale shall be entered into a permanently bound ledger book, computer record, or any other method that permanently records the information and is organized so that it can be reviewed by the Division.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. February 1, 1987;
Amended Eff. August 1, 1998;
Readopted Eff. April 1, 2024.

15A NCAC 18A .0422 SHELLSTOCK CLEANING

No person shall offer for sale any shellstock that have not been washed free of harvest area sediments and detritus. Water used for shellstock washing shall be obtained from a water source in accordance with Rule .0413 of this Section or from a growing area in the open status and classified as "approved" or "conditionally approved" as defined in Rule .0901 of this Subchapter.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. February 1, 1987;
Readopted Eff. April 1, 2024.

15A NCAC 18A .0423 SALE OF LIVE SHELLSTOCK

Only live shellstock shall be offered for sale.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. February 1, 1987;
Readopted Eff. April 1, 2024.

15A NCAC 18A .0424 SHELLFISH RECEIVING

No shellfish dealer shall receive or accept:

- (1) any shellstock from:
 - (a) a licensed shellfish harvester unless:
 - (i) the container or package bears the harvest tag as required in Rule 15A NCAC 03K .0109 and in accordance with the HACCP plan; and
 - (ii) the shellstock was harvested from a growing area in the open status and classified as "approved" or "conditionally approved" as defined in Rule .0901 of this Subchapter and as indicated on the harvest tag; or
 - (b) another shellfish dealer unless the container or package bears the tag as required in Rule .0425 of this Section or, in the case of a bulk shipment, Rule .0426 of this Section; and
- (2) any shellfish from another shellfish dealer unless:
 - (a) it is accompanied by the documentation required in Rule .0421(c) of this Section; and

- (b) the shellfish temperature and other critical limits are in compliance with the HACCP plan.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. February 1, 1987;
Amended Eff. April 1, 1997;
Readopted Eff. April 1, 2024.

15A NCAC 18A .0425 DEALER TAGS

(a) Consistent with the rules of this Section, it shall be unlawful to possess shellstock without a dealer tag or label affixed after the shellstock is processed or shipped by the initial certified shellfish dealer. The tag shall be durable, waterproof, and a minimum of two and five-eighths inches by five and one-fourth inches in size. It shall be unlawful for the tag to fail to contain legible information arranged in the specific order as follows:

- (1) the dealer's name, address, and certification number assigned by the appropriate shellfish control agency;
- (2) the original shipper's certification number;
- (3) the harvest date, or if depurated, the date of depuration processing, or if wet stored, the original harvest date and the final harvest date, which is the date removed from wet storage;
- (4) if wet stored or depurated, the wet storage or depuration cycle or lot number. The wet storage lot number shall begin with the letter "W";
- (5) the most precise identification of the harvest location as is practicable, including the initials of the state of harvest, and the state or local shellfish control authority's designation of the growing area by indexing, administrative, or geographic designation. If the authority in another state has not indexed growing areas, then a geographical or administrative designation shall be used (e.g., Long Bay, shellfish lease or franchise number, or lot number);
- (6) the type and quantity of shellstock;
- (7) the following statements in bold, capitalized font:
 - (A) "THIS TAG IS REQUIRED TO BE ATTACHED UNTIL CONTAINER IS EMPTY AND THEREAFTER KEPT ON FILE, IN CHRONOLOGICAL ORDER, FOR 90 DAYS."; and
 - (B) "RETAILERS; DATE WHEN LAST SHELLFISH FROM THIS CONTAINER SOLD OR SERVED (INSERT DATE) ____.";
- (8) the following statement, or equivalent:

"Consumer Advisory
Eating raw oysters, clams, or mussels may cause severe illness. People with the following conditions are at especially high risk: liver disease, alcoholism, diabetes, cancer, stomach or blood disorder, or weakened immune system. Ask your doctor if you are unsure of your risk. If you eat raw shellfish and become sick, see a doctor immediately."; and
- (9) the following statement, or equivalent:

"Keep Refrigerated".

(b) The dealer tag or label shall remain attached to the shellstock container until the container is empty and thereafter shall be kept on file, in chronological order, for 90 days.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. February 1, 1987;
Amended Eff. April 1, 1997; January 4, 1994; December 1, 1987;
Temporary Amendment Eff. October 12, 1998; February 1, 1998;
Amended Eff. April 1, 1999;
Readopted Eff. March 15, 2023.

15A NCAC 18A .0426 BULK SHIPMENTS BETWEEN SHELLFISH DEALERS

(a) For the purpose of this Rule:

- (1) "bulk shipment" shall mean a shipment of a shellstock lot between shellfish dealers.
- (2) "shellstock lot" shall mean a single type of bulk shellstock or containers of shellstock of no more than one day's harvest from a single growing area harvested by one or more harvesters.

(b) Bulk shipments shall not be made except if the shipment is from only one consignor to one consignee, both of which shall be shellfish dealers.

- (c) When a shellstock lot is shipped, if multiple containers are used they shall be on a wrapped pallet, in a tote, in a net bailer, or other container and the unit shall be tagged with a single tag in accordance with Rule .0425 of this Section. The single tag shall also include a statement that "All shellstock containers in this lot have the same harvest date and area of harvest" and shall include the number of individual containers in the unit.
- (d) The shellfish dealer shall provide a transaction record that accompanies the bulk shipment that contains the same information required on a dealer's tag in Rule .0425 of this Section and additionally states the name of the consignee, which shall be a shellfish dealer.
- (e) Bulk shipments shall be kept above the floor using pallets to prevent the shellstock from becoming contaminated, unless the shipping conveyance has a channeled floor.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. February 1, 1987;
Readopted Eff. April 1, 2024.

15A NCAC 18A .0427 SHELLFISH STORAGE

- (a) It shall be unlawful to fail to keep shellstock and in-shell product under mechanical refrigeration at a temperature of 45°F or below unless otherwise required by proclamation issued under the authority of 15A NCAC 03K .0110 or otherwise specified in the HACCP plan.
- (b) Refrigerated storage areas shall be equipped with an accurate, operating thermometer.
- (c) It shall be unlawful to fail to keep shucked shellfish under temperature control at a temperature of 45°F or below.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. February 1, 1987;
Amended Eff. May 1, 1994; December 1, 1987;
Readopted Eff. June 17, 2024.

15A NCAC 18A .0428 SAMPLING AND TESTING

Samples of shellfish may be taken and examined by the Division of Marine Fisheries at any time or place for routine quality control checks or to evaluate for threats of physical injury or adverse health effects to consumers. This may include bacteriological examination or analysis for poisonous or deleterious substances as listed in the latest approved edition of the National Shellfish Sanitation Program (NSSP) Guide for the Control of Molluscan Shellfish, Section IV: Guidance Documents, Chapter II: Growing Areas; Action Levels, Tolerances and Guidance Levels for Poisonous or Deleterious Substances in Seafood, which is incorporated by reference, including subsequent amendments and editions. A copy of the reference material can be found at <https://www.fda.gov/food/federalstate-food-programs/national-shellfish-sanitation-program-nssp>, at no cost. Samples of shellfish shall be furnished, upon request of the Division, by operators of plants, trucks, carriers, stores, restaurants, and other places where shellfish are sold.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. February 1, 1987;
Readopted Eff. April 1, 2024.

15A NCAC 18A .0429 EMBARGO OR DISPOSAL OF SHELLFISH

- (a) When it has been determined by the Division of Marine Fisheries that shellfish have not been grown, harvested, stored, treated, transported, handled, shucked, packed, or offered for sale in compliance with Sections .0300 through .0900 of this Subchapter, those shellfish may be deemed adulterated in accordance with Rule .0438 of this Section, except as required in Rules .0405 and .0430 of this Section.
- (b) Shellfish or shellfish products processed or prepared for sale to the public determined to be adulterated or misbranded shall be subject to embargo or disposal by the Division in accordance with G.S. 113-221.4. The authority of marine fisheries inspectors to seize shellfish or shellfish products pursuant to G.S. 113-137 shall not be affected by this Rule.
- (c) If voluntary disposal of adulterated or misbranded shellfish or shellfish products is alternatively chosen by the shellfish dealer, responsible individual, or other person or facility specified in Rule .0401 of this Section, the product disposal shall be observed by a Division employee.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 113-221.4; 143B-289.52;
Eff. February 1, 1987;

Readopted Eff. April 1, 2024.

15A NCAC 18A .0430 BACTERIOLOGICAL AND CONTAMINATION STANDARDS

Shellfish shucked or in the shell and intended or offered for sale shall be deemed adulterated by the Division of Marine Fisheries if:

- (1) the concentration of *Escherichia coli* exceeds a Most Probable Number (MPN), as defined in Rule .0901 of this Subchapter, of 230 per 100 grams of sample;
- (2) the total bacteria count, as determined by a standard plate count, exceeds 500,000 colony-forming units, as defined in Rule .0901 of this Subchapter. The standard plate count method, as detailed in Recommended Procedures for the Examination of Sea Water and Shellfish 4th Edition, is incorporated by reference, not including subsequent amendments and editions. The method can be found at <https://www.issc.org/Data/Sites/1/media/-22-com-docs/apha-recommended-procedures-1970-full-text.pdf>, at no cost; or
- (3) the shellfish contain any contaminant that renders it unsafe for human consumption in accordance with the latest approved edition of the National Shellfish Sanitation Program (NSSP) Guide for the Control of Molluscan Shellfish, Section IV: Guidance Documents, Chapter II: Growing Areas; Action Levels, Tolerances and Guidance Levels for Poisonous or Deleterious Substances in Seafood, which is incorporated by reference, including subsequent amendments and editions. A copy of the reference material can be found at <https://www.fda.gov/food/federalstate-food-programs/national-shellfish-sanitation-program-nssp>, at no cost.

*History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. February 1, 1987;
Readopted Eff. April 1, 2024.*

15A NCAC 18A .0431 STANDARDS FOR AN APPROVED SHELLFISH GROWING AREA

*History Note: Authority G.S. 130A-230;
Eff. February 1, 1987;
Repealed Eff. May 1, 2021.*

15A NCAC 18A .0432 PUBLIC DISPLAY OF CONSUMER ADVISORY

All shellfish dealers permitted by Rule .0302 of this Subchapter and all other businesses and persons that sell or serve raw shellfish shall post one of the following consumer advisories or an equivalent statement in a place where it may be observed by the public in the area where raw shellfish is sold or served:

- (1) "Consumer Advisory
Eating raw or undercooked oysters, clams, whole scallops, or mussels may cause severe illness. People with the following conditions are at especially high risk: liver disease, alcoholism, diabetes, cancer, stomach or blood disorder, or weakened immune system. Ask your doctor if you are unsure of your risk. If you eat shellfish and become sick, see a doctor immediately."; or
- (2) "Consuming raw or undercooked meats, poultry, seafood, shellfish, or eggs may increase your risk of foodborne illness, especially if you have certain medical conditions."

Nothing in this Rule is intended to supersede regulation of restaurants or other establishments subject to 15A NCAC 18A .2600 or the U.S. Food Code.

*History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Temporary Adoption Eff. October 12, 1998; February 1, 1998;
Eff. April 1, 1999;
Readopted Eff. April 1, 2024.*

15A NCAC 18A .0433 HAZARD ANALYSIS

Each shellfish dealer shall conduct a hazard analysis to determine the food safety hazards that are reasonably likely to occur for each kind of shellfish product processed by that dealer and to identify the preventative measures that the dealer can apply to control those hazards. For the purpose of this Rule, "reasonably likely to occur" shall mean a food safety hazard for which a processor would establish controls because experience, illness data, scientific reports, or other information provide a basis to

conclude that there is a reasonable possibility that it will occur in the absence of those controls, as defined in 21 CFR 123.6, which is incorporated by reference, including subsequent amendments and editions. A copy of the reference material can be found at <https://www.ecfr.gov/current/title-21/chapter-I/subchapter-B/part-123>, at no cost.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. August 1, 2000;
Readopted Eff. April 1, 2024.

15A NCAC 18A .0434 HACCP PLAN

(a) Each shellfish dealer shall have and implement a written HACCP plan specific to each kind of shellfish product processed. The owner or authorized individual shall sign the plan when implemented, which shall signify that the plan has been accepted for implementation by the dealer. The HACCP plan shall also be signed by the owner or authorized individual after any modification or verification of the plan as required by this Rule. The plan shall, at a minimum:

- (1) list the food safety hazards that are reasonably likely to occur;
- (2) list the critical control points for each of the food safety hazards;
- (3) list the critical limits that must be met for each of the critical control points;
- (4) list the procedures, and frequency thereof, that will be used to monitor each of the critical control points to ensure compliance with the critical limits;
- (5) list any corrective action plans to be followed in response to deviations from critical limits at critical control points;
- (6) provide a record keeping system that documents critical control point monitoring; and
- (7) list the verification procedures, and frequency thereof, that the dealer will use.

For the purpose of this Rule, "reasonably likely to occur" shall mean a food safety hazard for which a processor would establish controls because experience, illness data, scientific reports, or other information provide a basis to conclude that there is a reasonable possibility that it will occur in the absence of those controls, as defined in 21 CFR 123.6, which is incorporated by reference, including subsequent amendments and editions. A copy of the reference material can be found at <https://www.ecfr.gov/current/title-21/chapter-I/subchapter-B/part-123>, at no cost.

(b) With the exception of a shellfish dealer that has not been permitted for interstate commerce, the following functions shall be performed by an individual who has successfully completed Segment one and Segment two of a seafood HACCP training course approved by the Seafood HACCP Alliance or an equivalent training course where the curriculum covers the principles of HACCP, conducting a hazard analysis, and developing a HACCP plan for a seafood business:

- (1) developing a HACCP plan;
- (2) reassessing and modifying the HACCP plan; and
- (3) performing the record review specified in Paragraph (d) of this Rule.

(c) If a deviation from a critical limit occurs, the shellfish dealer shall take corrective action in accordance with 21 CFR 123.7, which is incorporated by reference, including subsequent amendments and editions. A copy of the reference material can be found at [https://www.ecfr.gov/current/title-21/chapter-I/subchapter-B/part-123/subpart-A/section-123.7#p-123.7\(b\)](https://www.ecfr.gov/current/title-21/chapter-I/subchapter-B/part-123/subpart-A/section-123.7#p-123.7(b)), at no cost.

(d) At least annually, each shellfish dealer shall verify that the HACCP plan is being implemented to control food safety hazards. Verification procedures shall include:

- (1) a reassessment of the plan when a change occurs that could affect the hazard analysis, and a review of any consumer complaints that have been received; and
- (2) a review, including signing and dating by the trained individual or responsible individual, of the records that document the monitoring of critical control points, the taking of corrective actions, and the calibrating of any process-monitoring instruments. This review shall occur within one week of the day that the records are made.

(e) All records required by this Rule shall be retained at the dealer facility for at least one year after the date they were prepared in the case of refrigerated products, and at least two years after the date they were prepared in the case of frozen products and shall include:

- (1) the name and location of the dealer;
- (2) the date and time of the activity that the record reflects;
- (3) the signature or initials of the individual performing the operation; and
- (4) the identity of the product and the production code, if any.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 113-221.4; 143B-289.52;

Eff. August 1, 2000;
Readopted Eff. April 1, 2024.

15A NCAC 18A .0435 SANITATION MONITORING REQUIREMENTS

(a) Each shellfish dealer shall monitor the following sanitation items when the plant is operational:

- (1) safety of water;
- (2) condition and cleanliness of food contact surfaces;
- (3) prevention of cross-contamination;
- (4) maintenance of hand washing, hand sanitizing, and toilet facilities;
- (5) protection of shellfish, shellfish packaging materials, and food contact surfaces from becoming adulterated;
- (6) proper labeling, storage, and use of toxic compounds;
- (7) control of employees with adverse health conditions; and
- (8) exclusion of pests from the facility.

(b) Monitoring records of these sanitation items shall be recorded at least daily and shall include the date and time of the activity that the record reflects, and the signature or initials of the individual performing the operation. The records shall be reviewed and signed by the owner or designated individual within one week of recording.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. August 1, 2000;
Readopted Eff. April 1, 2024.

15A NCAC 18A .0436 MONITORING RECORDS

History Note: Authority G.S. 130A-230;
Eff. August 1, 2002;
Repealed Eff. April 1, 2024.

15A NCAC 18A .0437 IN-SHELL PRODUCT

(a) In-shell product shall be kept under mechanical refrigeration at a temperature of 45°F or below.

(b) In-shell product shall be tagged or labeled to contain the following indelible and legible information listed in sequential order:

- (1) the shellfish dealer's name, address, and certification number assigned by the shellfish control agency in the state of the shellfish dealer's location;
- (2) the original shipper's certification number, except if the in-shell product is depurated, the original shipper's certification number is not required;
- (3) a "SELL BY date" that indicates the shelf-life or the words "BEST IF USED BY" followed by a date when the product would be expected to reach the end of its shelf-life. The date shall include month, day, and year;
- (4) if the in-shell product is depurated, the depuration cycle number or lot number;
- (5) the most precise identification of the harvest location as is practicable, including the initials of the state of harvest, and the state or local shellfish control authority's designation of the growing area by indexing, administrative, or geographic designation. If the authority in another state has not indexed growing areas, then a geographical or administrative designation shall be used (e.g., Long Bay, shellfish lease or franchise number, or lot number);
- (6) the type and quantity of in-shell product; and
- (7) the following statement in bold type on each tag or label: "THIS TAG IS REQUIRED TO BE ATTACHED UNTIL CONTAINER IS EMPTY OR IS RETAGGED AND THEREAFTER KEPT ON FILE, IN CHRONOLOGICAL ORDER, FOR 90 DAYS." "RETAILERS: DATE WHEN LAST SHELLFISH FROM THIS CONTAINER SOLD OR SERVED (INSERT DATE)_____." OR "THIS LABEL IS REQUIRED TO BE ATTACHED UNTIL CONTAINER IS EMPTY OR IS RELABELED AND THEREAFTER KEPT ON FILE, IN CHRONOLOGICAL ORDER, FOR 90 DAYS." "RETAILERS: DATE WHEN LAST SHELLFISH FROM THIS CONTAINER SOLD OR SERVED (INSERT DATE)_____."

(c) In-shell product shall include one of the following consumer advisories, or equivalent statement:

- (1) "Consumer Advisory

Eating raw or undercooked oysters, clams, whole scallops, or mussels may cause severe illness. People with the following conditions are at especially high risk: liver disease, alcoholism, diabetes, cancer, stomach or blood disorder, or weakened immune system. Ask your doctor if you are unsure of your risk. If you eat shellfish and become sick, see a doctor immediately."

- (2) "Consuming raw or undercooked meats, poultry, seafood, shellfish, or eggs may increase your risk of foodborne illness, especially if you have certain medical conditions."
- (d) The statement "Keep Refrigerated" or an equivalent statement shall be included on the tag or label.
- (e) If in-shell product for retail sale is packed in individual containers of five pounds or less and shipped in a master container that includes a tag in compliance with Paragraph (b) of this Rule, the individual containers of five pounds or less shall not require tags as specified in Paragraph (b) of this Rule if a lot code number is included on each container that allows traceback of the in-shell product to the master container. A consumer advisory shall be included on each retail package in accordance with Paragraph (c) of this Rule.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. April 1, 2024.

15A NCAC 18A .0438 INSPECTIONS AND COMPLIANCE SCHEDULE

- (a) If a critical deficiency is detected during an inspection of a shellfish dealer by a Division of Marine Fisheries inspector:
 - (1) the deficiency shall be corrected by the shellfish dealer during that inspection; or
 - (2) the shellfish dealer shall immediately cease production affected by the deficiency.
- If the shellfish dealer fails to correct the deficiency during the inspection, the Division shall initiate the suspension or revocation process for the Shellfish Dealer Permit and Certificate of Compliance as set forth in 15A NCAC 03O .0504. For the purpose of this Rule, "critical deficiency" shall mean a condition or practice that results in the production of a shellfish product that is adulterated or presents a threat to the health or safety of the consumer.
- (b) Shellfish products affected by a critical deficiency shall be controlled to prevent adulterated product from reaching consumers. The Division shall:
 - (1) embargo or destroy adulterated shellfish in accordance with Rule .0429 of this Section;
 - (2) initiate a recall of adulterated shellfish; and
 - (3) notify enforcement officials for the United States Food and Drug Administration, as well as shellfish control authorities in states that are known to have received adulterated shellfish.
 - (c) If a key or other deficiency is detected during an inspection of a shellfish dealer by a Division inspector, a compliance schedule shall be issued by the Division inspector that provides a time frame by which the deficiency shall be corrected by the shellfish dealer. For the purpose of this Rule, "key or other deficiency" shall mean a deficiency other than a critical deficiency.
 - (d) If a shellfish dealer fails to meet the compliance schedule, the Division shall proceed with one of the following options:
 - (1) revise the existing compliance schedule;
 - (2) initiate the suspension or revocation process for the Shellfish Dealer Permit and Certificate of Compliance as set forth in 15A NCAC 03O .0504; or
 - (3) seek other administrative remedies.
 - (e) Nothing in this Rule shall be construed to limit or make null any option for remedy in accordance with Rule 15A NCAC 03O .0504 or other available administrative remedy.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 113-221.4; 143B-289.52;
Eff. April 1, 2024.

15A NCAC 18A .0439 RECALL PROCEDURE

Each shellfish dealer shall adopt and adhere to a written procedure for conducting recalls of adulterated or misbranded shellfish products. This written procedure shall be based on, and complementary to, the FDA Enforcement Policy on Recalls, CFR Title 21, Chapter 1, Subchapter A., Part 7-Enforcement Policy, which is incorporated by reference, including subsequent amendments and editions. A copy of the reference material can be found at <https://www.ecfr.gov/current/title-21/chapter-I/subchapter-A/part-7>, at no cost. This procedure shall include shellfish dealers notifying the Division of Marine Fisheries and any consignee receiving affected product when a recall begins, as well as removal or correction of the affected product.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. April 1, 2024.

SECTION .0500 – OPERATION OF SHELLSTOCK PLANTS AND RESHIPPERS

Rules .0501 - .0504 of Title 15A Subchapter 18A of the North Carolina Administrative Code (T15A.18A .0501 - .0504); has been transferred and recodified from Rules .1001 - .1004 of Title 10 Subchapter 10B of the North Carolina Administrative Code (T10.10B .1001 - .1004), effective April 4, 1990.

15A NCAC 18A .0501 REQUIREMENTS FOR SHELLSTOCK PLANTS AND RESHIPPERS

The rules in Section .0400 and the rules of this Section shall apply for the operation of shellstock plants and reshippers.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. February 1, 1987;
Readopted Eff. April 1, 2024.

15A NCAC 18A .0502 GRADING SHELLSTOCK AND COMMINGLING

(a) For the purpose of this Rule:

- (1) "commingling" shall mean the act of combining different lots of shellfish harvested on different days in the same growing area or combining different lots of shellstock harvested from different growing areas.
- (2) "lot" shall mean clams from one day's harvest, from a single growing area, harvested by one or more harvesters.

(b) The grading of shellstock by a shellfish dealer shall be conducted only in a permitted shellstock plant.

(c) A grading room or area separate from other processing operations shall be required for the grading of shellstock.

(d) The grader used to grade shellstock, and any other accessories or tables used in the grading operation, shall be constructed to be easily cleanable and shall be kept in good repair.

(e) Shellfish dealers shall not commingle any shellfish, except for clams with prior approval of a commingling plan by the Division of Marine Fisheries. A commingling plan shall be approved by the Division based on limiting the dates of harvest and growing areas and maintaining lot identity so that each individual lot of shellfish can be traced back to its harvest source.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. February 1, 1987;
Readopted Eff. April 1, 2024.

15A NCAC 18A .0503 GRADER

History Note: Authority G.S. 130A-230;
Eff. February 1, 1987;
Repealed Eff. April 1, 2024.

15A NCAC 18A .0504 RESHIPPERS

Reshippers shall only purchase shellfish from other shellfish dealers and sell the product to other shellfish dealers, wholesalers, or retailers without repacking or relabeling.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. February 1, 1987;
Amended Eff. September 1, 1990;
Readopted Eff. April 1, 2024.

SECTION .0600 – OPERATION OF SHELLFISH SHUCKING AND PACKING PLANTS AND REPACKING PLANTS

Rules .0601 - .0619 of Title 15A Subchapter 18A of the North Carolina Administrative Code (T15A.18A .0601 - .0619); has been transferred and recodified from Rules .1101 - .1119 of Title 10 Subchapter 10B of the North Carolina Administrative Code (T10.10B .1101 - .1119), effective April 4, 1990.

15A NCAC 18A .0601 REQUIREMENTS FOR SHUCKING AND PACKING PLANTS AND REPACKING PLANTS

The rules in Section .0400 and the rules of this Section shall apply for the operation of shucking and packing plants and repacking plants.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. February 1, 1987;
Readopted Eff. April 1, 2024.

15A NCAC 18A .0602 SEPARATION OF OPERATIONS

A shucking and packing plant shall provide separate areas for shellstock storage, shucking, heat shock, and general storage. A packing area that is separate from other processing areas and with a delivery window or shelf as set forth in Rule .0605 of this Section shall be required.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. February 1, 1987;
Readopted Eff. April 1, 2024.

15A NCAC 18A .0603 HOT WATER SYSTEM

An automatically regulated hot water system shall be provided that has capacity to furnish water at a temperature of at least 130°F during all hours of shucking and packing plant operation.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. February 1, 1987;
Readopted Eff. April 1, 2024.

15A NCAC 18A .0604 HANDWASHING FACILITIES

History Note: Authority G.S. 130A-230;
Eff. February 1, 1987;
Repealed Eff. April 1, 2024.

15A NCAC 18A .0605 DELIVERY WINDOW OR SHELF

(a) A delivery window or a non-corrosive shelf shall be installed between the shucking area and packing area. If a delivery window is used it shall be equipped with a shelf completely covered with smooth, non-corrosive metal or other impervious material and shall be sloped to drain towards the shucking area.

(b) No shuckers or individuals that are not designated as packers by the owner or responsible individual shall be allowed in the packing area.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. February 1, 1987;
Readopted Eff. April 1, 2024.

15A NCAC 18A .0606 NON-FOOD CONTACT SURFACES

All non-food contact surfaces of equipment such as cabinets and shelving shall be impervious and constructed to be easily cleanable.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. February 1, 1987;
Readopted Eff. April 1, 2024.

15A NCAC 18A .0607 SHUCKING BENCHES

Shucking benches, tables, and contiguous walls to a height of at least two feet above the bench top, shall be of smooth concrete, non-corrosive metal, or other durable impervious material, free from cracks and pits, and constructed so that drainage is complete and is directed away from the stored shellfish. Shucking blocks shall be solid, one-piece construction, removable, and easily cleanable. The stands, stalls, and stools shall be of smooth material and shall be painted with a light-colored washable paint, such as white in color, so that unclean surfaces can be detected.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. February 1, 1987;
Readopted Eff. April 1, 2024.

15A NCAC 18A .0608 EQUIPMENT CONSTRUCTION

- (a) All pails, skimmers, measures, tanks, tubs, blowers, paddles, and other equipment, that come into contact with shucked shellfish or with ice used for direct cooling of shellfish, shall be made of smooth, non-corrosive, impervious materials and constructed so as to be easily cleanable and shall be kept clean and in good repair.
- (b) All equipment, including external and internal blower lines and hoses below a point two inches above the overflow level of the tank and blower drain valves, shall be constructed as to be easily cleanable in accordance with the "Shellfish Industry Equipment Guide" referenced in Rule .0402 of this Subchapter.
- (c) The blower and skimmer drain shall not be directly connected with the sewer. There shall be an air gap between the blower and skimmer outlets. A floor drain shall be provided.
- (d) Air-pump intakes shall be located in a place protected from dirt and other contamination, and shall be equipped with filters.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. February 1, 1987;
Amended Eff. September 1, 1990;
Readopted Eff. April 1, 2024.

15A NCAC 18A .0609 SANITIZING EQUIPMENT

Washing and sanitizing facilities, including a three-compartment wash sink of adequate size to wash the largest utensils used in the shucking and packing plant, shall be provided in a section of the plant so that it can service the work areas. The sink shall be kept in good repair. Permanent hot and cold water connections, with combination supply faucets, shall be installed so that all vats may receive hot and cold water. Either steam, hot water, or a sanitizing solution shall be used to sanitize utensils and equipment.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. February 1, 1987;
Amended Eff. December 1, 1987;
Readopted Eff. April 1, 2024.

15A NCAC 18A .0610 EQUIPMENT SANITATION

All utensils and tools, such as opening knives, shucking pails, measures, skimmers, colanders, tanks, tubs, paddles, and containers that come in contact with shellfish shall be thoroughly cleaned and then sanitized by:

- (1) steam in a steam chamber or box equipped with an indicating thermometer located in the coldest zone, by exposure to a temperature of 170°F for at least 15 minutes, or to a temperature of 200°F for at least five minutes;
- (2) immersion in hot water at a temperature of 170°F for at least two minutes;
- (3) immersion for at least one minute in, or exposure for at least one minute to a constant flow of, a solution containing not less than 100 parts per million chlorine residual. Utensils and equipment that must be washed in place shall require washing, rinsing, and sanitizing; or
- (4) other equivalent products and procedures approved in 21 CFR 178.1010, which is incorporated by reference, including subsequent amendments and editions. A copy of the reference material can be found at <https://www.ecfr.gov/current/title-21/chapter-I/subchapter-B/part-178/subpart-B/section-178.1010>, at no cost.

A testing method or equipment shall be available and used to test chemical sanitizers to ensure minimum prescribed strengths.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. February 1, 1987;
Readopted Eff. April 1, 2024.

15A NCAC 18A .0611 EQUIPMENT STORAGE

Equipment and utensils that have been cleaned and sanitized shall be stored in a manner to prevent contamination.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. February 1, 1987;
Readopted Eff. April 1, 2024.

15A NCAC 18A .0612 ICE

- (a) Ice shall be obtained from a water supply approved by the Division of Marine Fisheries pursuant to Rule .0413 of this Subchapter and shall be stored and handled in a manner to prevent contamination and keep the ice clean.
- (b) All equipment used in the handling of ice shall be used for no other purpose and shall be cleaned and sanitized at least once each day the facility is in operation.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. February 1, 1987;
Readopted Eff. April 1, 2024.

15A NCAC 18A .0613 SHELLFISH SHUCKING

- (a) Shellfish shall be shucked in a manner to prevent contamination. Shellstock shall be free of excessive sediment prior to being shucked. Only live shellstock shall be shucked.
- (b) Shucking of shellstock shall only be permitted on shucking tables or benches in accordance with Rules .0402 and .0607 of this Subchapter. Floors shall not be used for the storage of shellfish or the retention of shucking pails or other food contact containers.
- (c) When shellstock are stored in the shucking room, protection shall be provided for the storage space to prevent the shellstock from becoming adulterated from wash water wastes and from the feet of the employees.
- (d) Shucking pails shall be placed so as to exclude the drippings from shells and from the hands of shuckers. The pails shall be rinsed with running tap water before each filling.
- (e) Shucked shellfish shall be washed on a skimmer or a container approved by the Division of Marine Fisheries with cold running water from a source in accordance with Rule .0413 of this Subchapter.
- (f) The return of excess shucked shellfish from the packing room shall not be allowed. All shucked shellfish shall be packed before it leaves the packing room.
- (g) If blowers are used for cleansing, the total time that shellfish are in contact with water after leaving the shucker, including the time of washing, rinsing, and any other contact with water, shall not be more than 30 minutes. In computing the time of contact with water, the length of time that shellfish are in contact with water that is agitated shall be calculated at twice the actual length of time that the shellfish are in contact with the water. Before packing into containers for shipment or delivery for consumption, the shellfish shall be drained. Shellfish shall be packed without any added substance.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. February 1, 1987;
Amended Eff. September 1, 1990;
Readopted Eff. April 1, 2024.

15A NCAC 18A .0614 CONTAINERS

- (a) Containers used for transporting shucked shellfish shall be made from food-safe materials. These containers shall not be reused for packing shellfish.
- (b) The shucker-packer's or repacker's name and address and certification number shall be permanently and visibly recorded on the label of each container used for shucked shellfish.
- (c) Any container of shucked shellfish that has a capacity of 64 fluid ounces or more shall include the words "DATE SHUCKED" followed by the date shucked permanently recorded on the lid and sidewall or bottom of the container. The date shall consist of either the abbreviation for the month and number of the day of the month or the Julian format (YDDD), the last digit of the four-digit year and the three-digit number corresponding to the day of the year.
- (d) Any container of shucked shellfish that has a capacity of less than 64 fluid ounces shall include the words "SELL BY" or "BEST IF USED BY" followed by a date when the product will reach the end of its projected shelf life. The date shall consist of the abbreviation for the month and number of the day of the month.

- (e) For fresh frozen shellfish, the year shall be added to the date for non-Julian format. If fresh frozen, the container shall be labeled as frozen in equal size type immediately adjacent to the type of shellfish. If a frozen container of shucked shellfish is thawed and repacked, the container shall be labeled as previously frozen.
- (f) Each container of shucked shellfish shall include a consumer advisory. The following statement, or an equivalent statement, shall be included on all containers: "Consuming raw or undercooked meats, poultry, seafood, shellfish, or eggs may increase your risk of foodborne illness, especially if you have certain medical conditions."
- (g) No person shall use containers bearing a certification number other than the number assigned to him or her.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. February 1, 1987;
Amended Eff. August 1, 1998; February 1, 1997; December 1, 1987;
Readopted Eff. April 1, 2024.

15A NCAC 18A .0615 SHELLFISH COOLING

- (a) For shellstock that has not been refrigerated prior to processing, shucked meats and in-shell product shall be chilled to an internal temperature of 45°F or less within three hours of shucking or processing.
- (b) For shellstock that has been refrigerated prior to processing, shucked meats and in-shell product shall be chilled to an internal temperature of 45°F or less within four hours after removal from refrigeration.
- (c) If heat shock is used, once shellstock is shucked, the shucked shellfish meats shall be cooled to an internal temperature of 45°F or less within two hours from the time of heat shock.
- (d) Shucked and packed shellfish shall be stored in covered containers at an ambient temperature of 45°F or less or covered in ice.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. February 1, 1987;
Amended Eff. April 1, 1997;
Readopted Eff. April 1, 2024.

15A NCAC 18A .0616 SHELLFISH FREEZING

- (a) If shellfish are to be frozen, they shall be frozen within three days of shucking and packing. Containers of frozen shellfish shall be labeled in accordance with Rule .0614 of this Section.
- (b) A temperature of 0°F or less shall be maintained in the frozen storage rooms.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. February 1, 1987;
Amended Eff. April 1, 1997; December 1, 1987;
Readopted Eff. April 1, 2024.

15A NCAC 18A .0617 SHIPPING

History Note: Authority G.S. 130A-230;
Eff. February 1, 1987;
Amended Eff. April 1, 1997;
Repealed Eff. April 1, 2024.

15A NCAC 18A .0618 HEAT SHOCK METHOD OF PREPARATION OF SHELLFISH

- (a) If a shucking and packing plant uses the heat shock process, it shall be done in a separate room adjacent to the shellstock storage room and the shucking room.
- (b) The heat shock tank shall be constructed of smooth, non-corrosive metal, designed to drain completely and to be easily cleanable.
- (c) All heat shock tanks shall be equipped with booster heaters that are thermostatically controlled.
- (d) All shellstock subjected to the heat shock process shall be washed with flowing potable water immediately prior to the heat shock operation.
- (e) During the heat shock process the water shall be maintained at not less than 140°F or more than 150°F. An accurate thermometer shall be available and used to determine the temperature during the heat shock process.

- (f) Nothing in this Rule shall be construed to prohibit any other process that has been found by the Division of Marine Fisheries to be equally effective.
- (g) At least eight gallons of heat shock water shall be maintained in the tank for each one-half bushel of shellstock being treated. All water used in the heat shock process shall be from a source approved by the Division in accordance with Rule .0413 of this Subchapter.
- (h) Immediately after the heat shock process, all treated shellstock shall be subjected to a cool-down with flowing potable water. All heat-shocked shellstock shall be handled in a manner to prevent the product from becoming adulterated. Shellfish that have been subjected to the heat shock process shall be cooled to an internal temperature of 45°F or below within two hours after this process and shall be placed in storage at 45°F or below.
- (i) At the close of each day's operation, the heat shock tank shall be completely emptied of all water, mud, and detritus, and cleaned and then rinsed with flowing potable water.
- (j) All heat shock tanks shall be sanitized immediately before starting each day's operation.
- (k) The procedure for the heat shock process shall be posted in a location that can be viewed by employees to help ensure the correct procedure can be followed.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. February 1, 1987;
Amended Eff. August 1, 2002; August 1, 1998; February 1, 1997; September 1, 1990;
Readopted Eff. April 1, 2024.

15A NCAC 18A .0619 REPACKING OF SHELLFISH

- (a) If repacking is practiced, it shall be conducted in accordance with all the requirements for shucking and packing plants in the rules of this Section except for requirements related to shucking.
- (b) The shucked shellfish to be repacked shall be received at the repacking plant at a temperature of 45°F or less.
- (c) Shellfish shall not be repacked more than one time.
- (d) The temperature of the shellfish shall not exceed an internal temperature of 45°F for more than two hours during the repacking process.
- (e) Containers of repacked shellfish shall be repacked and labeled in accordance with Rule .0614 of this Section, except that the original date of shucking shall be added to the new repacked container or the original date of shucking shall be used in establishing the "SELL BY" or "BEST IF USED BY" date.
- (f) Repackers shall keep records indicating the source from which shellfish were purchased, the date packed, the date of purchase, and the names and addresses of shellfish dealers to whom shellfish were sold.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. February 1, 1987;
Amended Eff. December 1, 1987;
Readopted Eff. April 1, 2024.

15A NCAC 18A .0620 SHELLFISH THAWING AND REPACKING

- (a) If frozen shellfish are thawed, they shall be thawed at a temperature of 45°F or less.
- (b) Shellfish held for thawing shall be separated from other shellfish.
- (c) Thawed shellfish shall not exceed 45°F for more than two hours during the repacking process.
- (d) Containers of repacked, thawed shellfish shall be labeled as required in Rule .0619 of this Section and shall also be labeled as "PREVIOUSLY FROZEN", or equivalent.
- (e) Thawed shellfish that remain in original containers shall be labeled as required in Rule .0614 of this Section and shall also be labeled as "PREVIOUSLY FROZEN", or equivalent.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. April 1, 1997;
Readopted Eff. April 1, 2024.

15A NCAC 18A .0621 RECALL PROCEDURE

History Note: Authority G.S. 130A-230;
Eff. August 1, 1998;

Repealed Eff. April 1, 2024.

SECTION .0700 – OPERATION OF DEPURATION (MECHANICAL PURIFICATION) FACILITIES

Rules .0701 - .0713 of Title 15A Subchapter 18A of the North Carolina Administrative Code (T15A.18A .0701 - .0713); has been transferred and recodified from Rules .1201 - .1213 of Title 10 Subchapter 10B of the North Carolina Administrative Code (T10.10B .1201 - .1213), effective April 4, 1990.

15A NCAC 18A .0701 REQUIREMENTS FOR DEPURATION

(a) In addition to and to the extent not inconsistent with other applicable provisions of North Carolina Marine Fisheries Commission rules, requirements for depuration shall be in accordance with the 2019 Revision of the National Shellfish Sanitation Program (NSSP) Guide for the Control of Molluscan Shellfish chapter titled "Depuration", which is incorporated by reference, not including subsequent amendments and editions. A copy of the reference material is available online at: <https://www.fda.gov/food/federalstate-food-programs/national-shellfish-sanitation-program-nssp>, at no cost.

(b) All laboratory analyses used to evaluate the effectiveness of the depuration process shall be performed by a laboratory found by a Food and Drug Administration (FDA) Shellfish Laboratory Evaluation Officer or by an FDA-certified State Shellfish Laboratory Evaluation Officer to conform or provisionally conform to the requirements established under the National Shellfish Sanitation Program (NSSP).

(c) If a method is needed for the analysis of depuration process water and shellfish that are used to evaluate the effectiveness of the depuration process and no method approved for use within the NSSP exists, the following may be used:

- (1) a validated Association of Analytical Communities, Bacteriological Analysis Manual, or Environmental Protection Agency method; or
- (2) an Emergency Use Method as set forth in the latest approved edition of the NSSP Guide for the Control of Molluscan Shellfish.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. February 1, 1987;
Readopted Eff. April 1, 2024.

15A NCAC 18A .0702 FACILITY SUPERVISION

15A NCAC 18A .0703 FACILITY DESIGN AND SANITATION

History Note: Authority G.S. 130A-230;
Eff. February 1, 1987;
Repealed Eff. April 1, 2024.

15A NCAC 18A .0704 LABORATORY PROCEDURES

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. February 1, 1987;
Amended Eff. September 1, 1991; September 1, 1990;
Readopted Eff. May 1, 2021;
Repealed Eff. April 1, 2024.

15A NCAC 18A .0705 FACILITY OPERATIONS

15A NCAC 18A .0706 SHELLFISH SAMPLING PROCEDURES

15A NCAC 18A .0707 DEPURATION PROCESS WATER CONTROL - SAMPLING PROCEDURES

15A NCAC 18A .0708 DEPURATION TREATMENT PROCESS WATER - STANDARDS

15A NCAC 18A .0709 DEPURATION - SHELLFISH MEAT STANDARDS

15A NCAC 18A .0710 ULTRAVIOLET UNIT

15A NCAC 18A .0711 SHELLSTOCK STORAGE

15A NCAC 18A .0712 DEPURATION - TAGGING AND RELEASE OF SHELLFISH

15A NCAC 18A .0713 DEPURATION - RECORDS

History Note: Authority G.S. 130A-230;

Eff. February 1, 1987;
Amended Eff. September 1, 1990; December 1, 1987;
Repealed Eff. April 1, 2024.

SECTION .0800 – WET STORAGE OF SHELLSTOCK

Rules .0801 - .0806 of Title 15A Subchapter 10B of the North Carolina Administrative Code (T15A.10B .0801 - .0806); has been transferred and recodified from Rules .1301 - .1306 of Title 10 Subchapter 10B of the North Carolina Administrative Code (T10.10B .1301 -.1306), effective April 4, 1990.

15A NCAC 18A .0801 REQUIREMENTS FOR WET STORAGE OF SHELLSTOCK

(a) In addition to and to the extent not inconsistent with other applicable provisions of North Carolina Marine Fisheries Commission Rules, requirements for wet storage shall be in accordance with the 2019 Revision of the National Shellfish Sanitation Program (NSSP) Guide for the Control of Molluscan Shellfish (hereinafter referred to as "Model Ordinance") chapter titled "Wet Storage in Approved and Conditionally Approved Growing Areas", which is incorporated by reference except as provided in Paragraph (b) of this Rule, not including subsequent amendments and editions. A copy of the reference material is available online at: <https://www.fda.gov/food/federalstate-food-programs/national-shellfish-sanitation-program-nssp>, at no cost.

(b) Amendments and exceptions to the Model Ordinance chapter titled "Wet Storage in Approved and Conditionally Approved Growing Areas" incorporated by reference include:

- (1) Section @.01, .04, C(1)(a) is amended to read: "Except for a water source in accordance with Rule .0413 of this Subchapter, the quality of the surface source water prior to treatment shall meet, at a minimum, the bacteriological standards for the conditionally approved classification in the open status. Water classified as prohibited or restricted shall not be used as source water."
- (2) the following sections are not incorporated by reference and shall not apply: Sections @.01, .04, C(2)(a)(ii), @.01, .04, C(2)(b), @.01, .04, C(2)(c), and @.01, .04, C(2)(d).

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. February 1, 1987;
Readopted Eff. April 1, 2024.

15A NCAC 18A .0802 PLANT DESIGN: SANITATION: AND WET STORAGE
15A NCAC 18A .0803 WET STORAGE WATER
15A NCAC 18A .0804 SHELLSTOCK CLEANING
15A NCAC 18A .0805 WET STORAGE TANKS
15A NCAC 18A .0806 SHELLSTOCK CONTAINERS

History Note: Authority G.S. 130A-230;
Eff. February 1, 1987;
Repealed Eff. April 1, 2024.

SECTION .0900 - CLASSIFICATION OF SHELLFISH GROWING WATERS

15A NCAC 18A .0901 DEFINITIONS

The following definitions shall apply to this Section.

- (1) "Approved" means shellfish growing waters determined suitable by the Division for the harvesting of shellfish for direct market purposes.
- (2) "Closed-system marina" means a marina constructed in canals, basins, tributaries, or any other area with restricted tidal flow.
- (3) "Colony forming unit" means an estimate of the number of viable bacteria cells in a sample as determined by a plate count.
- (4) "Commercial marina" means a marina that offers one or more of the following services: fuel, transient dockage, haul-out facilities, or repair services.
- (5) "Conditionally approved" means shellfish growing waters that meet the criteria in 15A NCAC 18A .0905 that may be used for harvesting shellfish for direct market purposes when management plan criteria are met.

- (6) "Division" means the Division of Marine Fisheries or its authorized agent.
- (7) "Estimated 90th percentile" means a statistic that measures the variability in a sample set that shall be calculated by:
 - (a) calculating the arithmetic mean and standard deviation of the sample result logarithms (base 10);
 - (b) multiplying the standard deviation in Sub-Item (a) of this Item by 1.28;
 - (c) adding the product from Sub-Item (b) of this Item to the arithmetic mean; and
 - (d) taking the antilog (base 10) of the results from Sub-Item (c) of this Item to determine the estimated 90th percentile.
- (8) "Fecal coliform" means bacteria of the coliform group that will produce gas from lactose in a multiple tube procedure liquid medium (EC or A-1) within 24 plus or minus two hours at 44.5° C plus or minus 0.2° C in a water bath.
- (9) "Geometric mean" means the antilog (base 10) of the arithmetic mean of the sample result logarithm.
- (10) "Marina" means any water area with a structure, such as a dock, basin, or floating dock, that is utilized for docking or otherwise mooring vessels and constructed to provide temporary or permanent docking space for more than 10 boats.
- (11) "Marine biotoxins" means any poisonous compound produced by marine microorganisms and accumulated by shellstock.
- (12) "Median" means the middle number in a given sequence of numbers, taken as the average of the two middle numbers when the sequence has an even number of numbers.
- (13) "Most probable number (MPN)" means a statistical estimate of the number of bacteria per unit volume and is determined from the number of positive results in a series of fermentation tubes.
- (14) "National Shellfish Sanitation Program (NSSP)" means the federal and state cooperative program recognized by the U.S. Food and Drug Administration (FDA) and the Interstate Shellfish Sanitation Conference (ISSC) for the sanitary control of shellfish produced and sold for human consumption.
- (15) "Open-system marina" means a marina constructed in an area where tidal currents have not been impeded by natural or man-made barriers.
- (16) "Private marina" means any marina that is not a commercial marina as defined in this Rule.
- (17) "Prohibited" means shellfish growing waters unsuitable for the harvesting of shellfish for direct market purposes.
- (18) "Public health emergency" means any condition that may immediately cause shellfish waters to be unsafe for the harvest of shellfish for human consumption.
- (19) "Restricted" means shellfish growing waters from which shellfish may be harvested only by permit and are subjected to a treatment process through depuration that renders the shellfish safe for human consumption.
- (20) "Sanitary survey" means the written evaluation of factors that affect the sanitary quality of a shellfish growing area including sources of pollution, the effects of wind, tides, and currents in the distribution and dilution of polluting materials, and the bacteriological quality of water.
- (21) "Shellfish" means the term as defined in G.S. 113-129, except the term shall not include scallops when the final product is the shucked adductor muscle only.
- (22) "Shellfish growing area" means a management unit that defines the boundaries of a sanitary survey and that is used to track the location where shellfish are harvested.
- (23) "Shellfish growing waters" means marine or estuarine waters that support or could support shellfish life.
- (24) "Shellstock" means live molluscan shellfish in the shell.
- (25) "Shoreline survey" means an in-field inspection by the Division to identify and evaluate any potential or actual pollution sources or other environmental factors that may impact the sanitary quality of a shellfish growing area.
- (26) "Systematic random sampling strategy" means a sampling strategy designed to assess the bacteriological water quality of shellfish growing waters impacted by non-point sources of pollution and scheduled sufficiently far in advance to support random collection with respect to environmental conditions.

*History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. June 1, 1989;
Amended Eff. August 1, 1998; February 1, 1997; September 1, 1990;
Readopted Eff. May 1, 2021;
Amended Eff. March 24, 2025.*

15A NCAC 18A .0902 CLASSIFICATION OF SHELLFISH GROWING WATERS

(a) All shellfish growing waters shall be classified by the Division of Marine Fisheries as to their suitability for shellfish harvesting. Shellfish growing waters shall be designated with one of the following classifications:

- (1) approved;
- (2) conditionally approved;
- (3) restricted; or
- (4) prohibited.

(b) Maps showing the classification of shellfish growing waters shall be maintained by the Division.

*History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. June 1, 1989;
Readopted Eff. May 1, 2021.*

15A NCAC 18A .0903 SANITARY SURVEY

(a) Shellfish growing waters shall be divided into shellfish growing areas by the Division of Marine Fisheries. Maps showing the boundaries of these shellfish growing areas shall be maintained by the Division and can be found at: <https://deq.nc.gov/polluted-area-proclamations>.

(b) Except in shellfish growing areas where all shellfish growing waters are classified as prohibited, the Division shall complete a sanitary survey report for each shellfish growing area at least once every three years.

(c) A sanitary survey report shall include the following:

- (1) a shoreline survey.
- (2) an evaluation of meteorological, hydrodynamic, and geographic factors that may affect distribution of pollutants.
- (3) a microbiological survey to assess water quality. A microbiological survey shall include the collection of water samples and their analysis for fecal coliforms. The number and location of sampling stations shall be selected to produce the data necessary to effectively evaluate all point and non-point pollution sources identified during the shoreline survey. A minimum of six samples shall be collected annually from each designated sampling station.
- (4) a determination of the appropriate classification for all shellfish growing waters within the shellfish growing area in accordance with Rule .0902 of this Section.

(d) A sanitary survey report shall be required to designate any portion of a shellfish growing area with a classification other than prohibited, or for a reclassification from:

- (1) prohibited to any other classification;
- (2) restricted to conditionally approved or approved; or
- (3) conditionally approved to approved.

All other reclassifications may be made without a sanitary survey.

(e) In each calendar year that a shellfish growing area is not evaluated with a sanitary survey, a written annual evaluation report shall be completed by the Division and shall include the following:

- (1) a microbiological survey to assess water quality as set forth in Subparagraph (c)(3) of this Rule.
- (2) an evaluation of changes in pollution source impacts that may affect the classifications of the shellfish growing area.

If the annual evaluation determines conditions have changed and a classification for shellfish growing waters is incorrect, the Division shall initiate action to reclassify the shellfish growing waters in accordance with Rule .0902 of this Section.

(f) Sanitary survey reports and annual evaluation reports shall be maintained by the Division.

*History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. June 1, 1989;
Readopted Eff. May 1, 2021.*

15A NCAC 18A .0904 APPROVED WATERS

Shellfish growing waters classified as approved for shellfish harvesting shall meet the following criteria as indicated by a sanitary survey, as set forth in Rule .0903 of this Section:

- (1) the shoreline survey indicates there are no significant point sources of pollution;
- (2) the area is not contaminated with fecal material, pathogenic microorganisms, poisonous or deleterious substances, or marine biotoxins that may render consumption of the shellfish hazardous; and

- (3) the microbiological survey, as set forth in Rule .0903(c)(3) of this Section, indicates the bacteriological water quality does not exceed the following standards based on results generated using the systematic random sampling strategy:
 - (a) a median fecal coliform most probable number (MPN) or geometric mean MPN of 14 per 100 milliliters;
 - (b) a median fecal coliform colony-forming units (CFU) or geometric mean CFU of 14 per 100 milliliters;
 - (c) an estimated 90th percentile of 43 MPN per 100 milliliters for a five-tube decimal dilution test; or
 - (d) an estimated 90th percentile of 31 CFU per 100 milliliters for a membrane filter membrane-Thermotolerant Escherichia coli (mTEC) test.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. June 1, 1989;
Readopted Eff. May 1, 2021.

15A NCAC 18A .0905 CONDITIONALLY APPROVED WATERS

(a) Shellfish growing waters may be classified as conditionally approved if the Division of Marine Fisheries determines the following:

- (1) the sanitary survey indicates the shellfish growing waters will not meet the approved waters classification criteria as set forth in Rule .0904 of this Section under all conditions, but will meet those criteria under certain conditions;
- (2) the conditions when the shellfish growing waters will meet the approved waters classification criteria are known and predictable;
- (3) the public bottom within those shellfish growing waters support a population of harvestable shellfish; and
- (4) staff are available to carry out the requirements defined in the management plan, as set forth in Paragraph (b) of this Rule.

(b) A written management plan shall be developed by the Division for conditionally approved areas. This plan shall define the conditions under which the shellfish growing waters may be open to the harvest of shellfish. If the conditions defined in the management plan are not met, the Division shall immediately close the shellfish growing waters to shellfish harvesting.

(c) All conditionally approved growing waters shall be re-evaluated on an annual basis. A written report summarizing this re-evaluation shall be produced and shall include the following:

- (1) an evaluation of compliance with management plan criteria;
- (2) a review of the cooperation of all persons involved;
- (3) an evaluation of bacteriological water quality in the growing waters with respect to the standards for the classification; and
- (4) an evaluation of critical pollution sources.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. June 1, 1989;
Readopted Eff. May 1, 2021.

15A NCAC 18A .0906 RESTRICTED AREAS

(a) Shellfish growing waters may be classified as restricted if:

- (1) a sanitary survey indicates there are no sources of pollution that would cause fecal pollution, human pathogens, or poisonous or deleterious substances in shellstock to exceed levels that can be made safe for human consumption by either relaying or depuration; and
- (2) levels of fecal pollution, human pathogens, or poisonous or deleterious substances are at such levels that shellstock can be made safe for human consumption by either relaying or depuration.

(b) Depuration of shellfish shall be conducted in accordance with all applicable rules, including 15A NCAC 03K and 15A NCAC 18A .0300 and .0700.

(c) For shellfish growing waters classified as restricted and used as a source of shellstock for depuration, the microbiological survey, as set forth in Rule .0903(c)(3) of this Section, shall indicate the bacteriological water quality does not exceed the following standards based on results generated using the systematic random sampling strategy:

- (1) a median fecal coliform most probable number (MPN) or geometric mean MPN of 88 per 100 milliliters;
- (2) a median fecal coliform colony-forming units (CFU) or geometric mean CFU of 88 per 100 milliliters;

- (3) an estimated 90th percentile of 260 MPN per 100 milliliters for a five-tube decimal dilution test; or
- (4) an estimated 90th percentile of 163 CFU per 100 milliliters for a membrane filter membrane-Thermotolerant Escherichia coli (mTEC) test.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. June 1, 1989;
Readopted Eff. May 1, 2021;
Amended Eff. March 24, 2025.

15A NCAC 18A .0907 PROHIBITED WATERS

Shellfish growing waters shall be classified as prohibited if:

- (1) no current sanitary survey, as set forth in Rule .0903 of this Section, exists for the growing area; or
- (2) the sanitary survey determines:
 - (a) the shellfish growing waters are adjacent to a sewage treatment plant outfall or other point source outfall with public health significance; or
 - (b) the shellfish growing waters are contaminated with fecal material, pathogenic microorganisms, poisonous or deleterious substances, or marine biotoxins that render consumption of shellfish from those growing waters hazardous.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. June 1, 1989;
Readopted Eff. May 1, 2021.

15A NCAC 18A .0908 UNSURVEYED AREAS

History Note: Authority G.S. 130A-230;
Eff. June 1, 1989;
Repealed Eff. May 1, 2021.

15A NCAC 18A .0909 BUFFER ZONES

- (a) The Division of Marine Fisheries shall establish a buffer zone around the following:
 - (1) marinas, in accordance with Rule .0911 of this Section; and
 - (2) wastewater treatment plant outfalls or other point source outfalls determined to be of public health significance, in accordance with the latest approved edition of the National Shellfish Sanitation Program Guide for the Control of Molluscan Shellfish, Section II: Model Ordinance, Chapter IV: Shellstock Growing Areas, which is incorporated by reference, including subsequent amendments and editions, and available at <https://www.fda.gov/food/federalstate-food-programs/national-shellfish-sanitation-program-nssp> at no cost.
- (b) Buffer zones shall be classified as prohibited.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. June 1, 1989;
Readopted Eff. May 1, 2021.

15A NCAC 18A .0910 RECLASSIFICATION

History Note: Authority G.S. 130A-230;
Eff. June 1, 1989;
Repealed Eff. May 1, 2021.

15A NCAC 18A .0911 MARINAS, DOCKING FACILITIES, AND OTHER MOORING AREAS

The Division of Marine Fisheries shall classify shellfish growing waters with respect to marinas, docking facilities, and other mooring areas as follows:

- (1) the Division shall classify all waters within a marina as prohibited to the harvesting of shellfish for human consumption; and

- (2) the Division shall conduct a dilution analysis, in the form of a volumetric calculation or in-field hydrographic study, to determine the volume of water necessary to dilute the concentration of fecal coliform bacteria to less than 14 MPN. The Division shall classify the water area determined by this dilution analysis as prohibited to the harvesting of shellfish for human consumption. The Division shall conduct the dilution analysis yearly and shall incorporate the following:
- (a) the findings of the shoreline survey, including the presence of a sewage pumpout system or dump station;
 - (b) the physical factors influencing the dilution and dispersion of human wastes; and
 - (c) for marinas, docking facilities, and mooring areas in close proximity to one another, slip counts and services shall be combined for the purposes of the dilution analysis. Marinas, docking facilities, and mooring areas, each with three slips or more, shall be considered to be in close proximity to one another if the dilution analysis for each individual facility indicates that the dilution areas meet or overlap.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. June 1, 1989;
Amended Eff. July 1, 1993;
Readopted Eff. June 1, 2023.

15A NCAC 18A .0912 SHELLFISH MANAGEMENT AREAS

History Note: Authority G.S. 130A-230;
Eff. June 1, 1989;
Repealed Eff. June 1, 2022.

15A NCAC 18A .0913 PUBLIC HEALTH EMERGENCY

- (a) The Division of Marine Fisheries shall immediately close any potentially impacted shellfish growing waters to the harvesting of shellfish in the event of a public health emergency.
- (b) The Division may re-open shellfish growing waters if the condition causing the public health emergency no longer exists and shellfish have had time to purify naturally from possible contamination.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. June 1, 1989;
Readopted Eff. May 1, 2021.

15A NCAC 18A .0914 LABORATORY PROCEDURES

- (a) All laboratory analyses used for the evaluation of shellfish growing areas shall be performed by a laboratory found by a Food and Drug Administration (FDA) Shellfish Laboratory Evaluation Officer or by an FDA-certified State Shellfish Laboratory Evaluation Officer to conform or provisionally conform to the requirements established under the National Shellfish Sanitation Program (NSSP).
- (b) All methods for the analysis of shellfish and shellfish growing waters that are used for the evaluation of shellfish growing areas shall be cited in the latest edition of the NSSP Guide for the Control of Molluscan Shellfish, Section IV: Guidance Documents, subsection Approved NSSP Laboratory Tests, which is incorporated by reference, including subsequent amendments and editions, and available at <https://www.fda.gov/food/federalstate-food-programs/national-shellfish-sanitation-program-nssp> at no cost, or validated for use by the NSSP under the Constitution, Bylaws and Procedures of the Interstate Shellfish Sanitation Conference, which is incorporated by reference, including subsequent amendments and editions, and available at <https://www.issc.org/constitution-bylaws-procedures>, at no cost. If there is an immediate or ongoing critical need for a method and no method approved for use within the NSSP exists, the following may be used:
- (1) a validated Association of Analytical Communities, Bacteriological Analysis Manual, or Environmental Protection Agency method; or
 - (2) an Emergency Use Method as set forth in the latest approved edition of the NSSP Guide for the Control of Molluscan Shellfish.

History Note: Authority G.S. 113-134; 113-182; 113-221.2; 143B-289.52;
Eff. June 1, 1989;

*Amended Eff. September 1, 1991; September 1, 1990;
Readopted Eff. May 1, 2021.*

SECTION .1000 - SANITATION OF SUMMER CAMPS

15A NCAC 18A .1001 DEFINITIONS

The following definitions shall apply throughout this Section:

- (1) "Basecamp" means the permanent base of operations of the summer camp served by permanent connection to a public electrical service provider.
- (2) "Bathing facility" means any facility designed to wash the whole body, including a shower facility.
- (3) "Camp food service kitchen" means the interior of a camp kitchen facility at the basecamp, of permanent construction, operated and staffed by the camp employees, used to prepare food for camp attendees, employees, and guests. This term does not include an educational kitchen.
- (4) "Clean" means that an object or surface has been made free of garbage, solid waste, soil, dust, hair, dander, food, bodily fluids and secretions, and feces.
- (5) "Closed" means that a summer camp is not offering food or lodging to the public.
- (6) "Community water supply" means a community water system as defined at G.S. 130A-313(10).
- (7) "Cookout" means an organized activity staffed and operated by the summer camp at the basecamp involving outdoor cooking and dining.
- (8) "Cross-connection" means as defined in 15A NCAC 18C .0102(c)(8).
- (9) "DCDEE" means the Division of Child Development and Early Education of the North Carolina Department of Health and Human Services.
- (10) "Department" means the North Carolina Department of Health and Human Services.
- (11) "Educational kitchen" means a kitchen facility at base camp that can be operated by campers and staff for personal use or instructional purposes.
- (12) "Employee" means as defined in Part 1-2 of the Food Code incorporated by reference at 15A NCAC 18A .2650 as amended by 15A NCAC 18A .2651.
- (13) "Equipment" means as defined in Part 1-2 of the Food Code incorporated by reference at 15A NCAC 18A .2650 as amended by 15A NCAC 18A .2651. "Equipment" also includes washing machines and dryers.
- (14) "Evaluation" means an in-person visit from the regulatory authority to a summer camp for the purpose of assessing whether the summer camp will be issued a permit, or have a suspension lifted, pursuant to Rule .1004 of this Section. An evaluation does not result in a letter grade being issued.
- (15) "Garbage" means as defined at G.S. 130A-290(7).
- (16) "Good repair" means in a working safe condition. But for food service equipment and utensils, good repair means as defined at 15A NCAC 18A .2651(8).
- (17) "Inspection" means an in-person visit from the regulatory authority to an open summer camp with an active permit for the purpose of assessing the camp's sanitation pursuant to Rule .1008 of this Section. An inspection results in a letter grade being issued.
- (18) "Linen" means fabric items such as bedding, towels, cloth hampers, cloth napkins, tablecloths, wiping cloths, and work garments including cloth gloves.
- (19) "Litter" means refuse as defined in 130A-290(28).
- (20) "Local health department" means as defined in G.S. 130A-2(5).
- (21) "Non-community water supply" means a noncommunity water system as defined at G.S. 130A-313(10).
- (22) "Open" means that a summer camp is offering food or lodging to the public.
- (23) "Permanent sleeping quarters" means those buildings, cabins, platform tents, covered wagons, or teepees provided by the camp that remain in a fixed location during the camp operation session and provide overnight lodging accommodations for camp participants.
- (24) "Pest" means as defined at G.S. 143-460(26a).
- (25) "Pest harborage" means any condition that provides water or food and shelter for pests.
- (26) "Poisonous or toxic materials" means as defined in Part 1-2 of the Food Code incorporated by reference at 15A NCAC 18A .2650 as amended by 15A NCAC 18A .2651.
- (27) "Potable water" means water that is safe for human consumption.
- (28) "Public electrical service provider" means an entity that furnishes electricity for pay.
- (29) "Refuse" means as defined at G.S. 130A-290(28).
- (30) "Regulatory authority" means the Department or authorized agent of the Department.

- (31) "Responsible person" means the administrator, operator, owner, or other person in charge of the operation of the summer camp.
- (32) "Rubbish" means refuse as defined in 130A-290(28).
- (33) "Sanitarian" means the same as "Registered Environmental Health Specialist" as defined at G.S. 90A-51(4).
- (34) "Sanitize" means as defined in Part 4-7 of the Food Code incorporated by reference at 15A NCAC 18A .2650 as amended by 15A NCAC 18A .2654.
- (35) "Sewage and other liquid waste" means sewage as defined in G.S. 130A-334(13).
- (36) "Solid waste" means as defined at G.S. 130A-290(35).
- (37) "Summer camp" means those camp establishments which prepare or serve food for pay or provide overnight lodging accommodations for pay, for groups of children or adults engaged in organized recreational or educational programs. This definition does not include:
 - (a) those day camps required to obtain a license through DCDEE;
 - (b) Campgrounds or other facilities that only rent property or campsites for camping;
 - (c) Resident camps, Children's Foster Care Camps, and Residential Therapeutic (Habilitative) Camps as defined in 15A NCAC 18A .3601; or
 - (d) Primitive experience camps as defined in 15A NCAC 18A .3501.
- (38) "Summer camp premises" means the physical facilities of the summer camp, the contents of those facilities, and the contiguous land or property under the control of the permit holder or responsible person. This term does not include a camp food service kitchen facility.
- (39) "Supplemental cooking rooms" means as defined in 15A NCAC 18A .2651(20).
- (40) "Swimming pool" means a public swimming pool as defined in Section .2500 of this Subchapter.
- (41) "Time/Temperature Control for Safety Food" or "TCS Food" means as defined in Part 1-2 of the Food Code incorporated by reference at 15A NCAC 18A .2650 as amended by 15A NCAC 18A .2651.
- (42) "Toilet facility" means water closets or privies.
- (43) "Vermin" means "Pest" as defined at G.S. 143-460(26a).
- (44) "Warewashing" means as defined in Part 1-2 of the Food Code incorporated by reference at 15A NCAC 18A .2650 as amended by 15A NCAC 18A .2651.
- (45) "Wildlife" means as defined in G.S. 143-460(38).

History Note: Authority G.S. 130A-4; 130A-248;
 Eff. February 1, 1976;
 Readopted Eff. December 5, 1977;
 Amended Eff. November 1, 2002; September 1, 1990;
 Readopted Eff. April 1, 2024.

15A NCAC 18A .1002 FIELD SANITATION

- (a) Summer camps may conduct activities away from base camp provided field sanitation standards are maintained in accordance with 15A NCAC 18A .3619.
- (b) Summer camps may conduct cookouts at basecamp provided field sanitation standards are maintained in accordance with 15A NCAC 18A .3619(1) and (4) through (7), except that written procedures are not required.

History Note: Authority G.S. 130A-4; 130A-248;
 Eff. February 1, 1976;
 Readopted Eff. December 5, 1977;
 Amended Eff. September 1, 1990;
 Readopted Eff. April 1, 2024.

15A NCAC 18A .1003 STANDARDS AND APPROVAL OF PLANS

- (a) Plans drawn to scale for the proposed construction of summer camp kitchen facilities, lodging facilities, bathing facilities, and toilet facilities shall be submitted to the local health department of the county in which the camp is located. Plans and equipment specifications for construction or remodeling of a camp food service kitchen shall be submitted in accordance with the provisions of Part 8-2 of the Food Code incorporated by reference at 15A NCAC 18A .2650 as amended by 15A NCAC 18A .2658. Construction shall not be started until the plans have been approved by the local health department. The local health department shall approve, disapprove, or mark incomplete plans for summer camps within 30 days of their receipt. If

the local health department disapproves plans or marks them incomplete, the local health department shall provide written comments to the submitter informing them of what is missing or incomplete. If the local health department fails to approve, disapprove, or mark incomplete plans within 30 days of their receipt, the plans shall be deemed approved.

(b) Plans for the proposed construction or remodeling of a public swimming pool at a summer camp shall be submitted in accordance with 15A NCAC 18A .2509.

*History Note: Authority G.S. 130A-4; 130A-248;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. September 1, 1990;
Readopted Eff. April 1, 2024.*

15A NCAC 18A .1004 PERMITS

(a) No person shall operate a summer camp within the State of North Carolina who does not possess a valid permit from the Department. No summer camp permit shall be issued until an evaluation by the regulatory authority shows that the establishment complies with all rules within this Section.

(b) Summer camps shall complete and submit to the Department an Advanced Notification for Operation at least 45 days prior to the first date of operation each calendar year. The advanced notification form shall be obtained from the Department and shall include the following information:

- (1) type of camp (Summer, Resident, Primitive Experience);
- (2) date notification is submitted;
- (3) dates of operation (a calendar schedule may be attached);
- (4) the name of the camp;
- (5) the physical and billing addresses of the camp;
- (6) the name of the camp responsible person;
- (7) contact information for the responsible person including phone numbers and emails;
- (8) type of water supply;
- (9) type of wastewater system;
- (10) the capacity of the camp including campers and staff;
- (11) the date the water supply will be accessible for sampling and inspection if applicable;
- (12) the dates, prior to the first date of operation, when facilities will be inspected by camp management to ensure that:
 - (A) camp facilities are clean, and in good repair;
 - (B) camp kitchen equipment, including required refrigeration and dishwashing equipment, is clean and operational;
 - (C) camp buildings and permanent sleeping quarters are free of all bats and other vermin, wildlife, and pest harborages; and
 - (D) the camp is free from conditions which represent a threat to the public health;
- (13) list of any public swimming pools, wading pools, or water recreation attractions at the camp; and
- (14) the name, signature, and title of the person completing the form.

(c) Upon transfer of ownership of an existing summer camp, the regulatory authority shall complete an evaluation of the facility. If the establishment satisfies all the requirements of this Section, a permit shall be issued. If the establishment does not satisfy all the requirements of this Section, a permit shall not be issued. If the regulatory authority determines that the noncompliant items are related to construction or equipment items that do not represent a threat to the public health, a transitional permit may be issued. The transitional permit shall expire 180 days after the date of issuance, unless suspended or revoked before that date, and shall not be renewed. Upon expiration of the transitional permit, the permit holder or responsible person shall have corrected the noncompliant items and obtained a summer camp permit, or the summer camp shall be closed.

(d) The regulatory authority shall impose conditions on the issuance of a summer camp permit or transitional permit, if necessary, to ensure that the summer camp remains in compliance with the rules of this Section. Conditions may be specified for one or more of the following areas:

- (1) The number of persons served;
- (2) The categories of food served;
- (3) Time schedules in completing minor construction items;
- (4) Modification or maintenance of water supplies, water use fixtures and sanitary sewage systems;
- (5) Use of facilities for more than one purpose;

- (6) Continuation of contractual arrangements upon which basis the permit was issued;
- (7) Submission and approval of plans for renovation; and
- (8) Any other conditions necessary for the summer camp to remain in compliance with the Rules of this Section.

(e) A summer camp permit or transitional permit shall be immediately revoked in accordance with G.S. 130A-23(d) for failure of the facility to maintain a minimum grade of C. A permit or transitional permit may otherwise be suspended or revoked in accordance with G.S. 130A-23. If a permit or transitional permit has been suspended, the suspension shall be lifted if the regulatory authority has evaluated the establishment and found that the violations causing the suspension have been corrected. If a permit or transitional permit has been revoked, a new permit shall be issued only after the regulatory authority has evaluated the establishment and found it to comply with all applicable rules. These evaluations shall be scheduled and conducted within 15 days after the request is made by the summer camp's permit holder or responsible person.

History Note: Authority G.S. 130A-4; 130A-248;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. April 1, 1992; September 1, 1990; March 1, 1988;
Readopted Eff. April 1, 2024.

15A NCAC 18A .1005 PUBLIC DISPLAY OF GRADE CARD

Inspections of summer camps shall be made in accordance with this Section at least once during each season's operation. Upon completion of an inspection, the sanitarian shall remove the existing grade card, issue a grade card, and post the new grade card in a conspicuous place where it may be readily observed by the public upon entering the facility. The owner or operator shall be responsible for keeping the grade card posted at the location designated by the sanitarian at all times.

History Note: Authority G.S. 130A-248;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. July 1, 1986;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .1006 INSPECTIONS AND REINSPECTIONS

Upon request from the permit holder or responsible person for a reinspection for the purpose of raising the alphabetical grade of their summer camp, the regulatory authority shall make an unannounced inspection within 15 calendar days from the date of the request. If the camp is closed for the 15 calendar days following the request, the permit holder or responsible person shall inform the regulatory authority when the camp will open, and the regulatory authority shall make an unannounced inspection within 15 calendar days of when the camp opens.

History Note: Authority G.S. 130A-4; 130A-248;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Readopted Eff. April 1, 2024.

15A NCAC 18A .1007 INSPECTION FORMS

History Note: Authority G.S. 130A-248;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. September 1, 1990; June 30, 1980;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019;
Repealed Eff. April 1, 2024.

15A NCAC 18A .1008 GRADING

(a) The grading of summer camps shall be based on a system of scoring wherein summer camps receiving a score of at least 90 percent shall receive Grade A, summer camps receiving a score of at least 80 percent and less than 90 percent shall receive Grade B, and summer camps receiving a score of at least 70 percent and less than 80 percent shall receive Grade C. Permits

shall be immediately revoked in accordance with G.S. 130A-23(d) for summer camps receiving a score of less than 70 percent.

(b) The grading of summer camps shall include the grading of the summer camp premises and the camp food service kitchen, if applicable, using an inspection form provided by the Department. The form shall include the following information:

- (1) name and mailing address of the summer camp;
- (2) name of summer camp permit holder;
- (3) summer camp permit status and score given;
- (4) length of season;
- (5) number of residents;
- (6) standards of construction and operation referenced in Paragraph (c) and (d) of this Rule;
- (7) an explanation for all points deducted;
- (8) signature of the regulatory authority; and
- (9) date of the inspection.

(c) The grading of the summer camps premises shall be based on the standards of operation and construction as set forth in Rules .1002, .1010, .1011, .1013 through .1016, and .1017(f) through .1028 of this Section as follows:

- (1) Violation of Rule .1010 of this Section related to summer camp site free of actual or potential health hazards shall equal no more than three points.
- (2) Violation of Rule .1011(a), (b), or (c) of this Section related to water supply approved and no cross connections shall equal no more than four points.
- (3) Violation of Rule .1011(d) of this Section related to hot water facilities provided, hot and cold water under pressure shall equal no more than two points.
- (4) Violation of Rule .1013 of this Section related to sewage and liquid waste disposal shall equal no more than four points.
- (5) Violation of Rule .1025 of this Section related to solid waste storage and cleaning facilities shall equal no more than three points.
- (6) Violation of Rule .1024(1) or (2) of this Section related to camp building floors, walls, and ceilings properly constructed, clean, and in good repair shall equal no more than four points.
- (7) Violation of Rule .1024(3) of this Section related to lighting and ventilation adequate, clean, and in good repair shall equal no more than two points.
- (8) Violation of Rule .1016 of this Section related to lodging facilities and permanent sleeping quarters provided by the camp, properly arranged, clean, and in good repair shall equal no more than three points.
- (9) Violation of Rule .1016 of this Section related to separate storage and handling of clean and dirty linen in lodging facilities provided by the camp shall equal no more than two points.
- (10) Violation of Rule .1014(a) through (d) of this Section related to toilet, handwashing, or bathing facilities shall equal no more than four points.
- (11) Violation of Rule .1014(e) of this Section related to laundry areas and equipment clean and in good repair; soiled laundry handled and stored separately from clean laundry shall equal no more than two points.
- (12) Violation of Rule .1015 of this Section related to drinking water facilities shall equal no more than one point.
- (13) Violation of Rule .1026(b) or .1028(a) of this Section related to storage, handling, and use of pesticides, poisonous or toxic materials, and hazardous materials shall equal no more than three points.
- (14) Violation of Rule .1026(a) or (e) of this Section related to measures to exclude flies, rodents and other vermin from entry into food service areas and permanent sleeping quarters and measures to prevent pest harborages on the premises shall equal no more than three points.
- (15) Violation of Rule .1026(c) and .1028(b) of this Section related to clean camp premises, protective railings, and fences in good repair, shall equal no more than three points.
- (16) Violation of Rule .1017(f) or (g), or .1026(d) of this Section related to sanitation standards, lighting protected, and live animals not present in educational kitchen facilities shall equal no more than two points.
- (17) Violation of Rule .1002 of this Section related to field sanitation standards maintained for cookouts or activities involving food preparation or service away from base camp, and written procedures when required, shall equal no more than three points.
- (18) Violation of Rule .1023 of this Section related to the storage and handling of ice outside of a camp food service kitchen shall equal no more than two points.

(d) The grading of a camp food service kitchen shall be based solely on the standards of operation and construction set forth in Rule .1017(a) through .1017(e) of this Section as follows:

- (1) Violation of Chapter 2 of the Food Code incorporated by reference at 15A NCAC 18A .2650 as amended by 15A NCAC 18A .2652 related to person in charge present; performance of PIC duties shall equal no more than one point.
- (2) Violation of Chapter 2 of the Food Code incorporated by reference at 15A NCAC 18A .2650 as amended by 15A NCAC 18A .2652 related to management awareness, policy present; proper use of reporting, restriction, and exclusion; procedures for responding to vomiting and diarrheal events shall equal no more than two points.
- (3) Violation of Chapter 2 or 3 of the Food Code incorporated by reference at 15A NCAC 18A .2650 as amended by 15A NCAC 18A .2652 and .2653 related to proper employee eating, tasting, drinking, or tobacco use; no discharge from eyes, nose, and mouth shall equal no more than one point.
- (4) Violation of Chapter 2 of the Food Code incorporated by reference at 15A NCAC 18A .2650 as amended by 15A NCAC 18A .2652 related to hands clean and properly washed shall equal no more than three points.
- (5) Violation of Chapter 3 of the Food Code incorporated by reference at 15A NCAC 18A .2650 as amended by 15A NCAC 18A .2653 related to no bare hand contact with ready-to-eat food or approved alternate method properly followed shall equal no more than two points.
- (6) Violation of Chapters 5 or 6 of the Food Code incorporated by reference at 15A NCAC 18A .2650 as amended by 15A NCAC 18A .2655 and .2656 related to handwashing facilities supplied and accessible shall equal no more than one point.
- (7) Violation of .1017(d) or Chapter 3 or 5 of the Food Code incorporated by reference at 15A NCAC 18A .2650 as amended by 15A NCAC 18A .2653 and .2655 related to food obtained from an approved source; food received at proper temperature; food in good condition, safe, unadulterated; required records available, shellstock tags, parasite destruction; water and ice from approved source shall equal no more than three points.
- (8) Violation of Chapter 3 of the Food Code incorporated by reference at 15A NCAC 18A .2650 as amended by 15A NCAC 18A .2653 related to food separated and protected; disposition of returned, previously served, reconditioned, and unsafe food shall equal no more than two points.
- (9) Violation of Chapter 4 of the Food Code incorporated by reference at 15A NCAC 18A .2650 as amended by 15A NCAC 18A .2654 related to food-contact surfaces cleaned and sanitized shall equal no more than two points.
- (10) Violation of Chapter 3 of the Food Code incorporated by reference at 15A NCAC 18A .2650 as amended by 15A NCAC 18A .2653 related to cooking time and temperatures; pasteurized eggs used where required shall equal no more than two points.
- (11) Violation of Chapter 3 of the Food Code incorporated by reference at 15A NCAC 18A .2650 as amended by 15A NCAC 18A .2653 related to reheating procedures for hot holding shall equal no more than two points.
- (12) Violation of Chapter 3 of the Food Code incorporated by reference at 15A NCAC 18A .2650 as amended by 15A NCAC 18A .2653 related to cooling time and temperatures; proper cooling methods shall equal no more than two points.
- (13) Violation of Chapter 3 of the Food Code incorporated by reference at 15A NCAC 18A .2650 as amended by 15A NCAC 18A .2653 related to hot holding temperatures shall equal no more than two points.
- (14) Violation of Chapter 3 of the Food Code incorporated by reference at 15A NCAC 18A .2650 as amended by 15A NCAC 18A .2653 related to cold holding temperatures shall equal no more than two points.
- (15) Violation of Chapter 3 of the Food Code incorporated by reference at 15A NCAC 18A .2650 as amended by 15A NCAC 18A .2653 related to date marking and disposition shall equal no more than two points.
- (16) Violation of Chapter 3 of the Food Code incorporated by reference at 15A NCAC 18A .2650 as amended by 15A NCAC 18A .2653 related to time as a public health control procedures and records shall equal no more than two points.
- (17) Violation of Chapter 3 of the Food Code incorporated by reference at 15A NCAC 18A .2650 as amended by 15A NCAC 18A .2653 related to consumer advisory provided for raw or undercooked foods; pasteurized foods used and prohibited foods not offered shall equal no more than two points.
- (18) Violation of Chapter 3 or 7 of the Food Code incorporated by reference at 15A NCAC 18A .2650 as amended by 15A NCAC 18A .2653 and .2657 related to food additives approved and properly used; toxic substances properly identified, stored, and used shall equal no more than two points.

- (19) Violation of Chapters 3 and 4 of the Food Code incorporated by reference at 15A NCAC 18A .2650 as amended by 15A NCAC 18A .2653 and .2654 related to adequate equipment for temperature control; plant food properly cooked for hot holding; approved thawing methods used shall equal no more than two points.
 - (20) Violation of Chapter 4 of the Food Code incorporated by reference at 15A NCAC 18A .2650 as amended by 15A NCAC 18A .2654 related to thermometers provided and accurate shall equal no more than one point.
 - (21) Violation of Chapter 3 of the Food Code incorporated by reference at 15A NCAC 18A .2650 as amended by 15A NCAC 18A .2653 related to food being properly labeled or in the original container shall equal no more than one point.
 - (22) Violation of Chapters 2 and 6 of the Food Code incorporated by reference at 15A NCAC 18A .2650 as amended by 15A NCAC 18A .2652 and .2656 related to insects and rodents not present and no unauthorized animals shall equal no more than one point.
 - (23) Violation of Chapters 2, 3, 4, 6, or 7 of the Food Code incorporated by reference at 15A NCAC 18A .2650 as amended by 15A NCAC 18A .2652, .2653, .2654, .2656, and .2657 related to contamination prevented during food preparation, storage, and display, personal cleanliness, wiping cloths properly used and stored, and washing fruits and vegetables shall equal no more than two points.
 - (24) Violation of Chapters 3 and 4 of the Food Code incorporated by reference at 15A NCAC 18A .2650 as amended by 15A NCAC 18A .2653 and .2654 related to in-use utensils properly stored; utensils, equipment, and linens properly stored, dried and handled; single-use and single-service articles properly stored and used; gloves used properly shall equal no more than two points.
 - (25) Violation of Chapters 3 and 4 of the Food Code incorporated by reference at 15A NCAC 18A .2650 as amended by 15A NCAC 18A .2653 and .2654 related to equipment, food and non-food contact surfaces approved, cleanable, properly designed, constructed and used; warewashing facilities installed, maintained, used, and test strips shall equal no more than one point.
 - (26) Violation of Chapter 4 of the Food Code incorporated by reference at 15A NCAC 18A .2650 as amended by 15A NCAC 18A .2654 related to non-food contact surfaces clean shall equal no more than one point.
 - (27) Violation of Chapters 5 and 6 of the Food Code incorporated by reference at 15A NCAC 18A .2650 as amended by 15A NCAC 18A .2655 and .2656 related to hot and cold water available and adequate pressure; plumbing installed and proper backflow devices; sewage and wastewater properly disposed; toilet facilities properly constructed, supplied, and cleaned; garbage and refuse properly disposed and facilities maintained shall equal no more than two points.
 - (28) Violation of .1017(e) or Chapters 4 or 6 of the Food Code incorporated by reference at 15A NCAC 18A .2650 as amended by 15A NCAC 18A .2654 and .2656 related to physical facilities installed, maintained, and clean shall equal no more than one point.
 - (29) Violation of Rule .1017(c) regarding lighting intensity, or Chapters 4 and 6 of the Food Code incorporated by reference at 15A NCAC 18A .2650 as amended by 15A NCAC 18A .2654 and .2656 related to meets ventilation and lighting requirements and designated areas used shall equal no more than one point.
- (e) The inspection form shall be used to document points assessed for violations of the rules of this Section as set forth in Paragraph (c) and (d) of this Rule.
- (f) In filling out the inspection form, points shall be deducted only once for a single occurrence or condition existing within the summer camp. Deductions shall be based on actual violations of the rules of this Section observed during the inspection. The regulatory authority shall take zero, one-half, or a full deduction of points depending upon the severity or the recurring nature of the violation.
- (g) Water stains on walls or ceilings are not violations unless microbial growth is present.
- (h) The posted grade card shall be black on a white background on a form provided by the Department. The alphabetical and numerical rating shall be 1.5 inches in height. No other public displays representing sanitation level of the establishment may be posted by the summer camp unless approved by the regulatory authority.

History Note: Authority G.S. 130A-4; 130A-248;
 Eff. February 1, 1976;
 Readopted Eff. December 5, 1977;
 Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019;
 Amended Eff. April 1, 2024.

15A NCAC 18A .1009 STANDARDS

History Note: Authority G.S. 130A-248;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019;
Repealed Eff. April 1, 2024.

15A NCAC 18A .1010 SITE

The topography, drainage and other site factors shall be satisfactory for the camp facilities and activities, and the site shall be free of actual or potential health hazards.

History Note: Authority G.S. 130A-248;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. September 1, 1990;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .1011 WATER SUPPLY

- (a) Water supplies shall meet the requirements in 15A NCAC 18A .1700 or 15A NCAC 18C, as applicable.
- (b) For summer camps that use a non-community water supply, a sample of water shall be collected by the Department once a year and submitted to the North Carolina State Laboratory of Public Health or other laboratory certified by the North Carolina State Laboratory of Public Health under 10A NCAC 42C .0102 to perform bacteriological examinations. If the summer camp has been closed for more than 180 consecutive days during any 365-day period, the regulatory authority shall collect these samples at least 30 days and not more than 60 days prior to the camp's scheduled opening date. Failure of the regulatory authority to collect these samples at least 30 days prior to the camps scheduled opening shall not impede the opening of the camp.
- (c) A summer camp's water supply plumbing shall not include cross-connections.
- (d) Summer camps shall provide hot water heating facilities. Hot and cold running water under pressure shall be provided to food preparation areas, bathing facilities, and any other areas in which water is required for cleaning.

History Note: Authority G.S. 130A-4; 130A-248;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. September 1, 1990; July 1, 1986;
Readopted Eff. April 1, 2024.

15A NCAC 18A .1012 RECREATIONAL WATERS

When public swimming pools are provided by a summer camp, they shall meet the requirements of Section .2500 of this Subchapter.

History Note: Authority G.S. 130A-4; 130A-248;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. September 1, 1990;
Readopted Eff. April 1, 2024.

15A NCAC 18A .1013 LIQUID WASTES

All sewage and other liquid wastes shall be disposed of in a public sewer system or, in the absence of a public sewer system, by a properly operating sanitary sewage system approved by the Department.

History Note: Authority G.S. 130A-248;
Eff. February 1, 1976;
Amended Eff. July 1, 1977;
Readopted Eff. December 5, 1977;
Amended Eff. September 1, 1990; July 1, 1986;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .1014 TOILET: HANDWASHING: LAUNDRY: AND BATHING FACILITIES

(a) All summer camps shall be provided with toilet, handwashing, and bathing facilities which are available for use by employees and campers during all hours the camp is open. Toilets for campers shall be located so that the campers do not pass through a camp food service kitchen to enter the toilet rooms. Toilet facilities shall be provided at a rate of not more than 25 campers and staff per toilet seat. Toilet facilities shall be provided within 500 feet of permanent sleeping quarters and within 500 feet of every camp kitchen facility. Urinals may substitute for no more than two-thirds of toilets. The toilet facility ratio and distance requirements of this Paragraph do not apply to any structure used in the operation of the summer camp before the effective date of this Rule.

(b) Handwashing facilities with running potable water, soap, and individual towels or hand-drying devices shall be provided and located in or immediately adjacent to all flush toilet facilities. All camp kitchen facilities at basecamp shall contain at least one sink that can be used for handwashing supplied with hot and cold running water through mixing faucets, soap, and individual towels or hand-drying devices.

(c) Bathing facilities shall be provided with hot and cold potable water. Bathing facilities shall not be required for day camps where neither campers nor staff stay at the camp overnight.

(d) All toilet, handwashing, and bathing fixtures shall be kept clean and in good repair.

(e) Laundry areas and equipment, if provided, shall be kept clean and in good repair. Soiled laundry shall be handled and stored separately from clean laundry.

*History Note: Authority G.S. 130A-4; 130A-248;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. September 1, 1990;
Readopted Eff. April 1, 2024.*

15A NCAC 18A .1015 DRINKING WATER FACILITIES

Drinking water facilities shall be provided so that water can be dispensed in a sanitary manner. Drinking fountains, if provided, shall be of a sanitary angle-jet design, shall be kept clean and shall be properly regulated.

*History Note: Authority G.S. 130A-248;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.*

15A NCAC 18A .1016 LODGING FACILITIES

Permanent sleeping quarters shall provide cross ventilation, at least 30 inches between beds, a minimum of six feet between heads of sleepers and at least one bed for every camper. Only single beds or double level bunk beds shall be allowed. Lodging facilities, whether provided by the camp or by individual campers, shall be kept clean and in good repair. Clean linen and soiled linen shall be stored and handled separately and in a sanitary manner.

*History Note: Authority G.S. 130A-248;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. October 1, 1992; September 1, 1990;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.*

15A NCAC 18A .1017 FOOD SERVICE FACILITIES

(a) Summer camps that prepare or serve food for pay shall include at least one camp food service kitchen and a covered dining hall. A camp food service kitchen shall comply with the Food Code incorporated by reference at 15A NCAC 18A .2650 as amended by 15A NCAC 18A .2651-.2658 with the following exceptions:

- (1) Any TCS food required to be maintained at or below 41 degrees Fahrenheit by the provisions set forth in Part 3-501 of the Food Code incorporated by reference at 15A NCAC 18A .2650 as amended by 15A NCAC 18A .2653 may also be maintained between 41 degrees Fahrenheit and 45 degrees Fahrenheit in refrigeration equipment that is not capable of maintaining the food at 41 degrees Fahrenheit or less if:

- (A) The equipment is in place and in use in the camp food service kitchen on or before the effective date of this Rule;
- (B) On or before April 1, 2026, the equipment is upgraded or replaced to maintain food at a temperature of 5 degrees Celsius or 41 degrees Fahrenheit or less; and
- (C) Any food required to be datemarked in accordance with Part 3-501.17 of the Food Code incorporated by reference at 15A NCAC 18A .2650 as amended by 15A NCAC 18A .2653 is clearly marked to indicate the date or day by which the food shall be consumed on the premises, sold, or discarded when held at a temperature between 41 degrees Fahrenheit and 45 degrees Fahrenheit for a maximum of 4 days. The day of preparation shall be counted as Day 1;
- (2) The provisions of Part 8-405 of the Food Code incorporated by reference at 15A NCAC 18A .2650 as amended by 15A NCAC 18A .2658 shall not apply to camp food service kitchens;
- (3) The lighting intensity requirements set forth in Part 6-303.11 of the Food Code incorporated by reference at 15A NCAC 18A .2650 as amended by 15A NCAC 18A .2656 shall not apply;
- (4) Nothing in these Rules shall prohibit family style service where patrons elect to participate in the family dining-table type of service;
- (5) For all equipment, except warewashing equipment, non-commercial equipment in good repair shall be allowed in a camp food service kitchen;
- (6) When only single-service eating and drinking utensils are used, a sink with at least two-compartments meeting the requirements set forth in Chapter 4 of the Food Code incorporated by reference at 15A NCAC 18A .2650 as amended by 15A NCAC 18A .2654 shall be acceptable as the camp food service kitchen warewashing sink;
- (7) The provisions of Part 2-102 of the Food Code incorporated by reference at 15A NCAC 18A .2650 as amended by 15A NCAC 18A .2652 shall not apply; and
- (8) The following provisions of the Food Code incorporated by reference at 15A NCAC 18A .2650 as amended by 15A NCAC 18A .2651 -.2658 shall be effective for summer camps beginning April 1, 2025:
 - (A) Part 2-103.11 Person In Charge;
 - (B) Part 2-201 Responsibilities of Permit Holder, Person in Charge, Food Employees, and Conditional Employees;
 - (C) Part 4-302.13(B) Temperature Measuring Devices, Mechanical Warewashing; and
 - (D) Part 2-501.11 Clean-up of Vomiting and Diarrheal Events.
- (b) After April 1, 2026, all TCS food in camp food service kitchens shall be held in accordance with the provisions of Part 3-501 of the Food Code incorporated by reference at 15A NCAC 18A .2650 as amended by 15A NCAC 18A .2653 with no allowance for cold holding above 41 degrees Fahrenheit.
- (c) Camp food service kitchens shall be illuminated by natural or artificial means.
- (d) If camp food service is provided by contract with an outside person or operated by an outside company, the responsibility for compliance with food service sanitation requirements remains with the permit holder. The permit holder shall confirm that all food provided by an outside person or company complies with the requirements of Part 3-201.11 of the Food Code incorporated by reference at 15A NCAC 18A .2650 as amended by 15A NCAC 18A .2653.
- (e) Supplemental cooking rooms shall be allowed in summer camps. Supplemental cooking rooms shall comply with the standards set forth in 15A NCAC 18A .2664 except that the lighting intensity requirements in Item (7) of that Rule shall not apply.
- (f) Educational kitchens may be operated with non-commercial utensils and equipment. Notwithstanding the provisions set forth in this Section, field sanitation standards set forth in 15A NCAC 18A .3619 shall be met in educational kitchens.
- (g) The lighting in any educational kitchen, food preparation area, or food storage area shall comply with Part 6-202.11 of the Food Code incorporated by reference at 15A NCAC 18A .2650 as amended by 15A NCAC 18A .2656.

History Note: Authority G.S. 130A-4; 130A-248;
 Eff. February 1, 1976;
 Readopted Eff. December 5, 1977;
 Amended Eff. September 1, 1990;
 Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019;
 Amended Eff. April 1, 2024.

15A NCAC 18A .1018 FOOD SERVICE UTENSILS AND EQUIPMENT
15A NCAC 18A .1019 FOOD SUPPLIES

15A NCAC 18A .1020 SHELLFISH
15A NCAC 18A .1021 MILK AND MILK PRODUCTS
15A NCAC 18A .1022 FOOD PROTECTION

History Note: Authority G.S. 130A-248;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. October 1, 1993; September 1, 1990; July 1, 1984;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019;
Repealed Eff. April 1, 2024.

15A NCAC 18A .1023 ICE HANDLING

Ice shall be handled, transported, stored, and dispensed in such a manner as to be protected from contamination. If block ice is used, outer surfaces shall be thoroughly rinsed before crushing. Ice crushers, buckets, containers and scoops shall be kept clean and shall be stored and handled in a sanitary manner. Facilities for the making and storage of ice shall be kept clean and in good repair and shall be so located as to be protected from the elements, splash, drip, dust, vermin, and other contamination, and from use by unauthorized personnel.

History Note: Authority G.S. 130A-248;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .1024 CONSTRUCTION AND MAINTENANCE REQUIREMENTS

All camp buildings shall be of sound construction, shall comply with the North Carolina Building Code, Volume I, II, shall be kept clean and in good repair and shall comply with the following specific requirements:

- (1) All floors shall be of such materials and so constructed as to be easily cleanable, shall be kept free of obstacles to cleaning and shall be kept clean and in good repair. The floor area shall be sufficient to accommodate all necessary operations. Floors in the rooms used for the handling, storage, and preparation of food; rooms in which utensils are washed; walk-in refrigerators; dressing or locker rooms; laundry rooms; and toilet rooms shall be of nonabsorbent materials such as concrete, terrazzo, tile, durable grades of linoleum or plastic, or equal, provided that floors in non-refrigerated dry storage areas need not be nonabsorbent. In all rooms in which water is routinely discharged to the floor, or in which floors are subjected to flooding-type cleaning, floors shall be concrete, terrazzo, tile or equal, shall slope to drain, and be provided with floor drains.
- (2) The walls of all rooms shall be kept clean and in good repair. All walls and ceilings in rooms used for the handling, storage and preparation of food; rooms in which utensils or equipment are washed; dressing or locker rooms; toilet rooms and bath rooms shall be easily cleanable and light colored; and walls shall have washable surfaces to the highest level reached by splash or spray in rooms or areas where such occur.
- (3) All rooms and areas shall be well lighted and ventilated, by natural or artificial means, which shall be effective under actual use conditions. Lighting fixtures and ventilating equipment shall be kept clean and in good repair. Ventilation systems shall comply with the North Carolina Building Code, Volume III, and vents to the outside air shall discharge in such a manner as not to create a nuisance.

History Note: Authority G.S. 130A-248;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. September 1, 1990;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .1025 SOLID WASTES

(a) All solid wastes containing food scraps and other decomposable material shall, prior to disposal, be kept in leak-proof, nonabsorbent containers such as standard garbage cans, which shall be kept covered with tight-fitting lids when filled or stored, or not in continuous use. Storage racks elevated above the ground are required for outside storage of garbage cans. All

dry rubbish (including scrap paper, cardboard, etc.) shall be stored in containers, rooms, or designated areas, in an approved manner.

(b) The rooms, enclosures, designated areas, and containers shall be adequate for the storage of all solid wastes accumulating on the premises. Container cleaning facilities, including a mixing faucet with hose threads, shall be provided and each container, room, or designated area shall be thoroughly cleaned after emptying or removal of wastes. All solid wastes shall be disposed of with sufficient frequency and in such a manner approved by the Department.

History Note: Authority G.S. 130A-248;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. September 1, 1990;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .1026 VERMIN CONTROL: PREMISES: STABLES

(a) Effective measures shall be taken to keep flies, rodents, and other vermin out of the food service areas and permanent sleeping quarters, and to prevent their breeding or presence on the premises. Unless flies or other flying insects are absent from the immediate vicinity of the camp, all openings to the outer air of food service areas and sleeping quarters shall be effectively protected against the entrance of such insects by self-closing doors, closed windows, 16-inch mesh or finer screening, controlled air currents, or other effective means.

(b) Only those pesticides shall be used which have been approved for a specific use and properly registered with the Environmental Protection Agency and with the North Carolina Department of Agriculture in accordance with the "Federal Environmental Pesticide Control Act" and the "North Carolina Pesticide Law". Such pesticides shall be used as directed on the label and shall be so handled and stored as to avoid health hazards.

(c) The premises under control of the management shall be kept neat, clean and free of litter.

(d) No live birds or animals shall be permitted in the kitchen or dining areas.

(e) Horse stables, if provided, shall be in a location removed from the main recreation center of activity to minimize potential odor and nuisance problems. All manure shall be stored, removed, or disposed of in such a manner as to minimize the breeding of flies.

History Note: Authority G.S. 130A-248;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. September 1, 1990;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .1027 FOOD SERVICE EMPLOYEES

History Note: Authority G.S. 130A-248;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. September 1, 1990;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019;
Repealed Eff. April 1, 2024.

15A NCAC 18A .1028 MISCELLANEOUS

(a) Potentially hazardous materials, such as fuel, chemicals, explosives, equipment and apparatuses, shall be handled and stored so as to minimize health hazards.

(b) Protective railings, fences, or similar enclosures shall be provided where necessary and shall be kept in good repair.

History Note: Authority G.S. 130A-248;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. September 1, 1990;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .1029 SEVERABILITY

History Note: Authority G.S. 130A-248;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Expired Eff. August 1, 2019 pursuant to G.S. 150B-21.3A.

15A NCAC 18A .1030 REFERENCE RULES

History Note: Authority G.S. 130A-248;
Eff. February 1, 1976;
Amended Eff. July 1, 1977;
Readopted Eff. December 5, 1977;
Amended Eff. July 1, 1986; June 10, 1978;
Repealed Eff. September 1, 1990.

15A NCAC 18A .1031 APPEALS PROCEDURE

Appeals concerning the interpretation and enforcement of the rules in this Section shall be made in accordance with G.S. 150B.

History Note: Authority G.S. 130A-248;
Eff. February 1, 1987;
Amended Eff. September 1, 1990;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

SECTION .1100 - SANITATION OF FOOD AND BEVERAGE VENDING MACHINES

Rules .1101 - .1135 of Title 15A Subchapter 18A of the North Carolina Administrative Code (T15A.18A.1101 - .1135); has been transferred and recodified from Rules .1101 - .1135 Title 10 Subchapter 10A of the North Carolina Administrative Code (T10.10A.1101 - .1135). Rules .1136 - .1137 of Title 15A Subchapter 18A of the North Carolina Administrative Code (T15A.18A.1136 - .1137); has been transferred and recodified from Rules .1137 - .1138 Title 10 Subchapter 10A of the North Carolina Administrative Code (T10.10A.1137 - .1138), effective April 4, 1990.

15A NCAC 18A .1101	DEFINITIONS
15A NCAC 18A .1102	ISSUANCE OF PERMIT
15A NCAC 18A .1103	APPLICATION FOR COMMISSARY PERMIT
15A NCAC 18A .1104	APPLICATION FOR VENDING MACHINE PERMIT
15A NCAC 18A .1105	DISPLAY
15A NCAC 18A .1106	LIST OF MACHINES
15A NCAC 18A .1107	SUSPENSION OR REVOCATION OF PERMITS
15A NCAC 18A .1108	ADVANCE NOTICE OF CERTAIN INSTALLATIONS
15A NCAC 18A .1109	INSPECTIONS OF VENDING MACHINES AND COMMISSARIES
15A NCAC 18A .1110	ADULTERATED OR MISBRANDED FOOD OR BEVERAGE
15A NCAC 18A .1111	REQUIREMENTS FOR VENDING MACHINES
15A NCAC 18A .1112	SATISFACTORY COMPLIANCE
15A NCAC 18A .1113	MACHINE LOCATION
15A NCAC 18A .1114	EXTERIOR CONSTRUCTION AND MAINTENANCE
15A NCAC 18A .1115	INTERIOR CONSTRUCTION AND MAINTENANCE
15A NCAC 18A .1116	APPROVED MACHINES
15A NCAC 18A .1117	WATER SUPPLY
15A NCAC 18A .1118	WASTE DISPOSAL
15A NCAC 18A .1119	DELIVERY OF FOODS AND SUPPLIES
15A NCAC 18A .1120	REQUIREMENTS FOR PERSONNEL
15A NCAC 18A .1121	DISEASE CONTROL

15A NCAC 18A .1122	COMMISSARIES PREPARING FOOD
15A NCAC 18A .1123	COMMISSARIES NOT PREPARING FOOD
15A NCAC 18A .1124	FLOOR
15A NCAC 18A .1125	WALLS AND CEILINGS
15A NCAC 18A .1126	DOORS AND WINDOWS
15A NCAC 18A .1127	LIGHTING AND VENTILATION
15A NCAC 18A .1128	TOILET FACILITIES
15A NCAC 18A .1129	LAVATORY FACILITIES
15A NCAC 18A .1130	FOOD STORAGE AREAS
15A NCAC 18A .1131	FACILITIES FOR CLEANING
15A NCAC 18A .1132	LIQUID WASTES
15A NCAC 18A .1133	OTHER WASTES
15A NCAC 18A .1134	PREMISES
15A NCAC 18A .1135	SEVERABILITY
15A NCAC 18A .1136	REFERENCES

History Note: Authority G.S. 130A-248;
Eff. February 1, 1976;
Amended Eff. July 1, 1977;
Readopted Eff. December 5, 1977;
Amended Eff. June 30, 1980;
Repealed Eff. July 1, 1990 in accordance with G.S. 150B-59(c).

15A NCAC 18A .1137 APPEALS PROCEDURE

History Note: Authority G.S. 130A-248;
Eff. February 1, 1987;
Repealed Eff. July 1, 1990 in accordance with G.S. 150B-59(c).

SECTION .1200 - GRADE A MILK SANITATION (TRANSFERRED TO 02 NCAC 09G .2001-.2010)

15A NCAC 18A .1201-.1208 were transferred and recodified from 10 NCAC 10A .1205-.1212, 15A NCAC 18A .1209 was transferred and recodified from 10 NCAC 10A .1214, transfers and recodifications effective April 4, 1990.

15A NCAC 18A .1201	GENERAL - ADOPTION BY REFERENCE (TRANSFERRED TO 02 NCAC 09G .2001)
15A NCAC 18A .1202	MODIFICATIONS OF THE ADOPTION BY REFERENCE (TRANSFERRED TO 02 NCAC 09G .2002)
15A NCAC 18A .1203	DEFINITIONS (TRANSFERRED TO 02 NCAC 09G .2003)
15A NCAC 18A .1204	PERMITS REQUIRED (TRANSFERRED TO 02 NCAC 09G .2004)
15A NCAC 18A .1205	PROCEDURE FOR ISSUANCE OF PERMIT: SAMPLING: EMBARGO (TRANSFERRED TO 02 NCAC 09G .2005)
15A NCAC 18A .1206	PERMIT SUSPENSION AND REVOCATION (TRANSFERRED TO 02 NCAC 09G .2006)
15A NCAC 18A .1207	ENFORCEMENT AND PENALTIES (TRANSFERRED TO 02 NCAC 09G .2007)
15A NCAC 18A .1208	SEVERABILITY (TRANSFERRED TO 02 NCAC 09G .2008)
15A NCAC 18A .1209	APPEALS PROCEDURE (TRANSFERRED TO 02 NCAC 09G .2009)

15A NCAC 18A .1210 RESTRICTIONS ON DISPENSING RAW MILK (TRANSFERRED TO 02 NCAC 09G .2010)

SECTION .1300 - SANITATION OF HOSPITALS, NURSING HOMES, ADULT CARE HOMES, AND OTHER INSTITUTIONS

15A NCAC 18A .1301 DEFINITIONS

The following definitions shall apply throughout this Section:

- (1) "Activity kitchen" means a kitchen that is available to residents of an institution and their guests for the purpose of preparing food for individual or group activities. Nothing in this Section shall prohibit residents or employees of a residential care facility, as that term is defined at 15A NCAC 18A .1601 or their guests from using an activity kitchen when an institution's activity kitchen is in the same building where a residential care facility is located.
- (2) "Administrator" means the person designated by the licensee to be responsible for the daily operation of the institution.
- (3) "Ancillary kitchen" means a kitchen that is used by the institution's employees for meal preparation and other work to support the dietary kitchen. Ancillary kitchens shall meet the requirements of 15A NCAC 18A .2600.
- (4) "Bed linens" means bed sheets, pillowcases, mattress covers, blankets, and duvets covers.
- (5) "Clean" means that an object or surface has been made free of garbage, solid waste, soil, dust, hair, dander, food, bodily fluids and secretions, and feces.
- (6) "Department" means the North Carolina Department of Health and Human Services.
- (7) "Dietary kitchen" means the primary kitchen in the institution that is used to provide meals and nutrition services to the institution's residents, employees, and guests. Dietary kitchens shall meet the requirements of 15A NCAC 18A .2600.
- (8) "Disinfect" means a non-sporicidal process used on inanimate surfaces to destroy or irreversibly inactivate fungi, viruses, and bacteria by using an EPA registered disinfectant in accordance with the disinfectant's product label.
- (9) "EPA registered disinfectant" means a disinfectant as defined at 40 C.F.R. 158.2203 that has been registered with the United States Environmental Protection Agency ("EPA") in accordance with 40 C.F.R. 152, which are hereby incorporated by reference, including any subsequent amendments or editions, and available free of charge at <https://www.ecfr.gov/>.
- (10) "Garbage" means as defined at G.S. 130A-290(7).
- (11) "Good repair" means as defined at 15A NCAC 18A .2651(8). Items that are in good repair shall operate in accordance with the manufacturer's instructions.
- (12) "Hand Hygiene Program" means a written plan implemented in an institution in the absence of hand washing facilities as set forth in this Section. The licensee or the licensee's designee shall submit the hand hygiene program plan to the local health department for the county in which the institution is located, serving as the regulatory authority, for approval prior to implementing the hand hygiene program. The regulatory authority shall notify the institution or the institution's designee in writing of the decision to approve or not to approve the hand hygiene program plan. In determining whether to approve the hand hygiene program, the regulatory authority shall consider the following:
 - (a) the type and frequency of activities carried out at the institution that involve employee or resident contact with bodily fluids or secretions; and
 - (b) the number of handwashing facilities on each wing or floor of an institution's building or buildings.
- (13) "Institution" means the following establishments that provide room or board and for which a license or certificate of payment must be obtained from the Department:
 - (a) hospital, as defined in G.S. 131E-76 including doctors' clinics with food preparation facilities;
 - (b) nursing home, as defined in G.S. 131E-101;
 - (c) an establishment, other than a hospital and nursing home, for the recuperation and treatment of 13 or more persons suffering from physical, behavioral, or mental health conditions;
 - (d) adult care home, as defined at G.S. 131D-2.1;
 - (e) residential child care facility, as defined at G.S. 131D-10.2(13); and

- (f) facilities that provide room and board to individuals but are exempt from licensure under G.S. 131D-10.4(1).

This term shall not include a child care facility as defined in G.S. 110-86(3), an adult day service facility as defined in 15A NCAC 18A .3300, or a residential care facility as defined in 15A NCAC 18A .1600.

- (14) "Licensing agency" means the North Carolina Department of Health and Human Services, Division of Health Service Regulation.
- (15) "Linens" means bath towels, hand drying towels, and bed linens.
- (16) "Local health department" means as defined in G.S. 130A-2(5).
- (17) "Non-community water supply" means a noncommunity water system as defined at G.S. 130A-313(10).
- (18) "Nourishment station" means an area where commercially packaged food that is used to provide nourishment to an institution's residents, employees, or guests is stored.
- (19) "Pest" means as defined at G.S. 143-460(26a).
- (20) "Pest harborage" means any condition that provides water or food and shelter for pests.
- (21) "Refuse" means as defined at G.S. 130A-290(28).
- (22) "Registered Environmental Health Specialist" or "REHS" means as defined at G.S. 90A-51(4).
- (23) "Regulatory authority" means the Department or authorized agent of the Department.
- (24) "Rehabilitation kitchen" means a kitchen used solely for the purpose of providing supervised therapeutic activities to residents, including occupational or physical therapy. Food prepared in a rehabilitation kitchen shall not be consumed by anyone who is not a participant in the therapeutic activity being conducted in the rehabilitation kitchen.
- (25) "Resident" means an individual residing in or being served by the institution, including patients. This term does not include an institution's employees or a resident's guests.
- (26) "Sanitize" means as defined in Part 4-7 of the Food Code incorporated by reference at 15A NCAC 18A .2650 as amended by 15A NCAC 18A .2654.
- (27) "Solid waste" means as defined at G.S. 130A-290(35).
- (28) "Time/Temperature Control for Safety Food" or "TCS Food" means as defined in Part 1-2 of the Food Code incorporated by reference at 15A NCAC 18A .2650 as amended by 15A NCAC 18A .2651.
- (29) "Yard trash" means as defined at G.S. 130A-290(45).

History Note: Authority G.S. 130A-4; 130A-29; 130A-235;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. March 1, 2003 (see S.L. 2002-160); August 1, 1998; February 1, 1997; September 1, 1990;
March 1, 1988;
Temporary Amendment Eff. June 1, 2003;
Amended Eff. February 1, 2004;
Readopted Eff. December 1, 2022.

15A NCAC 18A .1302 APPROVAL OF PLANS

Construction documents, as defined in 10A NCAC 13B .3001, for an institution shall be submitted by the licensee to the local health department for the county in which the institution is located, serving as the regulatory authority, for review and approval before beginning construction. Construction documents shall be approved by the regulatory authority when the plans comply with the Rules of this Section.

History Note: Authority G.S. 130A-4; 130A-29; 130A-235;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. March 1, 2003 (see S.L. 2002-160); April 1, 1997; September 1, 1990; June 30, 1980;
Readopted Eff. December 1, 2022.

15A NCAC 18A .1303 WATER SUPPLY AND SEWERAGE FACILITIES

History Note: Authority G.S. 130A-235;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;

Repealed Eff. September 1, 1990.

15A NCAC 18A .1304 INSPECTIONS

(a) Institutions shall be inspected once in a six month period by the local health department for the county in which the institution is located, serving as the regulatory authority. Dietary kitchens within institutions shall be inspected in accordance with G.S. 130A-235(a1) or 10A NCAC 46 .0213, as applicable.

(b) The inspection of institutions shall be documented on inspection forms furnished by the Department to local health departments. The form shall contain the following information:

- (1) the name and address of the institution;
- (2) the name of the licensee;
- (3) an explanation for all points deducted during the inspection and scoring;
- (4) the institution's score calculated in accordance with Rule .1308 of this Section;
- (5) the signature of the Registered Environmental Health Specialist who conducted the inspection; and
- (6) the date on which the inspection was conducted.

(c) The inspection of dietary kitchens, ancillary kitchens, and areas for dining associated with the dietary kitchen or ancillary kitchen shall be documented separately using the inspection forms and grading system specified in 15A NCAC 18A .2661 and .2662. Dietary kitchens, ancillary kitchens, and areas for dining associated with the dietary kitchen or ancillary kitchen in operation before March 1, 2003 shall be allowed to continue to use equipment and construction in use on that date if no imminent hazard as defined at G.S. 130A-2(3) exists. When such equipment is replaced, the replacement equipment shall comply with 15A NCAC 18A .2654.

*History Note: Authority G.S. 130A-4; 130A-29; 130A-235;
Eff. February 1, 1976;
Readopted Eff. December 1, 1977;
Amended Eff. March 1, 2003 (see S.L. 2002-160); September 1, 1990; June 30, 1980;
Temporary Amendment Eff. June 1, 2003;
Amended Eff. February 1, 2004;
Readopted Eff. December 1, 2022.*

15A NCAC 18A .1305 GRADING RESIDENTIAL CARE FACILITIES IN INSTITUTIONS

When an institution is located in the same building or on contiguous parcels of land as one or more residential care facilities that provide room or board for 12 persons or fewer, the residential care facilities shall be inspected and graded separately from the institution and in accordance with 15A NCAC 18A .1600.

*History Note: Authority G.S. 130A-4; 130A-29; 130A-235;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. March 1, 2003 (see S.L. 2002-160); September 1, 1990;
Readopted Eff. December 1, 2022.*

15A NCAC 18A .1306 PUBLIC DISPLAY OF GRADE CARD

(a) When an institution is inspected, the regulatory authority shall designate the location where the grade card shall be posted. The grade card shall be located where the public has an unobstructed view of the grade card upon entering the institution. The posted grade card shall be black text on a white background. The section of text on the grade card that lists the numeric score and the alphabetic grade shall be 1.5 inches in height.

(b) When an institution is inspected, the regulatory authority shall remove any existing grade card, issue a new grade card, and post the new grade card in accordance with Paragraph (a) of this Rule. The administrator shall keep the grade card posted at the designated location at all times.

*History Note: Authority G.S. 130A-4; 130A-29; 130A-235;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. March 1, 2003 (see S.L. 2002-160); July 1, 1986;
Readopted Eff. December 1, 2022.*

15A NCAC 18A .1307 REINSPECTIONS

The administrator may request a reinspection for the purpose of raising the alphabetical grade. If the administrator requests a reinspection for the purpose of raising the alphabetical grade, the regulatory authority shall conduct a reinspection in accordance with the rules of this Section. The administrator shall submit the request for reinspection to the local health department, serving as the regulatory authority, for the county in which the institution is located. The regulatory authority shall make an unannounced inspection within 30 calendar days from the date on which the request for reinspection is made. The alphabetical grade that is assessed based on the reinspection shall replace the institution's most recently assessed alphabetical grade. Following a reinspection, a new grade card shall be issued and posted in accordance with Rule .1306 of this Section.

*History Note: Authority G.S. 130A-4; 130A-29; 130A-235;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. March 1, 2003 (see S.L. 2002-160);
Readopted Eff. December 1, 2022.*

15A NCAC 18A .1308 SCORING SYSTEM

(a) The grading of all institutions shall be based on a sanitation system of scoring as follows:

- (1) institutions receiving a score of 90 percent or greater shall be awarded Grade A;
- (2) institutions receiving a score of at least 80 percent and less than 90 percent shall be awarded Grade B;
- (3) institutions receiving a score of at least 70 percent and less than 80 percent shall be awarded Grade C; and
- (4) institutions receiving a score of less than 70 percent do not meet the minimum sanitation standards and shall not receive a grade.

(b) If an institution or an institution's dietary kitchen fails to earn a sanitation score of at least 70 percent, the regulatory authority shall notify the licensing agency within 24 hours of completing the inspection and shall provide a copy of the inspection report to the licensing agency within two business days of the date of the inspection.

(c) The sanitation score is a percentage determined by deducting points from 100 for each item found not to be in compliance with the rules of this Section. Deductions for sanitation scores shall be based on violations of the Rules of this Section that are observed during the inspection. The regulatory authority shall take zero, one-half, or a full deduction based on the severity or the recurring nature of the rule violation. The percentage point value of each item is determined as follows:

- (1) Violation of Rule .1309 of this Section regarding the cleanliness and repair of floors and carpet shall equal no more than two points.
- (2) Violation of Rule .1310(a) of this Section regarding walls and ceilings shall equal no more than two points.
- (3) Violation of Rule .1310(b) of this Section regarding ceiling attachments shall equal no more than one point.
- (4) Violation of Rule .1311(a) of this Section regarding lighting levels shall equal no more than one point.
- (5) Violation of Rule .1311(b) of this Section regarding cleanliness of ventilation equipment shall equal no more than one point.
- (6) Violation of Rule .1311(c) of this Section regarding ambient air temperatures shall equal no more than two points.
- (7) Violation of Rule .1312(a) of this Section regarding toilet, handwashing, and bathing facilities shall equal no more than two points.
- (8) Violation of Rule .1312(b) of this Section regarding storage and signage shall equal no more than one point.
- (9) Violation of Rule .1312(c) of this Section regarding bedpans, urinals, bedside commodes, and emesis basins shall equal no more than one point.
- (10) Violation of Rule .1312(d) of this Section regarding handwashing facilities shall equal no more than three points.
- (11) Violation of Rule .1312(e) of this Section regarding disinfectants shall equal no more than two points.
- (12) Violation of Rule .1312(f) of this Section regarding bathing facilities shall equal no more than three points.
- (13) Violation of Rule .1313(a) of this Section regarding water supply shall equal no more than four points.
- (14) Violation of Rule .1313(b) of this Section regarding water sampling shall equal no more than two points.
- (15) Violation of Rule .1313(c) of this Section regarding cross-connections shall equal no more than two points.
- (16) Violation of Rule .1313(d) of this Section regarding hot and cold water shall equal no more than three points.
- (17) Violation of Rule .1313(e) of this Section regarding back up water supply plans shall equal no more than one point.

- (18) Violation of Rule .1314(a) of this Section regarding cleaning and maintenance of drinking fountains shall equal no more than one point.
- (19) Violation of Rule .1314(b) of this Section regarding utensils used for service of water and ice shall equal no more than two points.
- (20) Violation of Rule .1314(c) of this Section regarding protection of ice shall equal no more than two points.
- (21) Violation of Rule .1315(a) of this Section regarding sewage disposal shall equal no more than four points.
- (22) Violation of Rule .1315(b) of this Section regarding disposal of mop water shall equal no more than three points.
- (23) Violation of Rule .1316(a) of this Section regarding solid waste storage shall equal no more than one point.
- (24) Violation of Rule .1316(b) of this Section regarding refuse, recyclables, and returnables shall equal no more than one point.
- (25) Violation of Rule .1316(c) of this Section regarding containers and container washing facilities shall equal no more than one point.
- (26) Violation of Rule .1316(d) of this Section regarding cleaning and maintenance of the premises shall equal no more than two points.
- (27) Violation of Rule .1316(e) of this Section regarding handling and disposal of medical waste shall equal no more than two points.
- (28) Violation of Rule .1317(a) of this Section regarding pest control shall equal no more than one point.
- (29) Violation of Rule .1317(b) of this Section regarding storage and handling of pesticides shall equal no more than two points.
- (30) Violation of Rule .1318(a) of this Section regarding medication carts shall equal no more than two points.
- (31) Violation of Rule .1318(b) of this Section regarding feeding bags, tubes, syringes, and oral suction catheters shall equal no more than two points.
- (32) Violation of Rule .1319(a) of this Section regarding furnishings shall equal no more than one point.
- (33) Violation of Rule .1319(b) of this Section regarding linens and linen storage shall equal no more than one point.
- (34) Violation of Rule .1319(c) of this Section regarding sanitizing of laundry shall equal no more than three points.
- (35) Violation of Rule .1319(d) of this Section regarding laundry shall equal no more than one point.
- (36) Violation of Rule .1319(e) of this Section regarding laundry areas shall equal no more than one point.
- (37) Violation of Rule .1319(f) of this Section regarding mobility equipment shall equal no more than one point.
- (38) Violation of Rule .1320(a) of this Section regarding food service equipment shall equal no more than one point.
- (39) Violation of Rule .1320(b) of this Section regarding cleaning and sanitization of utensils shall equal no more than three points.
- (40) Violation of Rule .1320(c) of this Section regarding handwashing facilities shall equal no more than two points.
- (41) Violation of Rule .1320(d) of this Section regarding cooking and baking equipment surfaces shall equal no more than one point.
- (42) Violation of Rule .1321(a) of this Section regarding food sources and supplies shall equal no more than three points.
- (43) Violation of Rule .1321(b) of this Section regarding storage, labeling, and condition of food shall equal no more than one point.
- (44) Violation of Rule .1323(a) of this Section regarding food protection shall equal no more than four points.
- (45) Violation of Rule .1323(b) of this Section regarding hot and cold food holding equipment shall equal no more than one point.
- (46) Violation of Rule .1323(c) of this Section regarding food storage shall equal no more than one point.
- (47) Violation of Rule .1323(d) of this Section regarding live animals shall equal no more than two points.
- (48) Violation of Rule .1324(a) of this Section regarding employee clothing shall equal no more than two points.
- (49) Violation of Rule .1324(a)(1)-(5) of this Section regarding employee handwashing shall equal no more than three points.
- (50) Violation of Rule .1324(b) of this Section regarding employee handwashing shall equal no more than three points.
- (51) Violation of Rule .1324(c) of this Section regarding exclusion of persons with certain diseases and conditions from food service work shall equal no more than four points.

- (52) Violation of Rule .1324(d) of this Section regarding cleaning supplies and written procedures for responding to vomiting or diarrheal events shall equal no more than two points.

History Note: Authority G.S. 130A-4; 130A-29; 130A-235;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. February 1, 2004; August 1, 2002;
Readopted Eff. December 1, 2022.

15A NCAC 18A .1309 FLOORS

- (a) Except as permitted by Paragraph (b) of this Rule, the floors in an institution shall be made of smooth, non-absorbent materials and shall be kept clean and in good repair.
- (b) Notwithstanding the foregoing in Paragraph (a) of this Rule, carpet is permitted if it is kept clean, odor free, and in good repair.

History Note: Authority G.S. 130A-4; 130A-29; 130A-235;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. March 1, 2003 (see S.L. 2002-160); September 1, 1990;
Readopted Eff. December 1, 2022.

15A NCAC 18A .1310 WALLS AND CEILINGS

- (a) The interior walls of the institution, including doors, windows and window trim, and ceilings shall be kept clean and in good repair.
- (b) Light fixtures, fans, conduits, and heating, ventilation, and air conditioning vents shall be kept clean and in good repair.

History Note: Authority G.S. 130A-4; 130A-29; 130A-235;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. March 1, 2003 (see S.L. 2002-160);
Readopted Eff. December 1, 2022.

15A NCAC 18A .1311 LIGHTING AND VENTILATION

- (a) The areas interior to an institution's building or buildings shall be equipped with at least 10 foot candles of light at 30 inches above the floor.
- (b) Ventilation equipment shall be kept clean and in good repair.
- (c) Ambient indoor air temperatures shall be maintained at or below 85 degrees Fahrenheit.

History Note: Authority G.S. 130A-4; 130A-29; 130A-235;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. March 1, 2003 (see S.L. 2002-160); September 1, 1990; July 1, 1986; October 1, 1985;
Readopted Eff. December 1, 2022.

15A NCAC 18A .1312 TOILET; HANDWASHING; AND BATHING FACILITIES

- (a) All institutions shall provide toilet, handwashing, and bathing facilities that are available for use by residents and staff. These facilities shall be kept clean and in good repair.
- (b) Bathrooms shall not be used for storage of items not currently in use. A sign shall be posted in each toilet room for institution employees directing them to wash their hands after each visit to the toilet room and before returning to work.
- (c) Institutions where bedpans, bedside commodes, urinals, or emesis basins are used shall provide facilities for emptying, cleaning, and disinfecting bedpans, bedside commodes, urinals, and emesis basins. Bedpans, bedside commodes, urinals, shared diaper changing surfaces, and emesis basins that have been used by a resident shall be kept clean and shall be disinfected before use by other residents. When disposable bedpans, emesis basins, and urinals are reused, they shall be labeled so that they are associated with an individual resident. Disposable bedpans, emesis basins, and urinals shall not be used by more than one resident.

(d) Handwashing facilities shall be located in an institution in accordance with 10A NCAC 13B .5411, 10A NCAC 13D .3201, 10A NCAC 13F .0305, .1304, and 10A NCAC 13K .1109, .1204, as applicable. Institutions that do not have a handwashing facility located in all areas required by this Paragraph shall not be required to install handwashing facilities if the institution has an approved hand hygiene program. Hand washing facilities shall be equipped with running water and a tempering device. Handwashing facilities shall be supplied with soap and disposable towels or hand-drying devices. Handwashing facilities shall be used only for handwashing and shall not be used for disposal of bodily fluids or washing items that are not clean. Notwithstanding the foregoing sentence, handwashing facilities provided for use in a resident's room may be used for personal hygiene, rinsing feeding tubes, obtaining drinking water, and disposal of medications in accordance with the manufacturer's instructions or non-TCS liquids as long as the handwashing facility is kept clean and is disinfected daily. Employees shall be permitted to use handwashing facilities to dispose of medications in accordance with the manufacturer's instructions.

(e) EPA registered disinfectants shall be used in accordance with the manufacturer's instructions. When EPA registered disinfectants are mixed and prepared by institution employees, a measuring device, chemical testing device, or the methods and devices prescribed by the chemical manufacturer shall be used to prepare the concentration of chemicals in accordance with the disinfectant's label and the manufacturer's instructions.

(f) Bathing facilities shall be equipped with running water and a tempering device. Bathing equipment that has contact with a resident's skin and is used by more than one resident shall be kept clean and shall be disinfected between resident uses. Equipment located within a bathing facility that uses a pump to move water shall be kept clean in accordance with the manufacturer's instructions.

History Note: Authority G.S. 130A-4; 130A-29; 130A-235;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. March 1, 2003 (see S.L. 2002-160); September 1, 1990;
Temporary Amendment Eff. June 1, 2003;
Amended Eff. February 1, 2004;
Readopted Eff. December 1, 2022.

15A NCAC 18A .1313 WATER SUPPLY

(a) Water supplies at institutions shall meet the requirements in 15A NCAC 18C or 15A NCAC 18A .1700, as applicable.

(b) In institutions that use a non-community water supply, a sample of water shall be collected by the Department once a year and submitted to the North Carolina State Laboratory of Public Health or other laboratory certified by the North Carolina State Laboratory of Public Health under 10A NCAC 41C .0102 to perform bacteriological examinations.

(c) An institution's water supply plumbing shall not include cross-connections as set out in 15A NCAC 18C .0102(c)(8).

(d) Institutions shall provide water heating facilities. Hot and cold running water under pressure shall be provided to carry out all operations. Hot water shall be provided at temperatures between 105 degrees Fahrenheit and 116 degrees Fahrenheit at handwashing and bathing facilities.

(e) The administrator shall immediately notify the licensing agency and the local health department that serves the county in which the institution is located if the institution's primary water supply is interrupted for more than four consecutive hours. The institution shall have a written plan to obtain a backup water supply in the event that the institution's primary water supply is interrupted for more than four consecutive hours. The written plan shall identify a backup water supply or alternate source of water that provides two liters of potable water per day per resident and institution employee for drinking and potable water for food preparation, hand washing, bathing, cleaning, dishwashing, laundry, and disposal of bodily waste. This may include a plan for relocating residents to a facility with a water supply that satisfies Paragraph (a) of this Rule. If an institution's primary water supply or back up water supply becomes unsafe for human consumption then the water sources within the institution, such as sink faucets, shall be labeled or hooded to prevent their use and the administrator shall provide potable water for use by the institution's residents and employees.

History Note: Authority G.S. 130A-4; 130A-29; 130A-235;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. March 1, 2003 (see S.L. 2002-160); September 1, 1990; July 1, 1986;
Temporary Amendment Eff. June 1, 2003;
Amended Eff. February 1, 2004;
Readopted Eff. December 1, 2022.

15A NCAC 18A .1314 DRINKING WATER FACILITIES: ICE HANDLING

- (a) Drinking fountains shall be kept clean and in good repair.
- (b) Multi-use utensils for service of water and ice shall be kept clean and in good repair and shall be sanitized before being provided to a resident for use. Disposable, single service utensils shall be used by only one person.
- (c) Ice shall be protected against physical, chemical, and biological contamination and shall be kept clean. Ice machines, buckets, and scoops shall be kept clean and in good repair. Ice machines and storage chests accessible to residents, guests, or the public shall provide ice through automatic ice dispensing equipment and shall not permit ice to be accessed using a scoop or bucket.

History Note: Authority G.S. 130A-4; 130A-29; 130A-235;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. March 1, 2003 (see S.L. 2002-160); September 1, 1990;
Readopted Eff. December 1, 2022.

15A NCAC 18A .1315 LIQUID WASTES

- (a) All sewage originating from the institution shall be disposed of using a publicly operated sewage treatment plant or an individual sewage disposal system that meets the requirements of Section .1900 of this Subchapter.
- (b) Mop basins or mop sinks shall only be used to wash mops and dispose of the water used for mopping.

History Note: Authority G.S. 130A-4; 130A-29; 130A-235;
Eff. February 1, 1976;
Amended Eff. July 1, 1977;
Readopted Eff. December 5, 1977;
Amended Eff. March 1, 2003 (see S.L. 2002-160); September 1, 1990;
Readopted Eff. December 1, 2022.

15A NCAC 18A .1316 SOLID WASTES: PREMISES MEDICAL WASTES

- (a) All solid wastes containing food scraps or other putrescible materials shall be kept in leak-proof, non-absorbent containers which shall be kept covered with tight-fitting lids when not in use.
- (b) Refuse, recyclables, and returnables shall be stored in containers, rooms, or areas designated for the storage of refuse, recyclables, and returnables.
- (c) The designated rooms and containers described in Paragraph (b) of this Rule shall have the capacity to store the institution's refuse, recyclables, and returnables and shall be kept clean. Cleaning facilities for containers used to store food scraps, putrescible materials, refuse, recyclables, and returnables shall be provided.
- (d) An institution's exterior premises, including parking lots, lawns, and walkways, and interior premises within the institution's building or buildings, shall be kept free of garbage, solid waste, yard trash, and pest harborage.
- (e) Medical wastes shall be handled and disposed of as required in North Carolina "Solid Waste Management Rules" 15A NCAC 13B .1200.

History Note: Authority G.S. 130A-4; 130A-29; 130A-235;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. March 1, 2003 (see S.L. 2002-160); September 1, 1990;
Readopted Eff. December 1, 2022.

15A NCAC 18A .1317 PEST CONTROL: PESTICIDES

- (a) Pests shall not be present in an institution's building or buildings. Openings to the outside of an institution's building or buildings shall be equipped with self-closing doors that are flush with the door frame when closed, closed windows, window screening on windows that can be opened, or controlled air currents to prevent pests from entering the building or buildings.
- (b) Only pesticides that are registered in accordance with 40 C.F.R. 152 and G.S. 143-442 shall be used to control pests. Pesticides shall be used, handled, and stored in accordance with the instructions on the manufacturer's label.

History Note: Authority G.S. 130A-4; 130A-29; 130A-235;

Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. March 1, 2003 (see S.L. 2002-160); September 1, 1990;
Readopted Eff. December 1, 2022.

15A NCAC 18A .1318 MEDICAL SUPPLIES

- (a) Medication carts shall be kept clean. Food, utensils, medications, and equipment used on medication carts shall be kept clean. Sharps containers located on medication carts shall be attached or secured to the medication cart to prevent the sharps contained from spilling.
- (b) Feeding bags, tubes, syringes, and oral suction catheters shall be stored and used in accordance with the manufacturer's instructions.

History Note: Authority G.S. 130A-4; 130A-29; 130A-235;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. March 1, 2003 (see S.L. 2002-160);
Readopted Eff. December 1, 2022.

15A NCAC 18A .1319 FURNISHINGS AND LAUNDRY

- (a) Furnishings in an institution, including furniture, curtains, rugs, and blinds, shall be kept clean and in good repair. Mattresses shall be kept clean, dry, and in good repair.
- (b) Bed linens that are provided by the institution for use by residents shall be free from holes and tears. A resident's bed linens shall be changed when no longer clean. Linens that are not clean shall be placed in a covered container or bag devoted to this purpose at the point of use and stored in the covered container or bag until sanitized in accordance with Paragraph (c) of this Rule to contain and minimize aerosolization of and exposure to any waste products. Such covered containers or bags shall be kept clean between uses and labeled to indicate the contents. Linens that are not clean shall be handled and stored separately from cleaned and sanitized linens.
- (c) Linens provided by the institution that are not clean shall be cleaned and sanitized in accordance with this paragraph. When hot water in washing machines is used to sanitize linens provided by the institution, the washing machines shall be operated in accordance with the manufacturer's instructions. When chemicals are used to sanitize linens provided by the institution, linens shall be washed in accordance with the following:
- (1) using a solution of at least 50 parts per million chlorine; or
 - (2) using laundry sanitizer that is registered in accordance with 40 C.F.R. 152 and that is used in accordance with the manufacturer's instructions.
- (d) Clothing and linens that are provided by a resident for the resident's personal use shall be that resident's personal laundry. Personal laundry that is not clean shall be kept separate from clean clothing and linens using covered containers or bags that are labeled to indicate their contents and kept clean between uses. Containers or bags that are used to hold personal laundry that is not clean shall not be used for clean personal laundry. When a resident's personal laundry is combined with the personal laundry of one or more other residents and washed together by the institution, the combined personal laundry shall be washed in accordance with Paragraph (c) of this Rule.
- (e) Laundry areas and equipment shall be kept clean.
- (f) Wheelchairs, walkers, lifts, and other mobility equipment shall be kept clean and sanitized between uses by different residents.

History Note: Authority G.S. 130A-4; 130A-29; 130A-235;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. March 1, 2003 (see S.L. 2002-160); August 1, 1998; February 1, 1997; September 1, 1990;
Temporary Amendment Eff. June 1, 2003;
Amended Eff. February 1, 2004;
Readopted Eff. December 1, 2022.

15A NCAC 18A .1320 ACTIVITY KITCHENS, REHABILITATION KITCHENS, AND NOURISHMENT STATIONS

- (a) All food service equipment and utensils shall be kept clean and in good repair. Institutions shall be allowed to use domestic food service equipment in activity kitchens, rehabilitation kitchens, and nourishment stations.
- (b) Utensils that have been used to prepare, serve, or consume food or drink shall be returned to the dietary kitchen and shall be washed, rinsed, and sanitized. Notwithstanding the foregoing sentence, utensils may be washed, rinsed and sanitized at activity kitchens, rehabilitation kitchens, and nourishment stations that are equipped with the following:
 - (1) a two compartment sink with 24 inch drainboards or counter top space at each end of the sink for handling used utensils and air drying clean and sanitized utensils. The sinks shall be of sufficient size to submerge, wash, rinse and sanitize utensils; or
 - (2) a dishwashing machine approved by National Sanitation Foundation International.
- (c) Any area where food is portioned, served, or handled shall be equipped with a handwashing facility with a hot and cold mixing faucet, soap, and single-use towels or a hand-drying device.
- (d) The food-contact surfaces of cooking and baking equipment, including microwave ovens, shall be kept clean.

History Note: Authority G.S. 130A-4; 130A-29; 130A-235;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. March 1, 2003 (see S.L. 2002-160); September 1, 1990;
Temporary Amendment Eff. June 1, 2003;
Amended Eff. February 1, 2004;
Readopted Eff. December 1, 2022.

15A NCAC 18A .1321 FOOD SUPPLIES

- (a) All food and food supplies provided by an institution for consumption by residents shall be from approved sources, stored, and handled as set forth in 15A NCAC 18A .2600.
- (b) Food brought from home by employees or visitors of patients or residents shall be stored separately from the institution's food supply as described in Paragraph (a) of this Rule. Such food shall be labeled with the name of the resident or employee that the food belongs to and the date the food was brought into the institution. Labeling as required by this Rule shall not be required for food items stored in employee-designated or individual resident's refrigerators or rooms.

History Note: Authority G.S. 130A-4; 130A-29; 130A-235;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. March 1, 2003 (see S.L. 2002-160); September 1, 1990;
Temporary Amendment Eff. June 1, 2003;
Amended Eff. February 1, 2004;
Readopted Eff. December 1, 2022.

15A NCAC 18A .1322 MILK AND MILK PRODUCTS

History Note: Authority G.S. 130A-235;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. March 1, 2003 (see S.L. 2002-160); September 1, 1990; July 1, 1979;
Expired Eff. August 1, 2019 pursuant to G.S. 150B-21.3A.

15A NCAC 18A .1323 FOOD PROTECTION IN ACTIVITY KITCHENS, REHABILITATION KITCHENS, AND NOURISHMENT STATIONS

- (a) All TCS food shall be maintained at temperatures required by Part 3-501.19 of the Food Code incorporated by reference at 15A NCAC 18A .2650 as amended by 15A NCAC 18A .2653 during storage, preparation, transportation, display, and service of the TCS food. Time as a public health control may be used as specified in Section .2600 of this Subchapter, except that written procedures shall not be required.
- (b) Hot and cold holding equipment shall be used to maintain required temperatures for TCS food. Each refrigeration unit shall be provided with an indicating thermometer that is accurate to ± 3 degrees Fahrenheit or ± 1.5 degrees Celsius.
- (c) Food shall be stored at least six inches above the floor, in a clean, dry location, and protected from contamination.

(d) No live animals shall be allowed in any room where food is prepared or stored. Live animals shall be permitted in an institution's dining areas in the following situations and only if the live animal does not come into physical contact with institution employees engaged in the preparation or handling of food, serving dishes, utensils, tableware, linens, unwrapped single service and single use articles, food contact surfaces, or other food service items:

- (1) Fish or crustacea in aquariums or display tanks, or other animals in enclosed terrariums or glass enclosed aviaries;
- (2) Dogs accompanying police or security officers in offices and dining, sales, and storage areas, and dogs used for security purposes running loose in outside fenced areas;
- (3) Service animals, as defined in 28 C.F.R. 36.104, accompanying individuals with disabilities in areas that are not used for food preparation; and
- (4) Dogs (*Canis lupus familiaris*) and cats (*Felis catus*) in outdoor dining areas provided that dogs and cats are physically restrained and do not pass through any indoor dining areas of the facility.

(e) Notwithstanding Paragraph (d) of this Rule, and except in accordance with applicable law, nothing in this Rule shall prohibit an institution from restricting live animals in dining areas.

*History Note: Authority G.S. 130A-4; 130A-29; 130A-235;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. March 1, 2003 (see S.L. 2002-160); October 1, 1993; September 1, 1990;
Readopted Eff. December 1, 2022.*

15A NCAC 18A .1324 EMPLOYEES

(a) While at work, all institution employees shall wear clean outer clothing. Employees shall wash or decontaminate their hands as set forth in Paragraph (b) immediately:

- (1) before beginning work;
- (2) after each visit to the toilet;
- (3) before and after resident contact;
- (4) after coughing, sneezing, using a handkerchief or disposable tissue, using tobacco, eating, or drinking; and
- (5) after removing gloves.

(b) Institution employees shall wash their hands as required by Paragraph (a) of this Rule in a handwashing sink using the handwashing method required for food employees in Part 2-301.12 of the Food Code incorporated by reference at 15A NCAC 18A .2650 as amended by 15A NCAC 18A .2652. When an employee's hands are visibly clean, in lieu of handwashing, the employee may use alcohol-based hand antiseptics that contain 65 percent or more ethyl alcohol or 70 percent or more isopropyl alcohol. In the event of interruption of the institution's water supply or when handwashing facilities are not available for use, hand decontamination can be achieved by using a towelette containing detergent followed by an alcohol-based hand antiseptic that contains 65 percent or more ethyl alcohol or 70 percent or more isopropyl alcohol.

(c) Institution employees shall comply with the requirements for exclusion from work and restriction due to communicable disease or illness required for food employees as set forth in Parts 2-201.12 and 2-201.13 of the Food Code incorporated by reference at 15A NCAC 18A .2650 as amended by 15A NCAC 18A .2652.

(d) The institution shall have gloves, personal protective equipment, disinfectant, individual disposable towels, and a coagulating agent on-site for employees to use and a written procedure for employees to follow when responding to vomitus or fecal matter on institution surfaces. The procedure shall specify the actions that employees shall take to minimize the exposure of employees, residents, guests, food, and additional surfaces to vomitus or fecal matter.

*History Note: Authority G.S. 130A-4; 130A-29; 130A-235;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. March 1, 2003 (see S.L. 2002-160); September 1, 1990;
Readopted Eff. December 1, 2022.*

15A NCAC 18A .1325 SEVERABILITY

*History Note: Authority G.S. 130A-235;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;*

Expired Eff. August 1, 2019 pursuant to G.S. 150B-21.3A.

15A NCAC 18A .1326 REFERENCE RULES

*History Note: Authority G.S. 130A-235;
Eff. February 1, 1976;
Amended Eff. July 1, 1977;
Readopted Eff. December 5, 1977;
Amended Eff. June 10, 1978;
Repealed Eff. September 1, 1990.*

15A NCAC 18A .1327 INCORPORATED RULES

Where referenced in this Section, 15A NCAC 13B .1200, 15A NCAC 18A .1700, 15A NCAC 18A .2600, and 15A NCAC 18C, are hereby incorporated by reference, including any subsequent amendments or editions, and available free of charge at <http://reports.oah.state.nc.us/ncac.asp>.

*History Note: Authority G.S. 130A-4; 130A-29; 130A-235;
Eff. March 1, 2003 (See S.L. 2002-160);
Readopted Eff. December 1, 2022.*

SECTION .1400 - MASS GATHERINGS

Rules .1401 - .1426 of Title 15A Subchapter 18A of the North Carolina Administrative Code (T15A.18A .1401- .1426); has been transferred and recodified from Rules .1401 - .1426 of Title 10 Subchapter 10B of the North Carolina Administrative Code (T10.10B .1401 - .1426), effective April 4, 1990.

15A NCAC 18A .1401 DEFINITIONS

15A NCAC 18A .1402 STANDARDS AND REQUIREMENTS

15A NCAC 18A .1403 FACILITIES AND SERVICES

*History Note: Authority G.S. 130A-257;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. July 1, 1985;
Repealed Eff. September 1, 1990.*

15A NCAC 18A .1404 ACTIVITY AREA

An activity area shall be provided of sufficient size to accommodate the estimated number of persons reasonably expected to be in attendance at any one time. This activity area is in addition to those areas required for parking in .1410, for camping in .1407, and for the command post in .1408 of this Section.

*History Note: Authority G.S. 130A-257;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.*

15A NCAC 18A .1405 DISTANCE FROM DWELLINGS

No part of the perimeter of the activity and camping areas shall be within 1500 feet of any residence unless the occupant or owner has signed a written waiver. Notarized copies of any such waivers shall accompany the application.

*History Note: Authority G.S. 130A-257;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.*

15A NCAC 18A .1406 DISTANCE FROM CERTAIN PUBLIC WATER SUPPLY SOURCES

No part of the perimeters of the activity, including camping areas, shall be located within one mile of a class I or class II reservoir, as classified by the Division of Environmental Health, or within three miles of a protected watershed which drains into an A-I stream, as classified by the Division of Environmental Management, and which stream is used as a source of public water supply.

*History Note: Authority G.S. 130A-257;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. June 30, 1980;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.*

15A NCAC 18A .1407 CAMPING AREA

An area of adequate size to accommodate the provision of safe drinking water and sewage collection and disposal shall be provided and designated for camping. Such area shall be in addition to the areas provided for activities in Rule .1404 and for parking in Rule .1410 of this Section.

*History Note: Authority G.S. 130A-257;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. September 1, 1990;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.*

15A NCAC 18A .1408 COMMAND POST

A command post at a conveniently accessible location approved by the Department shall be provided for use by the Department, law enforcement, and other governmental agencies with regulatory authority for such events. The command post shall consist of at least one building or mobile unit equipped with telephones, other utilities and parking spaces. The permittee shall provide access to the command post at all times for use by the Department and the other entities listed in this Rule.

*History Note: Authority G.S. 130A-257;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. September 1, 1990;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.*

15A NCAC 18A .1409 INGRESS AND EGRESS ROADS: ENTRANCES AND EXITS

The permittee shall provide personnel and arrangements necessary to keep entrances and exits to public highways open to traffic at all times. The permittee shall make arrangements with private parties or consult with the North Carolina Department of Transportation and Highway Safety regarding adequate ingress and egress roads.

*History Note: Authority G.S. 130A-257;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. September 1, 1990;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.*

15A NCAC 18A .1410 PARKING

Parking spaces shall be provided on the basis of one space for every four persons expected to attend. Vehicles used for camping shall park in the camping area provided in Rule .1407 of this Section. Parking on shoulders of public highways shall not be permitted and temporary signs shall be erected by permittee to so indicate.

*History Note: Authority G.S. 130A-257;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;*

Amended Eff. September 1, 1990;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .1411 CROWD CONTROL AND SECURITY ENFORCEMENT

The application for permit shall be accompanied by a written plan for limiting attendance to the number stated in the application for permit, the exclusion of persons not holding tickets, and a written plan for security enforcement, including the number of security guards to be provided for internal and external crowd control and security enforcement. The plan shall be accompanied by a written statement by the sheriff or chief of police, whichever has jurisdiction over the area, that the plan seems adequate. The permittee shall execute the plan.

History Note: Authority G.S. 130A-257;

Eff. February 1, 1976;

Readopted Eff. December 5, 1977;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .1412 DUST CONTROL

The application shall be accompanied by a written plan for dust control. The permittee shall execute the plan.

History Note: Authority G.S. 130A-257;

Eff. February 1, 1976;

Readopted Eff. December 5, 1977;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .1413 FIRE PREVENTION AND CONTROL

The application shall be accompanied by a written plan for fire prevention and control.

History Note: Authority G.S. 130A-257;

Eff. February 1, 1976;

Readopted Eff. December 5, 1977;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .1414 PLANS FOR EMERGENCIES

The application shall be accompanied by written plans for dealing with emergency situations involving the occurrence of incidents requiring rapid evacuation, including arrangements for use of emergency egress roads.

History Note: Authority G.S. 130A-257;

Eff. February 1, 1976;

Readopted Eff. December 5, 1977;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .1415 PROVISION OF MEDICAL CARE

The application for permit shall be accompanied by a written plan for the provision of medical care, such plan having been approved in writing by the local health director. At the time of the inspection, the structure and all supplies and equipment provided for in the plan shall be in place; and the agreements and statements provided for in the plan shall be determined to be valid. The plan shall include provisions for:

- (1) the name and address of a physician licensed to practice medicine in North Carolina to be responsible for the organization and delivery of emergency medical services; A signed notarized statement by the physician accepting the responsibility shall accompany the plan. He shall determine how many licensed physicians, licensed nurses, and other medical personnel shall be on duty on the premises at any particular time;
- (2) at least one enclosed covered structure to be used as a medical treatment center; The structure or structures shall provide at least a total of 450 square feet and shall have running water under pressure from an approved source;
- (3) a list of medical supplies and equipment sufficient to support reasonably anticipated medical care requirements;

- (4) notification of all general public hospitals within 20 miles of the mass gathering location as to scheduled dates and anticipated attendance of the mass gathering;
- (5) the name and address of at least one licensed ambulance service agency to be responsible for providing emergency transportation; A signed notarized statement by an official of the agency accepting the responsibility shall accompany the plan.

History Note: Authority G.S. 130A-257;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. September 1, 1990;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .1416 WATER SUPPLY

- (a) There shall be provided a water supply from an approved source. An approved emergency source shall be provided in addition where necessary. Facilities approved by the Department for the distribution and dispensing of water shall be provided. The sponsor shall have in his possession, at the time of inspection, the reports of bacteriological and chemical examinations of water samples performed by the Division of Laboratory Services or another laboratory certified by the Department to perform such examinations. The water shall be chlorinated so as to provide a free chlorine residual of at least 1.0 part per million at all outlets at all times during the gathering. The water supply and the facilities for distribution and dispensing shall be provided with effective safeguards to prevent the introduction of hallucinogenic drugs or other contamination.
- (b) If water is to be provided only for drinking and washing, water shall be supplied at a rate of three gallons per person per day and a peak hour demand of one and one-half pints per person. If water is to be provided for drinking, washing, and bathing, water shall be supplied at a rate of 12 gallons per day per person and a peak hour demand of six pints per person.
- (c) Water shall be obtained from a public or community water supply approved by the Department. If a new source of water supply is to be provided, the application shall be accompanied by the necessary plans, engineer's report, and specifications (in triplicate) as required for review and approval by the Department. The application shall include plans, engineer's report, and specifications for an emergency source capable of supplying at least three gallons per day per person. If water is to be hauled from an off-site source, storage facilities shall be provided in the area sufficient in volume to supply the needs of the gathering for its duration. Before being filled with water for use during the gathering, all such storage tanks shall be cleaned thoroughly, filled with clean water containing a chlorine residual of at least 100 parts per million, and, after a contact time of at least 24 hours, all such tanks shall be emptied. Subsequently, and prior to the issuance of a permit, all such tanks shall be filled with water from an approved source and all inlets to such tanks shall be closed and locked so as to give positive protection against the introduction of contamination.
- (d) Water outlets shall be provided at an adequate number of convenient and readily accessible locations properly distributed throughout the activity and camping areas.

History Note: Authority G.S. 130A-257;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. September 1, 1990; June 30, 1980;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .1417 TOILET FACILITIES: SEWAGE DISPOSAL

- (a) Sanitary toilet facilities shall be provided at convenient and readily accessible locations properly distributed throughout the activity and camping areas at a rate of not more than 100 persons per toilet seat.
- (b) If chemical toilet rental service is to be employed, all toilets shall be so located as to be readily accessible by service vehicles and shall be serviced as often as necessary. Material removed from such toilets shall be disposed of in a public or community sewerage system, or in a disposal trench to be constructed in the area. Each load of material deposited in such trench shall be covered immediately with earth or lime. At the end of each 24-hour period, the material shall be covered with a layer of at least six inches of earth.
- (c) If trench latrines are to be used, all trenches shall be covered with fly-tight seat boxes with hinged lids.
- (d) If water-carried sewerage facilities are provided, the sewer system shall be connected to a public or community sewerage system having wastewater treatment facilities of adequate capacity to treat the flow of wastewater from the mass gathering. The application shall be accompanied by a signed statement by the Division of Environmental Management attesting to the

adequacy of the treatment facilities. A similar statement shall accompany the application if material removed from chemical toilets is to be disposed of in a public or community sewerage system. No sewage shall be discharged to the surface of the ground or into any watercourse without the approval of the Division of Environmental Management.

History Note: Authority G.S. 130A-257;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. September 1, 1990;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .1418 SOLID WASTE COLLECTION AND DISPOSAL

- (a) Facilities shall be provided for all solid wastes to be collected and stored in leak-proof, nonabsorbent containers, and all solid wastes shall be removed daily or more often and disposed of in a community solid waste disposal facility or in a sanitary landfill to be constructed in the area. Solid wastes shall be placed in the landfill, compacted as densely as possible, and covered after each day of operation with a compacted layer of at least six inches of dirt.
- (b) Approved receptacles having a maximum capacity of 32 gallons shall be provided at places conveniently located throughout the activity, camping and parking areas, and at each food service facility for the deposition of solid wastes.
- (c) If bulk solid waste storage containers are used, at least two four-cubic-yard containers shall be provided per 1,000 persons in the case of once-daily removal, or two two-cubic-yard containers per 1,000 persons in the case of twice-daily removal, and these containers shall be so located as to be accessible to solid waste service vehicles.

History Note: Authority G.S. 130A-257;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .1419 FOOD DISPENSING

- (a) Sanitary food dispensing facilities shall be provided at accessible and convenient locations, and shall be maintained in a sanitary condition.
- (b) Perishable food items dispensed from such facilities shall be limited to prepackaged items, such as wrapped sandwiches, prepared in commercial establishments and under official sanitary supervision, and shall be dispensed in the unbroken packages; provided, that chicken, hamburgers, and frankfurters obtained from approved sources may be cooked and packaged at the site if all operations of preparation, cooking and packaging in unit packages for dispensing to individuals are done inside an approved structure or vehicle, in a sanitary manner, and otherwise in compliance with the "Sanitation of Restaurants and Other Foodhandling Establishments," 15A NCAC 18A .2600. Perishable foods shall be stored at or below 45 degrees F., or in the frozen state, until heated or cooked immediately before serving.

History Note: Authority G.S. 130A-257;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. September 1, 1990;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .1420 INSECT AND RODENT CONTROL

There shall be no fly or mosquito-breeding places, rodent harborages, or undrained areas on the premises. Necessary measures shall be taken to control flies, mosquitoes, rodents, or other vermin.

History Note: Authority G.S. 130A-257;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .1421 POST-GATHERING CLEAN-UP

Within one week after the end of the gathering, all sanitary landfills and any trenches or pits used for sewage and liquid waste disposal shall be covered with at least two feet of compacted earth material; and the areas and immediate surrounding

properties shall be cleaned of all litter and solid wastes attributable to the mass gatherings. In addition, any signs, litter, and solid wastes on roads leading from the areas and within one mile of the areas and which can be attributed to the mass gathering shall be removed. All solid wastes shall be disposed of as provided in .1418 of this Section. Unless otherwise directed by the owner of the property, all temporary facilities (such as solid waste receptacles and signs) shall be removed from the areas.

History Note: Authority G.S. 130A-257;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .1422 NOISE LEVEL AT PERIMETER

The application shall be accompanied by detailed plans for amplifying equipment, which shall be so located and operated as to limit the noise level at the perimeter of the site to no more than 70 decibels on the A scale of a sound level meter which meets the specifications of the American National Standards Institute, which are adopted by reference in accordance with G.S. 150B-14(c). The applicant shall include a signed statement certifying that the noise level limit as herein specified will not be exceeded.

History Note: Authority G.S. 130A-257;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. September 1, 1990;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .1423 LIGHTING

The application shall be accompanied by detailed plans for lighting designed to illuminate the site.

History Note: Authority G.S. 130A-257;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .1424 SIGNS

Signs shall be posted throughout the area showing the locations of toilet facilities, water supply outlets, solid waste receptacles, food stands, first aid facilities, and the command post.

History Note: Authority G.S. 130A-257;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .1425 SEVERABILITY

History Note: Authority G.S. 130A-257;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Expired Eff. August 1, 2019 pursuant to G.S. 150B-21.3A.

15A NCAC 18A .1426 REFERENCE RULES

History Note: Authority G.S. 130A-257;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. July 1, 1985;
Repealed Eff. September 1, 1990.

SECTION .1500 - SANITATION OF LOCAL CONFINEMENT FACILITIES

Rules .1501 - .1525 of Title 15A Subchapter 18A of the North Carolina Administrative Code (T15A.18A .1501 - .1525); has been transferred and recodified from Rules .0101 - .0125 of Title 10 Subchapter 10A of the North Carolina Administrative Code (T10.10A .0101 - .0125), effective April 4, 1990.

15A NCAC 18A .1501 DEFINITIONS

The following definitions shall apply throughout this Section in the interpretation and enforcement of this Section:

- (1) "Local confinement facility" shall include the following and similar establishments: any county or municipal confinement facility, local lockup, regional or district confinement facility, any detention facility for children or adults, any county or municipal workhouse or house of correction, and any other confinement facility operated by any local government for confinement of persons awaiting trial or sentences.
- (2) "Department" shall mean the Secretary of the Department of Environment and Natural Resources or his authorized representative.
- (3) "Local health director" shall mean local health director as defined in G.S. 130A-2(6) or his authorized representative.
- (4) "Sanitarian" shall mean a person authorized to represent the Department on the local or state level in making inspections pursuant to state laws and rules.
- (5) "Sanitize" means the approved bactericidal treatment by a process which meets the temperature and chemical concentration levels in 15A NCAC 18A .2619.
- (6) "Potentially hazardous food" means any food or ingredient, natural or synthetic, in a form capable of supporting the growth of infectious or toxigenic microorganisms, including *Clostridium botulinum*. This term includes raw or heat treated foods of animal origin, raw seed sprouts, and treated foods of plant origin. The term does not include foods which have a pH level of 4.6 or below or a water activity (Aw) value of 0.85 or less.

History Note: Authority G.S. 153A-226;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. November 1, 2002; September 1, 1990;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .1502 APPROVAL OF PLANS

Plans and specifications for new construction or major modification of local confinement facilities shall be submitted to the local health director for review and endorsement prior to, or concurrent with, submission to the Division of Health Service Regulation, Department of Human Resources, for approval.

History Note: Authority G.S. 153A-226; 143B-165;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .1503 INSPECTIONS

Inspections of local confinement facilities shall be made at least once a year. A copy of each inspection form shall be left with the person in charge of the facility at the time of the inspection.

History Note: Authority G.S. 153A-226;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .1504 REINSPECTIONS

A sanitarian may reinspect a local confinement facility at any time to insure compliance with these Rules and to give assistance in the interpretation of these Rules.

History Note: Authority G.S. 153A-226;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. September 1, 1990;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .1505 INSPECTION FORMS

The grading of local confinement facilities shall be done on an inspection form furnished by the Department to local health departments. The form shall include at least the following information:

- (1) the name and address of the facility,
- (2) the name of the person in charge of the facility,
- (3) the classification of the facility,
- (4) the standards of construction and operation as listed in .0107 to .0123 of this Section,
- (5) the signature of the authorized representative of the Department.

History Note: Authority G.S. 153A-226;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. September 1, 1990; June 30, 1980;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .1506 GRADING

(a) The grading of local confinement facilities shall be based on the standards of construction and operation as set out in .0107 to .0123 of this Section.

(b) The grade of the facility shall be classified as follows:

- (1) as approved if the demerit score is 20 or less and no six demerit point item is violated;
- (2) As provisional if any six demerit point item is violated, or if the demerit score is more than 20 but not more than 40; The duration of such classification shall not exceed seven days; provided, that a longer period may be established if construction or renovation is involved;
- (3) as disapproved if the demerit score is more than 40, if the conditions found are dangerous to the health of the persons confined, or if the conditions resulting in the provisional classification have not been corrected within the specified time period.

History Note: Authority G.S. 153A-226;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. January 1, 1978;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .1507 FLOORS

(a) All floors shall be so constructed as to be easily cleanable and shall be kept clean and in good repair.

(b) In all areas in which water is routinely discharged to the floor, or in which the floors are subjected to flooding-type cleaning, floors shall be of nonabsorbent materials, shall be sloped to drain and be provided with floor drains.

History Note: Authority G.S. 153A-226;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .1508 WALLS AND CEILINGS

(a) The walls and ceilings of all rooms and areas shall be kept clean and in good repair.

(b) All walls shall be easily cleanable and light colored, and shall have washable surfaces to the highest level reached by splash or spray in rooms or areas where such occur.

History Note: Authority G.S. 153A-226;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .1509 LIGHTING AND VENTILATION

- (a) All rooms shall be well lighted by natural or artificial means.
- (b) Ventilation shall be provided and installed as required by the North Carolina State Building Code. Copies of the North Carolina State Building Code may be obtained from the North Carolina Department of Insurance, P.O. Box 26387, Raleigh, North Carolina 27611.
- (c) Ventilation equipment shall be kept clean and in good repair.

History Note: Authority G.S. 153A-226;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. October 1, 1985;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .1510 TOILET, HANDWASHING AND BATHING FACILITIES

- (a) Each cell shall be provided with access to toilet and handwashing facilities, and soap and individual towels shall be provided. The fixtures shall be kept clean and in good repair.
- (b) Each cell block or section shall be provided with bathing facilities which shall be easily cleanable and shall be kept clean.
- (c) Convenient toilet facilities shall be provided for kitchen workers.
- (d) Handwashing facilities with hot and cold water and mixing faucet shall be provided in kitchens and any food preparation areas in addition to any lavatories which may be provided at workers' toilet rooms.
- (e) A supply of hot water adequate to meet all requirement for hot water in these Rules shall be provided.
- (f) Plumbing shall comply with the North Carolina State Building Code, Volume II.

History Note: Authority G.S. 153A-226;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. April 1, 1992; September 1, 1990;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .1511 WATER SUPPLY

- (a) Water supplies at local confinement facilities shall meet the requirements in 15A NCAC 18C or 15A NCAC 18A .1700, as applicable.
- (b) In local confinement facilities that use a non-community water system, as defined at G.S. 130A-313(10), a sample of water shall be collected by the Department of Health and Human Services once a year and submitted to the North Carolina State Laboratory of Public Health or other laboratory certified by the North Carolina State Laboratory of Public Health under 10A NCAC 42C .0102 to perform bacteriological examinations.
- (c) A local confinement facility's water supply plumbing shall not include cross-connections as set out in 15A NCAC 18C .0102(c)(8).
- (d) Local confinement facilities shall provide water heating facilities, and shall provide hot and cold running water under pressure to carry out all operations.

History Note: Authority G.S. 153A-226;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. September 1, 1990;
Readopted Eff. October 1, 2023.

15A NCAC 18A .1512 DRINKING WATER FACILITIES

- (a) Drinking fountains approved by the Department or individual drinking cups shall be provided.
- (b) Cups with open seams or surfaces readily corrodible and difficult to clean and maintain shall not be used. All multi-use drinking cups shall be thoroughly cleaned and sanitized daily and before being used by succeeding persons. Drinking fountains, if provided, shall be properly regulated and kept clean.

History Note: Authority G.S. 153A-226;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. September 1, 1990;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .1513 LIQUID WASTES

- (a) All sewage and other liquid wastes shall be disposed of in a public sewer system or, in the absence of a public sewer system, by a sanitary sewage disposal method approved as provided in "Sewage Disposal Systems," 15A NCAC 18A .1900.
- (b) All sewage and other liquid wastes shall be so disposed of as not to create a public-health hazard.

History Note: Authority G.S. 153A-226;
Eff. February 1, 1976;
Amended Eff. July 1, 1977;
Readopted Eff. December 5, 1977;
Amended Eff. September 1, 1990;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .1514 SOLID WASTES

- (a) All solid wastes containing food scraps or other decomposable materials shall, prior to disposal, be kept in leak-proof, nonabsorbent containers such as standard garbage cans, which shall be kept covered with tight-fitting lids when filled or stored, or not in continuous use.
- (b) All dry rubbish (including scrap paper, cardboard boxes, or similar items) shall be stored in containers, rooms, or designated areas in a manner approved by the Department. Cleaning facilities for waste containers shall be provided. Containers shall be cleaned after emptying or removal of garbage or rubbish.
- (c) All solid wastes shall be disposed of with sufficient frequency and in such a manner as to prevent a nuisance.

History Note: Authority G.S. 153A-226;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. September 1, 1990;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .1515 VERMIN CONTROL: PREMISES

- (a) Effective measures shall be taken to keep flies, rodents, and other vermin out of the local confinement facility and to prevent their breeding or presence on the premises.
- (b) The premises under control of the custodian shall be kept neat, clean, and free of litter.
- (c) Unless flies and other flying insects are absent from the immediate vicinity of the local confinement facility, all openings to the outer air shall be effectively protected against entrance of such insects by self-closing doors, closed windows, 16-mesh or finer screening, or other effective means.
- (d) Only those pesticides shall be used which have been approved for a specific use and properly registered with the Environmental Protection Agency and with the North Carolina Department of Agriculture in accordance with the "Federal Environmental Pesticide Control Act" and the "North Carolina Pesticide Law."

History Note: Authority G.S. 153A-226;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. September 1, 1990;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .1516 STORAGE

- (a) The local confinement facility shall provide at least one sufficiently sized janitor's closet equipped with a mop receptor, shelving, hooks, and other items necessary for the storage of all janitorial supplies and equipment.
- (b) The facility shall also provide storage closets or rooms for all bed linens, mattresses, and general supplies. Such rooms shall be kept clean.

*History Note: Authority G.S. 153A-226;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. September 1, 1990;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.*

15A NCAC 18A .1517 MATTRESSES, MATTRESS COVERS, BED LINEN

- (a) All furniture, bunks, mattresses, and other furnishings shall be kept clean and in good repair.
- (b) Clean bed linen and easily cleanable or washable mattress covers, washable mattresses, or equivalent, shall be provided for each occupant and shall be changed as often as necessary.
- (c) Clean linen shall be stored and handled in a sanitary manner. Soiled linen shall be stored and handled in such a manner as not to spread contamination, as by use of suitable bags or closed hampers. Suitable rooms or spaces shall be provided for the separate storage of clean and soiled linens.

*History Note: Authority G.S. 153A-226;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. September 1, 1990;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.*

15A NCAC 18A .1518 FOOD SERVICE UTENSILS AND EQUIPMENT

- (a) All equipment and utensils shall be so designed and of such material and workmanship as to be smooth and easily cleanable, and shall be kept in good repair.
- (b) The food-contact surfaces of such equipment and utensils shall, in addition, be easily accessible for cleaning, non-toxic, corrosion-resistant, relatively nonabsorbent, and free of open crevices; provided, that hard maple or its equivalent may be used for bakers' tables and cutting boards or blocks.
- (c) The National Sanitation Foundation has developed standards for many food service equipment items. Equipment which meets these or equivalent standards shall be accepted as meeting the requirements of this Section.

*History Note: Authority G.S. 153A-226;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. September 1, 1990;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.*

15A NCAC 18A .1519 CLEANING AND SANITIZING OF UTENSILS AND EQUIPMENT

- (a) All multi-use eating and drinking utensils shall be thoroughly cleaned and sanitized after each usage.
- (b) All kitchenware and food-contact surfaces of equipment, exclusive of cooking surfaces of equipment, used in the preparation or serving of food or drink, and all food storage utensils, shall be thoroughly cleaned after each use. Cooking surfaces of equipment shall be cleaned at least once each day. All utensils and food-contact surfaces of equipment used in the preparation, service, display or storage of potentially hazardous foods shall be cleaned and sanitized prior to each use. Non-food-contact surfaces of equipment shall be cleaned at such intervals as to keep them in a clean and sanitary condition.
- (c) Necessary facilities shall be provided and used for the cleaning and sanitizing of utensils and equipment. All such utensils and equipment shall then be stored so as to drain, dry and be protected from splash, dust, or contamination. In-place cleaning of fixed equipment shall be accepted when found effective.
- (d) Hand dishwashing facilities shall consist of an approved three-compartment sink of adequate size and depth, with hot and cold water service for each vat, and drainboards on each end of ample size to accommodate the number of eating and drinking

utensils involved. When hot water is used for sanitizing, a booster heater of adequate capacity shall be provided to maintain a water temperature of at least 170 degrees F. in the third compartment.

(e) A separate sink with drainboards on each end shall be provided where necessary for the washing of pots, pans, and vegetables.

(f) If a dishwashing machine is provided, the capacity shall be adequate to handle the number of utensils to be washed. The machine shall be fitted with a drainboard of ample size on each side; and the dirty dish lane shall be provided with a counter-sunk sink, or other effective means for the pre-cleaning, pre-flushing, or pre-soaking of the utensils.

(g) All cloths used by workers in the kitchen shall be clean. Single service containers shall be used only once.

(h) No polish or other substance containing cyanide or other poisonous material shall be used for the cleaning or polishing of eating or cooking utensils.

History Note: Authority G.S. 153A-226;

Eff. February 1, 1976;

Readopted Eff. December 5, 1977;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .1520 STORAGE AND HANDLING OF UTENSILS AND EQUIPMENT

(a) Sanitized utensils shall be stored in a clean place. Containers and utensils shall be covered, inverted, or stored in tight, clean cabinets. After cleaning and until use, food-contact surfaces of equipment shall be protected from contamination. Utensils shall be handled in such a manner as to prevent contamination.

(b) Single service utensils shall be purchased only in sanitary containers, shall be stored therein in a clean, dry place until used, and shall be handled in a sanitary manner.

History Note: Authority G.S. 153A-226;

Eff. February 1, 1976;

Readopted Eff. December 5, 1977;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .1521 FOOD SUPPLIES

(a) All food shall be from approved sources and shall be clean, wholesome, free from spoilage, free from adulteration and misbranding, and safe for human consumption.

(b) All meat and meat food products and all poultry and poultry products shall have been inspected for wholesomeness under an official federal, state, or local regulatory program; and, in all cases, the source shall be identifiable from labeling on carcasses, cuts, unit packages, bulk packages, or from bills of sale.

(c) Only Grade A pasteurized fluid milk and fluid milk products or canned milk shall be used. Dry milk and milk products may be reconstituted if used for cooking purposes only.

(d) When necessary to provide meals for prisoners in a jail or lockup which is not equipped with a kitchen, such meals shall be obtained from a foodhandling establishment approved by the local health director. Such meals or food shall be served in single service eating and drinking utensils. The procedures and equipment used for transporting of meals shall be approved by the local health director.

History Note: Authority G.S. 153A-226;

Eff. February 1, 1976;

Readopted Eff. December 5, 1977;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .1522 FOOD PROTECTION

(a) All food, while being stored, prepared, served, and during transportation, shall be protected from contamination. All perishable food shall be stored at such temperatures as will protect against spoilage. All potentially hazardous food shall be maintained at safe temperatures (45° F. or below, or 140° F. or above) except during necessary periods of preparation and serving. Ground beef and foods containing ground beef shall be cooked to an internal temperature of at least 155° F (68° C). Potentially hazardous foods that have been cooked and then refrigerated shall be reheated rapidly to 165° F (74° C) or higher throughout before being served or before being placed in a hot food storage facility, except that food in intact packages from regulated food manufacturing plants may initially be reheated to 140° F (60° C). Raw fruits and vegetables shall be washed

thoroughly before use. Stuffings, poultry, stuffed meats and poultry, and pork and pork products shall be thoroughly cooked before being served. Salads made of meat, poultry, potatoes, fish, shellfish, or eggs, and other potentially hazardous prepared food shall be prepared, preferably from chilled products, with a minimum of manual contact, and on surfaces and with utensils which are clean and which, prior to use, have been sanitized. Individual portions of food once served shall not be served again.

(b) No live animals or fowl shall be allowed in any room or area in which food is prepared, served, or stored.

(c) Refrigeration facilities, hot food storage facilities, and effective insulated facilities, shall be provided as needed to assure the maintenance of all food at required temperatures during storage, preparation, and serving.

(d) Each cold-storage facility used for the storage of perishable food in a non-frozen state shall be provided with an indicating thermometer of such type and so situated that the thermometer can be easily read.

(e) Containers of food shall be stored above the floor, on clean racks, dollies, slatted shelves, or other clean surfaces, in such a manner as to be protected from splash and other contamination.

History Note: Authority G.S. 153A-226;

Eff. February 1, 1976;

Readopted Eff. December 5, 1977;

Amended Eff. October 1, 1993;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .1523 FOOD SERVICE WORKERS

(a) All food service workers shall wear clean outer garments and conform to proper hygienic practices. They shall wash their hands thoroughly in an approved handwashing facility before starting work, and as often as may be necessary to remove soil and contamination.

(b) No worker shall resume work after visiting the toilet room without first washing his hands. Hair nets, headbands, caps, or other effective hair restraints, shall be used by workers engaged in the preparation and service of food to keep hair from food and food-contact surfaces. Workers shall not use tobacco in any form while engaged in food preparation, or while in equipment and utensil-washing or food-preparation areas.

(c) No person who has a communicable or infectious disease that can be transmitted by foods, or who is a carrier of organisms that cause such a disease, or who has a boil, infected wound, or an acute respiratory infection with cough and nasal discharge, shall work in food service in any capacity in which there is a likelihood of such person contaminating food or food-contact surfaces, with disease-causing organisms or transmitting the illness to other persons.

(d) If the custodian has reason to suspect that any person has contracted any disease in a communicable form or has become a carrier of such disease, he shall notify the local health department or county physician immediately.

History Note: Authority G.S. 153A-226;

Eff. February 1, 1976;

Readopted Eff. December 5, 1977;

Amended Eff. September 1, 1990;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .1524 SEVERABILITY

History Note: Authority G.S. 153A-226;

Eff. February 1, 1976;

Readopted Eff. December 5, 1977;

Expired Eff. August 1, 2019 pursuant to G.S. 150B-21.3A.

15A NCAC 18A .1525 REFERENCE RULES

History Note: Authority G.S. 153A-226;

Eff. February 1, 1976;

Amended Eff. July 1, 1977;

Readopted Eff. December 5, 1977;

Amended Eff. June 10, 1978;

Repealed Eff. September 1, 1990.

SECTION .1600 - SANITATION OF RESIDENTIAL CARE FACILITIES

Rules .1601 - .1622 of Title 15A Subchapter 18A of the North Carolina Administrative Code(T15A.18A .1601 - .1622); has been transferred and recodified from Rules .0201 - .0222 of Title 10 Subchapter 10A of the North Carolina Administrative Code (T10.10A .0201 - .0222), effective April 4, 1990.

15A NCAC 18A .1601 DEFINITIONS

The following definitions shall apply throughout this Section:

- (1) "Administrator" means the person designated by the licensee to be responsible for the daily operation of the residential care facility.
- (2) "Bed linens" means bed sheets, pillowcases, mattress covers, blankets, and duvet covers.
- (3) "Clean" means that an object or surface has been made free of garbage, solid waste, soil, dust, hair, dander, food, bodily fluids and secretions, and feces.
- (4) "Department" means the North Carolina Department of Health and Human Services.
- (5) "Disinfectant" means a disinfectant as defined at 40 C.F.R. 158.2203 that has been registered with the United States Environmental Protection Agency in accordance with 40 C.F.R. 152, which are hereby incorporated by reference, including any subsequent amendments or editions, and are available free of charge at <https://www.ecfr.gov/>.
- (6) "Good repair" means as defined at 15A NCAC 18A .2651(8). Items that are in good repair shall operate in accordance with the manufacturer's instructions.
- (7) "Licensing agency" means the North Carolina Department of Health and Human Services, Division of Health Service Regulation.
- (8) "Linen" means bath towels, hand drying towels, bed linens, and pillows.
- (9) "Non-community water supply" means as defined in G.S. 130A-313(10).
- (10) "Pest" means as defined in G.S. 143-460(26a).
- (11) "Pest harborage" means any condition that provides water or food and shelter for pests.
- (12) "Regulatory authority" means the Department or authorized agent of the Department.
- (13) "Resident" means a person, other than the administrator, his or her immediate family, and residential care facility employees , who is residing in a residential care facility.
- (14) "Residential care facility" means an establishment providing room or board and for which a license or certificate for payment is obtained from the Department, but does not include a child day care facility or an institution as defined in 15A NCAC 18A .1301.
- (15) "Solid waste" means as defined in G.S. 130A-290(35).
- (16) "Time/Temperature Control for Safety Food" or "TCS Food" means as defined in Part 1-2 of the Food Code incorporated by reference at 15A NCAC 18A .2650 as amended by 15A NCAC 18A .2651.

History Note: Authority G.S. 130A-4; 130A-235;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. July 1, 1993; September 1, 1990; March 1, 1988; July 1, 1984;
Temporary Amendment Eff. May 5, 1998;
Temporary Amendment Expired January 26, 1999;
Amended Eff. November 1, 2002;
Readopted Eff. April 1, 2024.

15A NCAC 18A .1602 APPROVAL OF PLANS

History Note: Authority G.S. 130A-235;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. September 1, 1990;
Repealed Eff. April 1, 2024.

15A NCAC 18A .1603 INSPECTIONS

(a) The regulatory authority shall inspect residential care facilities at least once a year prior to the expiration of the residential care facility's license issued by the licensing agency. The Department shall provide a copy of the inspection form to the administrator of the facility.

(b) The inspection of institutions shall be documented on an inspection form provided by the Department. The form shall include at least the following information:

- (1) name and address of the residential care facility;
- (2) name of licensee;
- (3) an explanation for all demerits incurred during the inspection;
- (4) classification in accordance with Rule .1606 of this Section;
- (5) the date on which the inspection is conducted; and
- (6) the signature of the regulatory authority.

*History Note: Authority G.S. 130A-4; 130A-235;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. July 1, 1993;
Readopted Eff. April 1, 2024.*

15A NCAC 18A .1604 REINSPECTIONS: VISITS

The regulatory authority may reinspect or visit residential care facilities at any time to ensure compliance with these Rules. When the administrator requests an inspection of their facility to improve a classification the regulatory authority shall make an unannounced inspection within 30 days.

*History Note: Authority G.S. 130A-4; 130A-235;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. September 1, 1990;
Readopted Eff. April 1, 2024.*

15A NCAC 18A .1605 INSPECTION FORMS

*History Note: Authority G.S. 130A-235;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. September 1, 1990; June 30, 1980;
Repealed Eff. April 1, 2024.*

15A NCAC 18A .1606 SCORING SYSTEM

(a) Residential care facility sanitation scores shall be based upon the standards of construction and operation set out in Rules .1607 through .1621 of this Section.

(b) The score of the facility shall be classified as follows:

- (1) "Approved" if the demerit score is less than 40 and no six-demerit item is violated; and
- (2) "Disapproved" if the demerit score is 40 or greater, or if any six-demerit item is violated.

(c) The sanitation score is the total amount determined by adding demerits for each item found not to be in compliance with the rules of this Section. The demerit value of each item is determined as follows:

- (1) Violation of Rule .1607 of this Section regarding the cleanliness of floors and carpet shall equal two demerits and repair of floors and carpet shall equal one demerit.
- (2) Violation of Rule .1608 of this Section regarding the cleanliness of walls, ceilings, and attachments shall equal two demerits and repair of walls, ceilings, and attachments shall equal one demerit.
- (3) Violation of Rule .1609(a) of this Section regarding the illumination of required spaces shall equal two demerits.
- (4) Violation of Rule .1609(b) of this Section regarding the cleanliness and state of repair of windows, fixtures, and ventilation equipment shall equal two demerits.
- (5) Violation of Rule .1610(a) of this Section regarding the availability of toileting, handwashing, and bathing facilities shall equal five demerits.

- (6) Violation of Rule .1610(a) of this Section regarding the cleanliness and state of repair of toileting, handwashing, and bathing facilities shall equal four demerits.
- (7) Violation of Rule .1610(b) of this Section regarding the handwashing sink design shall equal four demerits.
- (8) Violation of Rule .1610(b) of this Section regarding the supply and storage provisions in bathrooms shall equal four demerits.
- (9) Violation of Rule .1611(a) of this Section regarding the water supply shall equal six demerits.
- (10) Violation of Rule .1611(c) of this Section regarding cross-connections shall equal five demerits.
- (11) Violation of Rule .1611(d) of this Section regarding the pressure availability and temperature of water at fixtures shall equal four demerits.
- (12) Violation of Rule .1613 of this Section regarding liquid waste disposal shall equal six demerits.
- (13) Violation of Rule .1614(a) of this Section regarding the locations of storage waste disposal shall equal two demerits.
- (14) Violation of Rule .1614(b) of this Section regarding the covering, cleanliness, and state of repair of solid waste containers shall equal two demerits.
- (15) Violation of Rule .1614(c) of this Section regarding solid waste disposal frequency shall equal two demerits.
- (16) Violation of Rule .1615(a) of this Section regarding pest presence shall equal three demerits.
- (17) Violation of Rule .1615(a) of this Section regarding the prevention of harborage conditions shall equal two demerits.
- (18) Violation of Rule .1615(a) of this Section regarding the state of repair of outdoor furniture shall equal two demerits.
- (19) Violation of Rule .1616 of this Section regarding the storage of substances shall equal four demerits.
- (20) Violation of Rule .1617(a) of this Section regarding the cleanliness of furnishings shall equal two demerits.
- (21) Violation of Rule .1617(a) of this Section regarding the state of repair of furnishings shall equal two demerits.
- (22) Violation of Rule .1617(b) of this Section regarding the provisions and state of repair of bed linens shall equal four demerits.
- (23) Violation of Rule .1617(b) of this Section regarding the cleanliness and cleaning frequency of bed linens shall equal four demerits.
- (24) Violation of Rule .1617(c) of this Section regarding the storage of clean linen shall equal three demerits.
- (25) Violation of Rule .1617(d) of this Section regarding the cleanliness and state of repair of laundry areas and equipment shall equal three demerits.
- (26) Violation of Rule .1618(a) of this Section regarding the state of repair of food utensils and equipment, except temperature holding equipment, shall equal three demerits.
- (27) Violation of Rule .1618(b) of this Section regarding the cleanliness of food utensils and equipment shall equal four demerits.
- (28) Violation of Rule .1618(b) of this Section regarding the cleanliness of the non-food contact sides of equipment shall equal two demerits.
- (29) Violation of Rule .1618(c) of this Section regarding the storage of equipment and utensils shall equal two demerits.
- (30) Violation of Rule .1618(d) of this Section regarding the provisions for ware washing shall equal five demerits.
- (31) Violation of Rule .1618(e) of this Section regarding the cleanliness of food storage areas shall equal three demerits.
- (32) Violation of Rule .1619 of this Section regarding the safety and approved sources of foods shall equal five demerits.
- (33) Violation of Rule .1620(a) of this Section regarding the time and temperature control of food shall equal five demerits.
- (34) Violation of Rule .1620(b) of this Section regarding the prohibitions of live pets shall equal no more than three demerits.
- (35) Violation of Rule .1620(c) of this Section regarding the provisions and state of repair of temperature holding equipment shall equal five demerits.
- (36) Violation of Rule .1620(c) of this Section regarding the availability of accurate temperature indicating devices shall equal no more than two demerits.
- (37) Violation of Rule .1620(d) of this Section regarding the storage of food shall equal four demerits,

- (38) Violation of Rule .1621(a) of this Section regarding handwashing methods shall equal four demerits.
- (39) Violation of Rule .1621(b) of this Section regarding when to wash hands shall equal four demerits.
- (40) Violation of Rule .1621(c) of this Section regarding restricting or excluding employees shall equal five demerits.
- (41) Violation of Rule .1621(d) of this Section regarding cleaning supplies and written procedures for responding to vomiting or diarrheal events shall equal two demerits.

History Note: Authority G.S. 130A-4; 130A-235;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. July 1, 1993; January 1, 1978;
Readopted Eff. April 1, 2024.

15A NCAC 18A .1607 FLOORS

All floors shall be kept clean and in good repair.

History Note: Authority G.S. 130A-4; 130A-235;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Readopted Eff. April 1, 2024.

15A NCAC 18A .1608 WALLS AND CEILINGS

- (a) The interior walls and ceilings, including doors, window, and window trim, shall be kept clean and in good repair.
- (b) Wall and ceiling attachments, such as light fixtures, fans, and vent covers, shall be kept clean and in good repair.

History Note: Authority G.S. 130A-4; 130A-235;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Readopted Eff. April 1, 2024.

15A NCAC 18A .1609 LIGHTING AND VENTILATION

- (a) All rooms shall be illuminated by natural or artificial means.
- (b) Ventilation equipment shall be kept clean and in good repair.

History Note: Authority G.S. 130A-4; 130A-235;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. July 1, 1993; October 1, 1985; July 1, 1984;
Readopted Eff. April 1, 2024.

15A NCAC 18A .1610 TOILET: HANDWASHING: AND BATHING FACILITIES

- (a) All residential care facilities shall provide toilet, handwashing, and bathing facilities that are available for use by residents and employees. These facilities shall be kept clean and in good repair.
- (b) All hand sinks and baths shall be supplied with hot and cold running water through mixing devices. The residential care facility shall provide each resident with soap and individual hand-drying towels. These hand-drying towels will be stored separately after being used.

History Note: Authority G.S. 130A-4; 130A-235;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Readopted Eff. April 1, 2024.

15A NCAC 18A .1611 WATER SUPPLY

- (a) Water supplies at residential care facilities shall meet the requirements in 15A NCAC 18C or 15A NCAC 18A .1700, as applicable. For facilities licensed by the licensing agency before this Rule's effective date, a well that does not meet the

setback to building foundation requirements found in 15A NCAC 18A .1720 shall be approved if water sampling in accordance with Paragraph (b) of this Rule indicates the water is safe for human consumption.

(b) In residential care facilities that use a non-community water supply, a sample of water shall be collected by the Department once a year and submitted to the North Carolina State Laboratory of Public Health or other laboratory certified by the North Carolina State Laboratory of Public Health under 10A NCAC 41C .0102 to perform bacteriological examinations.

(c) A residential care facility's water supply plumbing shall not include cross-connections as set out in 15A NCAC 18C .0102(c)(8).

(d) Residential care facilities shall provide water heating facilities. Hot and cold running water under pressure shall be provided to carry out all operations. Hot water shall be provided at temperatures between 105 degrees Fahrenheit and 116 degrees Fahrenheit at handwashing and bathing facilities.

History Note: Authority G.S. 95-225; 130A-4; 130A-5(3); 130A-230; 130A-235; 130A-236; 130A-248; 130A-257;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. September 1, 1990; July 1, 1984;
Temporary Amendment Eff. May 5, 1998;
Temporary Amendment Expired January 26, 1999;
Temporary Amendment Eff. January 1, 1999;
Amended Eff. August 1, 2000;
Readopted Eff. April 1, 2024.

15A NCAC 18A .1612 DRINKING WATER FACILITIES: ICE HANDLING

History Note: Authority G.S. 130A-235;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. September 1, 1990;
Repealed Eff. April 1, 2024.

15A NCAC 18A .1613 LIQUID WASTES

All sewage originating from the residential care facility shall be disposed by using a publicly operated sewage treatment plant or in a sewage disposal system that meets the requirements of Section .1900 of this Subchapter.

History Note: Authority G.S. 130A-4; 130A-235;
Eff. February 1, 1976;
Amended Eff. July 1, 1977;
Readopted Eff. December 5, 1977;
Amended Eff. July 1, 1984;
Readopted Eff. April 1, 2024.

15A NCAC 18A .1614 SOLID WASTES

(a) All solid wastes shall be kept in leak-proof, non-absorbent containers. Waste containers shall be kept clean and in good repair.

(b) Outside waste containers shall be kept covered with tight-fitting lids when not in use.

(c) All solid wastes shall be removed from the premises at a frequency that prevents pest harborage.

History Note: Authority G.S. 130A-4; 130A-235;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. September 1, 1990;
Readopted Eff. April 1, 2024.

15A NCAC 18A .1615 PEST CONTROL AND OUTDOOR PREMISES

(a) Pests shall not be present in a residential care facility. Openings to the outside of a residential care facility building or buildings shall be equipped with doors that are flush with the door frame when closed, closed windows, window screening on

windows that can be opened, or controlled air currents to prevent pests from entering the building or buildings. The external premises of a residential care facility shall be kept clean, and free of litter and pest harborage. Outdoor furniture and playgrounds shall be kept in good repair.

(b) Only those pesticides that are registered in accordance with 40 C.F.R. 152 and G.S. 143-442 shall be used at a residential care facility.

History Note: Authority G.S. 130A-4; 130A-235;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. July 1, 1984;
Readopted Eff. April 1, 2024.

15A NCAC 18A .1616 CHEMICAL AND MEDICATION STORAGE

Toxic substances, which include corrosive agents, pesticides, bleaches, detergents, cleansers, polishes, and any substance which may be hazardous to a person if ingested, inhaled, or not handled in accordance with the manufacturer's instructions, and all medications, shall be stored and used in accordance with the manufacturer's instructions.

History Note: Authority G.S. 130A-4; 130A-235;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. September 1, 1990;
Readopted Eff. April 1, 2024.

15A NCAC 18A .1617 BEDS: LINEN: LAUNDRY: FURNITURE

(a) Furnishings, including furniture, curtains, draperies, and blinds, shall be kept clean and in good repair. Mattresses shall be kept clean, dry, and in good repair.

(b) Clean bed linen in good repair shall be provided for each resident and shall be changed when no longer clean.

(c) Clean linen shall be stored and handled in a manner to protect from contamination and separate from linen that is not clean.

(d) Laundry areas and equipment shall be kept clean and in good repair.

History Note: Authority G.S. 130A-4; 130A-235;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. September 1, 1990;
Readopted Eff. April 1, 2024.

15A NCAC 18A .1618 FOOD SERVICE UTENSILS AND EQUIPMENT

(a) All food service equipment and utensils shall be kept clean and in good repair.

(b) All food contact surfaces of utensils and equipment shall be cleaned after each use.

(c) Utensils and equipment shall be handled and stored in a manner as to protect from contamination.

(d) Residential care facilities shall provide a kitchen sink for cleaning food service equipment and utensils.

(e) Food storage areas shall be kept clean and free of pests.

History Note: Authority G.S. 130A-4; 130A-235;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. September 1, 1990;
Readopted Eff. April 1, 2024.

15A NCAC 18A .1619 FOOD

All food provided by a residential care facility for consumption by residents shall comply with Parts 3-1 and 3-2 of the Food Code incorporated by reference at 15A NCAC 18A .2650 as amended by 15A NCAC 18A .2653.

History Note: Authority G.S. 130A-4; 130A-235;

Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. September 1, 1990;
Readopted Eff. April 1, 2024.

15A NCAC 18A .1620 FOOD PROTECTION

(a) All TCS food shall be maintained at temperatures required by Part 3-501.16 of the Food Code, incorporated by reference at 15A NCAC 18A .2650 as amended by 15A NCAC 18A .2653, during storage, preparation, transportation, display, and service of the TCS food. Time as a public health control as set forth in Part 3-501.19 of the Food Code incorporated by reference at 15A NCAC 18A .2650 as amended by 15A NCAC 18A .2653, may be used, except that written procedures shall not be required.

(b) Live animals shall not be allowed in any room or area in which food is prepared or stored. Live animals shall be permitted in a residential care facility's dining areas if the live animal does not come into physical contact with residential care facility employees engaged in the preparation or handling of food, serving dishes, utensils, tableware, linens, unwrapped single service and single use articles, or food contact surfaces.

(c) Equipment shall be provided and maintained to keep all food at required temperatures during storage and transport. Cold holding equipment shall be provided with an indicating thermometer that is accurate to ± 3 degrees Fahrenheit or ± 1.5 degrees Celsius.

(d) All food shall be stored as required by Parts 3-302.11, 3-302.12, 3-305.11, and 3-305.12 of the Food Code, incorporated by reference at 15A NCAC 18A .2650 as amended by 15A NCAC 18A .2653.

History Note: Authority G.S. 130A-4; 130A-235;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. October 1, 1993; September 1, 1990;
Readopted Eff. April 1, 2024.

15A NCAC 18A .1621 EMPLOYEES

(a) Residential care facility employees shall wash their hands as required by Paragraph (b) of this Rule using the handwashing method required for food employees in Part 2-301.12 of the Food Code incorporated by reference at 15A NCAC 18A .2650 as amended by 15A NCAC 18A .2652.

(b) Residential care facility employees shall wash their hands immediately:

- (1) before beginning work;
- (2) before preparing food;
- (3) after each visit to the toilet;
- (4) before and after resident contact;
- (5) after coughing, sneezing, or using a handkerchief or disposable tissue; and
- (6) after using tobacco, eating, or drinking.

(c) Residential care facility employees shall comply with the requirements for exclusion from work and restriction due to communicable disease or illness required for food employees as set forth in Parts 2-201.12 and 2-201.13 of the Food Code incorporated by reference at 15A NCAC 18A .2650 as amended by 15A NCAC 18A .2652.

(d) The residential care facility shall have gloves, personal protective equipment, disinfectant, individual disposable towels, and a coagulating agent on-site for employees to use and a written procedure for employees to follow when responding to vomitus or fecal matter on facility surfaces. The procedure shall specify the actions that employees shall take to minimize the exposure of employees, residents, guests, food, and additional surfaces to vomitus or fecal matter.

History Note: Authority G.S. 130A-4; 130A-235;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. September 1, 1990;
Readopted Eff. April 1, 2024.

15A NCAC 18A .1622 SEVERABILITY

History Note: Authority G.S. 130A-235;

Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Expired Eff. August 1, 2019 pursuant to G.S. 150B-21.3A.

SECTION .1700 - PROTECTION OF WATER SUPPLIES

Rules .1701 - .1719 of Title 15A Subchapter 18A of the North Carolina Administrative Code (T15A.18A .1701 - .1719); has been transferred and recodified from Rules .1701 - .1719 of Title 10 Subchapter 10A of the North Carolina Administrative Code (T10.10A .1701 - .1719), effective April 4, 1990.

15A NCAC 18A .1701	PURPOSE
15A NCAC 18A .1702	DESIGN AND CONSTRUCTION
15A NCAC 18A .1703	SITE SELECTION
15A NCAC 18A .1704	WELL CONSTRUCTION
15A NCAC 18A .1705	PROTECTION
15A NCAC 18A .1706	WATER SUPPLY NEEDED
15A NCAC 18A .1707	DISINFECTION
15A NCAC 18A .1708	TEST WATER QUALITY
15A NCAC 18A .1709	TYPES OF WELLS
15A NCAC 18A .1710	CONTAMINATION
15A NCAC 18A .1711	PROTECTION OF SPRINGS
15A NCAC 18A .1712	CISTERNS
15A NCAC 18A .1713	HORIZONTAL SUCTION LINES
15A NCAC 18A .1714	PITLESS ADAPTER
15A NCAC 18A .1715	DISINFECTION PROCEDURES
15A NCAC 18A .1716	DISINFECTION OF WELLS
15A NCAC 18A .1717	DISINFECTION OF SPRINGS
15A NCAC 18A .1718	DISINFECTION OF DISTRIBUTION SYSTEM
15A NCAC 18A .1719	AVAILABILITY OF BULLETIN

History Note: Authority G.S. 130A-5(3); 130A-120; 130A-228; 130A-230; 130A-235; 130A-236; 130A-239; 130A-248; 130A-257;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. June 10, 1978;
Repealed Eff. September 1, 1990.

15A NCAC 18A .1720 WATER SUPPLIES

(a) A water supply for which requirements are established in this Subchapter, shall be from a community water supply regulated pursuant to 15A NCAC 18C or from a supply located, constructed, maintained, and operated in accordance with this Section.

(b) The requirements found in Rules .1720(c) through .1728 of this Section shall not apply to community water supplies.

(c) The following setback requirements shall apply:

- (1) A well shall not be located in an area propensity for flooding. Areas which have a propensity for flooding include those with concave slope, alluvial or colluvial soils, gullies, depressions or drainage ways.
- (2) A well constructed on or after July 1, 1993 shall be located at a minimum horizontal distance from:
 - (A) Septic tank or nitrification field; 100 ft.
 - (B) Other subsurface ground absorption waste disposal; 100 ft.
 - (C) Industrial or municipal sludge spreading or wastewater irrigation site; 100 ft.
 - (D) Watertight sewage or liquid-waste collection or transfer facility; 50 ft.
 - (E) Other sewage or liquid-waste collection or transfer facility; 100 ft.
 - (F) Animal feedlot or manure pile; 100 ft.
 - (G) Fertilizer, pesticide, herbicide or other chemical storage area; 100 ft.
 - (H) Non-hazardous waste storage, treatment or disposal lagoon; 100 ft.
 - (I) Sanitary landfill; 500 ft.

- | | | |
|-----|--|---------|
| (J) | Other non-hazardous solid waste landfill; | 100 ft. |
| (K) | Animal barn; | 100 ft. |
| (L) | Building foundation; | 50 ft. |
| (M) | Surface water body; | 50 ft. |
| (N) | Chemical or petroleum fuel underground storage tank regulated under 15A NCAC 2N: | |
| | (i) with secondary containment; | 50 ft. |
| | (ii) without secondary containment; | 100 ft. |
| (O) | Any other source of groundwater contamination. | 100 ft. |
- (3) For a well constructed prior to July 1, 1993, the minimum horizontal distances specified in Parts (C)(2)(A), (B), (D), and (L) of this Rule shall be reduced to no less than the following:
- | | | |
|-----|---|--------|
| (A) | Septic tank or nitrification field; | 50 ft. |
| (B) | Other subsurface ground absorption waste disposal system; | 50 ft. |
| (C) | Water-tight sewage or liquid-waste collection or transfer facility; | 25 ft. |
| (D) | Building foundation. | 25 ft. |
- (4) A well constructed prior to July 1, 1993 serving an establishment regulated under 15A NCAC 18A in operation prior to July 1, 1993 shall be required to meet only the following minimum horizontal distance requirements:
- | | | |
|-----|---|--------|
| (A) | Septic tank or nitrification field; | 50 ft. |
| (B) | Other subsurface ground absorption waste disposal system. | 50 ft. |
- (5) An owner, licensee or permittee shall not place or have placed a new source of contamination within the minimum horizontal distances in Subparagraphs (c)(1)-(4) of this Rule.
- (6) If different minimum horizontal distances requirements are set by the Division of Environmental Management pursuant to 15A NCAC 2C .0118 and .0119, those minimum horizontal distance requirements shall be used. The owner, licensee or permittees shall provide a written copy of the adjusted minimum horizontal distance requirements from the Division of Environmental Management to the local health department.

History Note: Authority G.S. 95-225; 130A-5(3); 130A-230; 130A-235; 130A-236; 130A-248; 130A-257;
 Eff. September 1, 1990;
 Amended Eff. May 1, 1996; July 1, 1993;
 Temporary Amendment Eff. May 25, 1998; May 5, 1998; March 1, 1998;
 Temporary Amendment (March 1, 1998) Expired December 11, 1998;
 Temporary Amendment (May 5, 1998) Expired January 26, 1999;
 Temporary Amendment (May 25, 1998) Expired March 12, 1999;
 Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .1721 WELL CASING

- (a) For a well constructed after July 1, 1993, the well casing shall be terminated at least 12 inches above the land surface.
- (b) For a well constructed prior to July 1, 1993, the well casing shall be terminated at least six inches above the land surface.

History Note: Authority G.S. 95-225; 130A-5(3); 130A-228; 130A-230; 130A-235; 130A-236; 130A-248; 130A-257;
 Eff. July 1, 1993;
 Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .1722 WELL HEAD PROTECTION

- (a) The base plate of a pump placed directly over the well shall be designed to form a watertight seal with the well casing or pump foundation.
- (b) In an installation where the pump is not located directly over the well, the annular space between the casing and pump intake or discharge piping shall be closed with a watertight seal designed specifically for this purpose.
- (c) The well shall be vented at the well head to allow for pressure changes within the well except when a suction lift type pump is used. Any vent pipe or tube shall be screened or otherwise designed to prevent the entrance of insects or other foreign materials.
- (d) For a well constructed after July 1, 1993, a hose bib shall be installed at the well head for obtaining samples. In the case of offset jet pump installations, the hose bib shall be installed directed downward on the pressure side of the jet pump piping. A vacuum breaker or backflow prevention device shall be installed on the hose bib.

(e) For a well constructed after July 1, 1993, a continuous bond concrete slab or well house concrete floor extending at least three feet horizontally around the outside of the well casing shall be provided. The minimum thickness for the concrete slab or floor shall be four inches. The slab or floor shall slope to drain away from the well casing.

(f) Any establishments permitted or licensed after July 1, 1993 shall have a continuous bond concrete slab or well house concrete floor extending at least three feet horizontally around the outside of the well casing. The minimum thickness for the concrete slab or floor shall be four inches. The slab or floor shall slope to drain away from the well casing.

History Note: Authority G.S. 95-225; 130A-5(3); 130A-230; 130A-235; 130A-236; 130A-248; 130A-257;
Eff. July 1, 1993;
Amended Eff. May 1, 1996;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .1723 SPRINGS

(a) If a spring is serving an establishment regulated under 15A NCAC 18A on or before July 1, 1993, the spring shall be approved unless a violation of Rule .1725 of this Section is identified. If Rule .1725 of this Section is violated and violation remains after disinfection in accordance with Rule .1724(b) of this Section, or the removal of chemical constituents, the spring shall comply with all requirements of Paragraph (b) of this Rule. However, a spring which is in violation of Rule .1725(c) of this Section may continue to be used if equipped with a continuous disinfection device in accordance with Rule .1727 of this Section.

(b) Any establishment permitted or licensed under 15A NCAC 18A after July 1, 1993, and any establishment developing a new spring shall meet the requirements of 2 NCAC 9C .0703, except Paragraphs (a), (b) and (f) shall not apply. 2 NCAC 9C .0703, except Paragraphs (a), (b) and (f) are hereby incorporated by reference including any subsequent amendments and editions. This material is available for inspection at the NC Department of Environment, Health, and Natural Resources, Environmental Health Services Section, 2728 Capital Blvd., Raleigh, North Carolina. Copies may be obtained from the Environmental Health Services Section at no cost.

(c) Springs approved pursuant to Paragraph (b) of this Rule shall not be connected to the establishment until compliance with this Section has been completed and the Department receives written certification from the owner of the establishment or a registered engineer, that the spring has been constructed in accordance with the approved plans and specifications.

History Note: Authority G.S. 95-225; 130A-5(3); 130A-230; 130A-235; 130A-236; 130A-248; 130A-257;
Eff. July 1, 1993;
Amended Eff. May 1, 1996;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .1724 DISINFECTION OF WATER SYSTEMS

(a) A water system regulated under this Section shall be disinfected upon completion of construction, maintenance, repairs, pump installation, or a report of a confirmed positive coliform sample. Wells shall be disinfected as required in 15A NCAC 02C .0111, which is hereby incorporated by reference, including any subsequent amendments and editions.

(b) A spring enclosure shall be disinfected upon completion of construction, maintenance, repairs, pump installation, or a report of a confirmed positive coliform sample as follows:

- (1) the interior surfaces of the spring enclosure shall be washed or swabbed with a chlorine solution of at least 100 milligrams per liter (mg/l) or greater of chlorine residual;
- (2) the disinfectant shall be poured into the spring, the service pipe shall be plugged, and water shall be retained in the spring storage for at least 24 hours, or disinfectant shall be fed into the spring continuously for at least 24 hours; and
- (3) the spring shall flow to waste until no disinfectant can be measured with a test kit that measures chlorine levels.

History Note: Authority G.S. 95-225; 130A-235; 130A-236; 130A-248; 130A-257; 130A-315;
Eff. July 1, 1993;
Readopted Eff. April 1, 2021.

15A NCAC 18A .1725 WATER QUALITY

(a) Prior to the initial use of a water supply, or after construction, maintenance, repairs, pump installation, or a report of a positive coliform sample, two consecutive bacteriological water samples taken at least 48 hours apart shall be collected by the

Department and submitted to the Division of Laboratory Services of the Department of Environment, Health, and Natural Resources or another laboratory certified pursuant to 15A NCAC 20D for analysis. Prior to collecting the sample, the water shall be tested and shall be negative for chlorine residual. For the purposes of this Rule, confirmation means another positive sample result following the initial positive sample unless the last positive sample was preceded by two consecutive negative samples.

(b) The water supply shall be deemed an imminent hazard under the following circumstances:

- (1) confirmation of the presence of fecal coliform bacteria.
- (2) determination by the Environmental Epidemiology Section of the Department that the presence of chemical constituents are present at levels that constitute an imminent hazard as defined in G.S. 130A-2(3).

(c) The water supply shall be deemed unsafe for use under the following conditions:

- (1) confirmation of the presence of total coliform.
- (2) determination by the Environmental Epidemiology Section of the Department that the presence of chemical constituents are present at levels in violation of water quality standards found in 15A NCAC 18C .1500 and do not constitute an imminent hazard as defined in G.S. 130A-2(3).

(d) After a positive sample has been followed by two consecutive negative samples collected at least 48 hours apart, follow-up samples shall be collected by the Department at least once each quarter, while the supply is in use, for one year. There shall be no treatment procedures between the two consecutive negative samples.

History Note: Authority G.S. 95-225; 130A-5(3); 130A-230; 130A-235; 130A-236; 130A-248; 130A-257;
Eff. July 1, 1993;
Amended Eff. May 1, 1996;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .1726 EMERGENCY SUPPLY SYSTEMS

A water supply serving an establishment regulated under 15A NCAC 18A which is in violation of Rule .1725 of this Section may be replaced by an emergency supply system for a time period not to exceed three months provided the Public Water Supply Section determines that the emergency supply system meets all the following requirements:

- (1) The source of water used by the emergency supply shall meet the requirements of 15A NCAC 18C;
- (2) Containers, hoses, pumps, lines, or other means of conveyance used to transport the water is disinfected with a chlorine solution of at least 100 mg/l of chlorine prior to being placed into use and after each transfer of water;
- (3) A chlorine residual of no less than 0.2 mg/l of free chlorine is maintained at all times and the owner, licensee, or permittee shall maintain a log to record the level of free chlorine residual at least twice a day while the facility is in operation; and
- (4) The emergency supply system is sampled for bacteriological analysis at least every other week by the Department and at least weekly by the owner, permittee, or licensee. All samples shall be submitted to the laboratory section of the Department or another laboratory certified by the Department for the analysis. A copy of all sample reports collected by the owner, permittee, or licensee shall be submitted to the local health department having jurisdiction within three days of receipt of the report.

History Note: Authority G.S. 95-225; 130A-5(3); 130A-230; 130A-235; 130A-236; 130A-248; 130A-257;
Eff. July 1, 1993;
Amended Eff. May 1, 1996;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .1727 CONTINUOUS DISINFECTION

(a) A supply which is in violation of Rule .1725(c)(1) of this Section may be used provided that the supply shall be continuously disinfected and a chlorine residual is maintained of at least 0.2 mg/l by use of equipment designed for this purpose. An operator shall be required for a water supply using continuous disinfection. The operator shall hold a valid certificate issued by the N.C. Water Treatment Facility Operators Certification Board.

(b) The owner, operator, or permittee shall provide to the Department a statement from the operator that a supply using continuous disinfection has a minimum chlorine residual of 0.2 mg/l and a chlorine contact time of at least 20 minutes.

(c) A disinfection device shall not be used to comply with a violation of Rule .1725 (b)(1) of this Section.

History Note: Authority G.S. 95-225; 130A-5(3); 130A-228; 130A-230; 130A-235; 130A-236; 130A-248; 130A-257;

Eff. July 1, 1993;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .1728 PROHIBITED SUPPLIES

(a) A supply in violation of Rule .1725(b)(1) of this Section shall be prohibited.

(b) Cisterns shall be prohibited.

*History Note: Authority G.S. 95-225; 130A-5(3); 130A-228; 130A-230; 130A-235; 130A-236; 130A-248; 130A-257;
Eff. July 1, 1993;*

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

SECTION .1800 - SANITATION OF LODGING PLACES

15A NCAC 18A .1801	DEFINITIONS
15A NCAC 18A .1802	PERMITS
15A NCAC 18A .1803	PUBLIC DISPLAY OF GRADE CARD
15A NCAC 18A .1804	INSPECTIONS
15A NCAC 18A .1805	INSPECTION FORMS
15A NCAC 18A .1806	GRADING
15A NCAC 18A .1807	APPROVED LODGING ESTABLISHMENTS
15A NCAC 18A .1808	LOBBY: HALLS: STAIRS: AND VENDING AREAS
15A NCAC 18A .1809	LAVATORIES AND BATHS
15A NCAC 18A .1810	WATER SUPPLY
15A NCAC 18A .1811	DRINKING WATER FACILITIES
15A NCAC 18A .1812	GUESTROOMS
15A NCAC 18A .1813	STORAGE AND LAUNDRY FACILITIES
15A NCAC 18A .1814	DISPOSAL OF GARBAGE AND TRASH: PREMISES
15A NCAC 18A .1815	SEVERABILITY

History Note: Authority G.S. 130A-248;

Eff. February 1, 1976;

Readopted Eff. December 5, 1977;

*Amended Eff. April 1, 1997; August 1, 1996; January 1, 1996; April 1, 1992; September 1, 1990;
December 1, 1988; March 1, 1988; July 1, 1986; June 30, 1980; September 1, 1979;*

Temporary Amendment Eff. June 22, 1998;

Temporary Amendment Expired March 12, 1999;

Temporary Amendment Eff. March 18, 1999;

Temporary Amendment Eff. January 31, 2000;

Amended Eff. November 1, 2006; September 1, 2002; April 1, 2001; August 1, 2000;

Repealed Eff. October 1, 2017.

15A NCAC 18A .1816 REFERENCE RULES

History Note: Authority G.S. 130A-248;

Eff. February 1, 1976;

Amended Eff. July 1, 1977;

Readopted Eff. December 5, 1977;

Amended Eff. June 10, 1978;

Repealed Eff. September 1, 1990.

15A NCAC 18A .1817 APPEALS PROCEDURE

History Note: Authority G.S. 130A-248;

Eff. February 1, 1987;

Amended Eff. September 1, 1990;

Repealed Eff. October 1, 2017.

15A NCAC 18A .1818 PLAN REVIEW

*History Note: Authority G.S. 130A-248;
Eff. August 1, 1990;
Amended Eff. January 1, 1996;
Repealed Eff. October 1, 2017.*

SUBCHAPTER 18A - SANITATION

SECTION .1800 - SANITATION OF LODGING PLACES

15A NCAC 18A .1821 DEFINITIONS

The following definitions shall apply throughout this Section:

- (1) "Accredited Program"
 - (a) "Accredited program" means a food protection manager certification program that has been evaluated and listed by an accrediting agency as conforming to national standards for organizations that certify individuals.
 - (b) "Accredited program" refers to the certification process and is a designation based upon an independent evaluation of factors such as the sponsor's mission; organizational structure; staff resources; revenue sources; policies; public information regarding program scope, eligibility requirements, re-certification, discipline, and grievance procedures; and test development and administration.
 - (c) "Accredited program" does not refer to training functions or educational programs.
- (2) "Adulterated" has the meaning stated in the Federal Food, Drug, and Cosmetic Act, 402, 21 U.S.C. 342, which is hereby incorporated by reference, including subsequent amendments and Editions and which can be accessed free of charge at <https://www.gpo.gov/fdsys/pkg/USCODE-2010-title21/html/USCODE-2010-title21-chap9-subchapIV-sec342.htm>.
- (3) "Approved" means acceptable to the regulatory authority based upon a determination of conformity with principles, practices, and generally recognized standards that protect public health.
- (4) "Bed and Breakfast Home" means bed and breakfast home as defined in G.S. 130A-247(5a).
- (5) "Bed and Breakfast Inn" means bed and breakfast inn as defined in G.S. 130A-247(6).
- (6) "CFR" means Code of Federal Regulations.
- (7) "Clean" means washed and free from dirt, marks, or unwanted matter.
- (8) "Department" means the North Carolina Department of Health and Human Services.
- (9) "Employee" means the permit holder, person in charge, food employee, person having supervisory or management duties, person on the payroll, family member, volunteer, person performing work under contractual agreement, or other person working in a lodging establishment.
- (10) "Equipment" means an article that is used in the operation of a lodging establishment such as a freezer, grinder, hood, ice machine, water fountain, meat block, mixer, oven, reach-in refrigerator, scale, sink, slicer, stove, table, temperature measuring device for ambient air, vending machine, or warewashing machine.
- (11) "Food" means a raw, cooked, or processed edible substance, ice, beverage, or ingredient used or intended for use or for sale in whole or in part for human consumption, or chewing gum.
- (12) "Food-contact surface" means:
 - (a) A surface of equipment or a utensil with which food normally comes into contact; or
 - (b) A surface of equipment or a utensil from which food may drain, drip, or splash:
 - (i) Into a food product; or
 - (ii) Onto a surface normally in contact with food.
- (13) "Food employee" means an individual working with unpackaged food, food equipment or utensils, or food-contact surfaces.
- (14) "Furnishings" means furniture, fittings, window coverings, and other accessories, including decorative accessories.

- (15) "Good Repair" means equipment and utensils shall be maintained in a state of repair and condition that meets the requirements specified under Parts 4-1 and 4-2 of the Food Code as incorporated by reference in Rule 15A NCAC 18A .2650.
- (16) "Guest Rooms" means the accommodations or designated areas for persons who pay for the services of the lodging establishment, such as bedrooms, suite areas, and bathrooms.
- (17) "Handwashing sink" means a lavatory, basin, or vessel for washing, a washbasin, or a plumbing fixture placed for use in personal hygiene and designed for the washing of the hands. This includes an automatic handwashing facility.
- (18) "Kitchenware" means food preparation and storage utensils.
- (19) "Linen" means fabric items such as bedding, towels, cloth hampers, cloth napkins, table cloths, wiping cloths, and work garments including cloth gloves.
- (20) "Lodging establishment" means all hotels, motels, inns, tourist homes, and other places providing lodging accommodations for pay. Facilities described in G.S. 130A-250 (1) through (5) shall not be regulated as "lodging establishment." For the purposes of this Section, the term "lodging establishment" also includes bed and breakfast homes and bed and breakfast inns.
- (21) "mg/L" means milligrams per liter, which is the metric equivalent of parts per million (ppm).
- (22) "Packaged" means bottled, canned, cartoned, bagged, or wrapped, whether packaged in a food establishment or a food processing plant.
- (23) "Permit" means the document issued by the regulatory authority that authorizes a person to operate a lodging establishment.
- (24) "Permit Holder" means:
 - (a) The person in charge who resides in and owns or rents the bed and breakfast home or bed and breakfast inn.
 - (b) The legal entity responsible for the operation of the lodging establishment, such as the owner, the owner's agent, or other person.
- (25) "Person" means person as defined in G.S. 130A-2(7).
- (26) "Person in charge" means the individual present at a lodging establishment who is responsible for the operation at the time of inspection.
- (27) "Physical facilities" means the structure and interior surfaces of a lodging establishment, including furnishings and accessories such as soap and towel dispensers and attachments, such as light fixtures and heating or air conditioning system vents.
- (28) "Poisonous or toxic materials" means substances that are not intended for ingestion and are included in four categories:
 - (a) Cleaners and sanitizers, which include cleaning and sanitizing agents and agents such as caustics, acids, drying agents, polishes, and other chemicals;
 - (b) Pesticides, except sanitizers, which include substances such as insecticides and rodenticides;
 - (c) Substances that are necessary for the operation and maintenance of the establishment such as nonfood grade lubricants and personal care items; and
 - (d) Substances that are not necessary for the operation and maintenance of the establishment and are on the premises for retail sale, such as petroleum products and paints.
- (29) "Potentially Hazardous Food" means potentially hazardous food (time/temperature control for safety food) to limit pathogenic microorganism growth or toxin formation.
- (30) "Premises" means the physical facility, its contents, and the contiguous land or property under the control of the permit holder.
- (31) "Refuse" means solid waste not carried by water through the sewage system.
- (32) "Registered Environmental Health Specialist" means an Environmental Health Specialist as defined in G.S. 90A-51(2b) who has registered in accordance with G.S. 90A-51(4).
- (33) "Regulatory Authority" means the Department or authorized agent of the Department.
- (34) "Sanitization" means the application of cumulative heat or chemicals on cleaned food-contact surfaces that, when evaluated for efficacy, is sufficient to yield a reduction of five logs, which is equal to a 99.999% reduction, of representative disease microorganisms.
- (35) "Sewage" means liquid waste containing animal or vegetable matter in suspension or solution and may include liquids containing chemicals in solution.
- (36) "Single-use articles" means tableware, carry-out utensils, and other items such as bags, containers, placemats, stirrers, straws, toothpicks, and wrappers that are designed and constructed for one time, one

person use after which they are intended for discard. It also includes utensils and bulk food containers designed and constructed to be used once and discarded, such as wax paper, butcher paper, plastic wrap, formed aluminum food containers, jars, plastic tubs or buckets, bread wrappers, pickle barrels, ketchup bottles, and number 10 cans.

- (37) "Tableware" means eating, drinking, and serving utensils for table use such as flatware including forks, knives, and spoons; hollowware including bowls, cups, serving dishes, and tumblers; and plates.
- (38) "Temperature measuring device" means a thermometer, thermocouple, thermistor, or other device that indicates the temperature of food, air, or water.
- (39) "Transitional Permit" means a permit issued by the regulatory authority upon the transfer of ownership or lease of an existing lodging establishment to allow the correction of construction and equipment problems that do not represent an immediate threat to public health.
- (40) "Utensil" means a food-contact implement or container used in the storage, preparation, transportation, dispensing, sale, or service of food, such as kitchenware or tableware that is multiuse, single-service, or single-use; gloves used in contact with food; temperature sensing probes of food temperature measuring devices; and probe-type price or identification tags used in contact with food.
- (41) "Warewashing" means the cleaning and sanitizing of utensils and food-contact surfaces of equipment.

History Note: Authority G.S. 130A-4; 130A-6; 130A-248;
Eff. October 1, 2017.

15A NCAC 18A .1822 MANAGEMENT AND PERSONNEL

(a) Bed and breakfast homes or bed and breakfast inns shall comply with Parts 2-1 through 2-4 of the Food Code as amended by Rule 15A NCAC 18A .2652, with the following exceptions:

- (1) Food preparation shall not be prohibited in a bed and breakfast home or bed and breakfast inn.
- (2) Nothing shall prohibit family style dining or return to self-service areas such as buffets in a bed and breakfast home or bed and breakfast inn.
- (3) The requirement in Section 2-102.12 of the Food Code as amended by Rule 15A NCAC 18A .2652 shall be effective one year after the effective date of this Rule.

(b) Lodging establishment employees shall comply with the requirements of Sections 2-301.11, 2-301.12, 2-301.14, 2-301.15, 2-304.11, 2-401.11, 2-401.12, and 2-403.11 of the Food Code as amended by Rule 15A NCAC 18A .2652.

History Note: Authority G.S. 130A-4; 130A-6; 130A-248;
Eff. October 1, 2017.

15A NCAC 18A .1823 FOOD

(a) Lodging establishments that prepare and serve food shall obtain a food establishment permit unless exempted by G.S. 130A-250.

(b) Food prepared in a bed and breakfast home or a bed and breakfast inn shall comply with Chapter 3 of the Food Code as amended by Rule 15A NCAC 18A .2653. The rules in this Section shall not prohibit family style service in bed and breakfast homes and bed and breakfast inns, and no additional protection or labeling of food shall be required during display and service in these establishments.

(c) In lodging establishments, ice used for room service shall be manufactured from a water supply that complies with 15A NCAC 18A .1700, "Rules Governing the Sanitation of Protection of Water Supplies Rules" and 15A NCAC 18C and shall be stored and handled in a manner so as to prevent contamination. All ice machines for use by guests shall dispense ice without exposing stored ice to guests.

History Note: Authority G.S. 130A-4; 130A-6; 130A-248;
Eff. October 1, 2017.

15A NCAC 18A .1824 EQUIPMENT AND UTENSILS

(a) Food-contact surfaces shall comply with Parts 4-1 and 4-2 of the Food Code as amended by Rule 15A NCAC 18A .2654. This shall not prohibit the use of domestic equipment.

(b) Equipment and utensils shall be kept clean and in good repair.

(c) All kitchenware and food-contact surfaces of equipment, excluding cooking surfaces of equipment, used in the preparation or serving of food or drink, and all food storage utensils, in a bed and breakfast home or bed and breakfast inn shall be

cleaned and sanitized, as required in Parts 4-6 and 4-7 of the Food Code as amended by Rule 15A NCAC 18A .2654 after each use, air dried, and stored in a manner to prevent contamination.

(d) Cooking and baking equipment in a bed and breakfast home or bed and breakfast inn shall be cleaned no less than once each day.

(e) Nonfood-contact surfaces of equipment shall be clean.

(f) Sanitizers used for sanitization of kitchenware and food-contact surfaces shall be maintained as required in Part 4-5 of the Food Code as amended by Rule 15A NCAC 18A .2564.

(g) Nothing in this Rule shall require sanitization as exempted in guest rooms per G.S. 130A-248(a3)(3).

(h) Sinks in guest rooms shall be sanitized before washing multi-use utensils.

(i) Single-use articles may be used if discarded after each use. Single-use articles must be stored and handled to prevent contamination.

(j) A food temperature measuring device with a small diameter probe shall be provided and accessible for use by employees in ensuring attainment and maintenance of food temperatures.

(k) A test kit or other device that measures the concentration in mg/L of sanitizing solutions shall be provided by the lodging establishment.

(l) Equipment for preparing coffee and tea shall be kept clean, but is exempt from sanitization required by Paragraph (c) of this Rule.

*History Note: Authority G.S. 130A-4; 130A-6; 130A-248;
Eff. October 1, 2017.*

15A NCAC 18A .1825 WATER, PLUMBING, AND WASTE

(a) Water, plumbing, and waste shall comply with Chapter 5 of the Food Code as amended by Rule 15A NCAC 18A .2655. The requirements of Sections 5-202.12, 5-203.11, 5-203.12, 5-203.13, 5-204.11, and 5-205.11 of the Food Code as amended by Rule 15A NCAC 18A .2655 shall be effective one year after the effective date of this Rule.

(b) Bed and Breakfast Homes that are permitted prior to April 2017 and only serve the breakfast meal shall not be required to provide a separate handwashing sink in the kitchen.

(c) A handwashing sink, located to allow use by employees handling clean and soiled linen, shall be provided. This requirement shall be effective one year after the effective date of this Rule. Facilities that do not have handwashing sinks in soiled linen areas shall not be required to install additional lavatories if a hand hygiene program, approved by the regulatory authority, is used.

(d) Baths, handwashing sinks, and toilets shall be provided for each guest room or unit in lodging establishments constructed on or after December 1, 1988.

(e) All refuse shall be collected and stored in covered receptacles. Refuse receptacles shall be kept clean and in good repair.

(f) Where dumpsters are used, a contract for off-site cleaning shall constitute compliance with Paragraph (e) of this rule.

(g) Refuse shall be removed from the premises at a frequency that will prevent the development of odors and other conditions that attract or harbor insects and rodents.

*History Note: Authority G.S. 130A-4; 130A-6; 130A-248;
Eff. October 1, 2017.*

15A NCAC 18A .1826 PHYSICAL FACILITIES

(a) Handwashing sinks as required in Rule .1825 in this Section shall be supplied with hand soap, and either individual, disposable towels; a continuous towel system that supplies the user with a clean towel; a heated-air hand drying device; or a hand drying device that employs an air-knife system that delivers high velocity, pressurized air at ambient temperatures. Handwashing sinks in guest rooms shall be supplied with soap and clean towels.

(b) Toilets or urinals shall be provided as in Rule .1825 of this Section and shall have a supply of toilet tissues available at each toilet.

(c) Sinks, vanities, toilets, and showers in guest rooms shall be cleaned and sanitized between guests.

(d) The light intensity shall be minimum 215 lux/20 foot candles at a distance of 75 cm/30 inches above the floor in areas used for handwashing, warewashing, and equipment and utensil storage, and in toilet rooms.

(e) Where natural ventilation only is provided, outside openings shall be screened and in good repair. Windows and doors shall be kept clean and in good repair.

(f) Physical facilities shall be kept clean and in good repair.

- (g) Perimeter walls and roofs shall protect the lodging establishment from the weather and the entry of insects, rodents, and other pests.
- (h) Furnishings, bathroom fixtures, carpets, and other accessories in guest rooms, shall be kept clean and in good repair.
- (i) The premises and guest rooms shall be maintained free of insects, rodents, and other pests. The presence of insects, rodents, and other pests shall be controlled to eliminate their presence on the premises by: inspecting incoming shipments of food and supplies; inspecting the premises for evidence of pests; and eliminating harborage conditions.
- (j) Live animals shall be prohibited from entering areas of food preparation, storage, sales, display, or dining. This excludes service animals accompanying persons with disabilities in areas that are not used for food preparation.

History Note: Authority G.S. 130A-4; 130A-6; 130A-248;
Eff. October 1, 2017.

15A NCAC 18A .1827 PREMISES, STORAGE, POISONOUS OR TOXIC MATERIALS

- (a) There shall be no fly or mosquito breeding places, rodent harborage, or undrained areas on the premises. The premises shall be free of litter and items unnecessary to the operation or maintenance of the lodging establishment, such as equipment that is nonfunctional or no longer used.
- (b) Only pesticides that have been registered with the EPA and with the N.C. Department of Agriculture and Consumer Services shall be used and only for the specific use for which they have been approved. Such pesticides shall be used as directed on the label and shall be handled and stored to avoid health hazards. Pesticides shall not be accessible to guests.
- (c) Household cleaning agents such as bleaches, detergents, and polishes shall be used and stored according to manufacturer's recommendations.
- (d) Sanitizing solutions shall not be stored in or dispensed from containers previously containing other poisonous or toxic materials.
- (e) Chemical sanitizers and other chemical antimicrobials applied to food-contact surfaces shall meet the requirements specified in "40 CFR 180.940," tolerance exemptions for active and inert ingredients for use in antimicrobial formulations (food-contact surface sanitizing solutions). 40 CFR 180.940 is hereby incorporated by reference, including all subsequent editions and amendments, and can be accessed free of charge at <https://www.gpo.gov/fdsys/granule/CFR-2012-title40-vol25/CFR-2012-title40-vol25-sec180-940>.
- (f) Medications under the control of the permit holder shall be stored in a manner to avoid contamination of food and food contact surfaces.
- (g) A storage area shall be provided for building and ground maintenance tools and supplies and stored in a manner to avoid contamination of food and food contact surfaces, linen, and single-use articles.

History Note: Authority G.S. 130A-4; 130A-6; 130A-248;
Eff. October 1, 2017.

15A NCAC 18A .1828 LAUNDRY AND LINENS

- (a) Except as specified in Paragraph (b) of this Rule, clean bed and bath linen in good repair shall be provided for each guest who is provided accommodations and shall be changed between successive guests. Two sheets shall be provided for each bed. The lower sheet shall be folded under both ends of the mattress. The upper sheet shall be folded under the mattress at the lower end.
- (b) If bed covers are not cleaned between successive guests, the upper sheet shall be folded under the mattress at the lower end and folded over the bed cover minimum six inches at the top end.
- (c) Clean linen and supplies shall be stored in cabinets, or on shelves in linen and supply storage rooms. Cabinets, shelves, and storage rooms shall be in good repair and kept clean.
- (d) Items on housekeeping carts shall be arranged in a manner to prevent cross-contamination between soiled and cleaned items. Housekeeping carts shall be kept clean and stored to protect items from contamination.
- (e) Soiled laundry shall be handled and stored separately from clean laundry using separate cleanable carts or bags. Carts used for soiled laundry shall be labeled or identified for soiled laundry use only.

History Note: Authority G.S. 130A-4; 130A-6; 130A-248;
Eff. October 1, 2017.

15A NCAC 18A .1829 PERMITS

(a) No permit for a lodging establishment shall be issued to a person until an application is submitted in accordance with Rule .1833 and an evaluation by the regulatory authority shows that the establishment complies with this Section. However, for bed and breakfast homes and inns, the regulatory authority shall allow a period of 210 days after the date of issuance of the permit to comply with the certified food protection manager requirements in Rule .1822 of this Section.

(b) Upon transfer of ownership of an existing lodging establishment, the regulatory authority shall complete an evaluation. If the lodging establishment satisfies all the requirements of the rules, a permit shall be issued. If the lodging establishment does not satisfy all the requirements of the rules, a permit shall not be issued. A transitional permit shall be issued if the regulatory authority determines that the noncompliant items are construction or equipment problems that do not represent an immediate threat to public health. The transitional permit shall expire 180 days after the date of issuance, unless suspended or revoked before that date, and shall not be renewed. Upon expiration of a transitional permit, the permit holder shall have corrected the noncompliant items and obtained a permit, or the lodging establishment shall not continue to operate.

(c) The regulatory authority shall impose conditions on the issuance of a permit or a transitional permit if necessary to ensure that a lodging establishment remains in compliance with this Section. Conditions may be specified for one or more of the following areas:

- (1) The number of bedrooms or persons housed;
- (2) The amount of laundry or kitchen and warewashing equipment on the premises;
- (3) Time schedules in completing minor construction items;
- (4) Modification or maintenance of water supplies, water use fixtures, and sanitary sewage systems;
- (5) Use of facilities for more than one purpose;
- (6) Continuation of contractual arrangements upon which basis the permit was issued; or
- (7) Any other conditions necessary for a lodging place to remain in compliance with this Section.

(d) If a permit or transitional permit has been suspended, the suspension shall be lifted if the regulatory authority has evaluated the lodging establishment and found that the violations causing the suspension have been corrected. If a permit or transitional permit has been revoked, a new permit shall be issued only after a request is made by the permit holder and the regulatory authority has evaluated the lodging establishment and found it to comply with the rules of this Section. The evaluations shall be conducted within 15 days after the request is made by the permit holder.

History Note: Authority G.S. 130A-4; 130A-6; 130A-248;
Eff. October 1, 2017.

15A NCAC 18A .1830 PUBLIC DISPLAY OF GRADE CARD

(a) Upon initial inspection of a lodging establishment or if a renovation or other change in the establishment makes the grade card not visible, the regulatory authority shall designate the location for posting the grade card. The grade card shall be located in a conspicuous place where it may be readily observed by the public upon entering the lodging establishment. If the person in charge of the lodging establishment objects to the location designated by the regulatory authority, the grade card may be posted in another location that meets the criteria of this Rule if agreed upon by the person in charge and the regulatory authority.

(b) When an inspection of a lodging establishment is made, the regulatory authority shall remove the existing grade card, issue a new grade card, and post the new grade card in the same location where the grade card was previously posted as long as that location remains conspicuous. The person in charge of the lodging establishment shall keep the grade card posted at the designated location at all times. The grade card may be posted in another location that meets the criteria of this Rule if agreed upon by the person in charge and the regulatory authority.

(c) The grade card issued by the Department shall be posted. The posted grade card shall be black on a white background. The alphabetical and numerical rating shall be 1.5 inches in height.

History Note: Authority G.S. 130A-4; 130A-6; 130A-248; 130A-249;
Eff. October 1, 2017.

15A NCAC 18A .1831 INSPECTIONS AND REINSPECTIONS

(a) Upon entry into a lodging establishment, the regulatory authority shall provide identification and the purpose in visiting that establishment. The regulatory authority shall inquire as to the identity of the person in charge and invite the person in charge to accompany the regulatory authority during the inspection. If no employee is identified as the person in charge, the regulatory authority shall invite an employee to accompany them on the inspection. Following the inspection, the regulatory authority shall offer to review the results of the inspection with the person in charge or employee, as applicable.

(b) The grading of lodging establishments shall be conducted using an inspection form furnished by the regulatory authority. The form shall provide the following information:

- (1) The name and mailing address of the lodging establishment;
- (2) The name of the permit holder;
- (3) The permit status and score given;
- (4) Standards of construction and operation as listed in Rules .1821 through .1834 of this Section;
- (5) An explanation for all points deducted;
- (6) The signature of the regulatory authority; and
- (7) The date.

(c) The grading of lodging establishments shall be based on the standards of operation and construction as set forth in Rules .1821 through .1834 of this Section.

(d) The Inspection of Lodging Establishment form shall be used to document points assessed for violation of the rules of this Section as follows:

- (1) Violation of Part 2-1 of the Food Code incorporated by reference in Rule .1822 of this Section related to person in charge present, certification by accredited program or performs duties shall equal no more than 2 points.
- (2) Violation of Part 2-1 of the Food Code incorporated by reference in Rule .1822 of this Section related to management awareness, policy present, and allergy awareness shall equal no more than 2 points.
- (3) Violation of Part 2-2 of the Food Code incorporated by reference in Rule .1822 of this Section related to use of reporting, restriction, and exclusion shall equal no more than 2 points.
- (4) Violation of Part 2-4 or Chapter 3 of the Food Code incorporated by reference in Rules .1822 and .1823 of this Section related to eating, tasting, drinking, or tobacco use shall equal no more than 1 point.
- (5) Violation of Parts 2-3 through 2-4 of the Food Code incorporated by reference in Rule .1822 of this Section related to personal cleanliness and hair restraints shall equal no more than 1 point.
- (6) Violation of Part 2-3 or Chapter 3 of the Food Code incorporated by reference in Rules .1822 and .1823 of this Section related to hands clean shall equal no more than 4 points.
- (7) Violation of Chapter 3 of the Food Code incorporated by reference in Rule .1823 of this Section related to food obtained from approved source, good condition, safe, and unadulterated shall equal no more than 3 points.
- (8) Violation of Chapter 3 of the Food Code incorporated by reference in Rule .1823 of this Section related to food separated and protected from contamination shall equal no more than 3 points.
- (9) Violation of Rule .1823 or Chapter 3 of the Food Code incorporated by reference in Rule .1823 of this Section related to food protected from environmental or other sources of contamination, including proper dispensing of ice, shall equal no more than 3 points.
- (10) Violation of Chapter 3 of the Food Code incorporated by reference in Rule .1823 of this Section related to cooking/reheating temperatures shall equal no more than 3 points.
- (11) Violation of Chapter 3 of the Food Code incorporated by reference in Rule .1823 of this Section related to proper cooling and approved methods shall equal no more than 3 points.
- (12) Violation of Chapter 3 of the Food Code incorporated by reference in Rule .1823 of this Section related to cold/hot holding temperatures shall equal no more than 3 points.
- (13) Violation of Chapter 3 of the Food Code incorporated by reference in Rule .1823 of this Section related to date marking shall equal no more than 3 points.
- (14) Violation of Rule .1824 or Parts 4-1 through 4-2 of the Food Code incorporated by reference in Rule .1824 of this Section related to equipment, food and nonfood-contact surfaces approved, cleanable, properly designed, constructed and used shall equal no more than 1 point.
- (15) Violation of Rule .1824 of this Section related to utensils, equipment properly stored, dried and handled shall equal no more than 1 point.
- (16) Violation of Rule .1824 or Part 4-6 of the Food Code incorporated by reference in Rule .1824 of this Section related to warewashing facilities installed, maintained and used shall equal no more than 2 points.
- (17) Violation of Rule .1824 or Parts 4-5 through 4-7 of the Food Code incorporated by reference in Rule .1824 of this Section or of Rule .1827 of this Section related to food-contact surfaces cleaned and sanitized where required and sanitizers maintained as required shall equal no more than 3 points.
- (18) Violation of Rule .1824 of this Section related to cooking surfaces of equipment and nonfood-contact surfaces clean shall equal no more than 1 point.

- (19) Violation of Rule .1824 of this Section related to single-use articles properly stored and used shall equal no more than 1 point.
- (20) Violation of Rule 1824 of this Section related to temperature measuring devices and sanitizer test kits provided shall equal no more than 2 points.
- (21) Violation of Rule .1825 or Chapter 5 of the Food Code incorporated by reference in Rule .1825 or .1826 of this Section related to handwashing sinks supplied and accessible and toilet tissue supplied shall equal no more than 2 points.
- (22) Violation of Rule .1823 of this Section or Chapter 5 of the Food Code incorporated by reference in Rule .1825 of this Section related to water from approved source, backflow prevention, plumbing in good repair shall equal no more than 4 points.
- (23) Violation of Chapter 5 of the Food Code incorporated by reference in Rule .1825 of this Section related to service sink or other approved method and mop storage shall equal no more than 2 points.
- (24) Violation of Chapter 5 of the Food Code incorporated by reference in Rule .1825 of this Section related to sewage and waste water disposal shall equal no more than 4 points.
- (25) Violation of Rule .1826 of this Section related to natural ventilation and lighting requirements shall equal no more than 2 points.
- (26) Violation of Rule .1826 of this Section related to furnishings clean and in good repair and guest room bathroom fixtures clean and sanitized between guests shall equal no more than 4 points.
- (27) Violation of Rule .1826 of this Section related to physical facilities installed, maintained and clean shall equal no more than 4 points.
- (28) Violation of Rule .1826 of this Section related to insects and rodents present shall equal no more than 4 points.
- (29) Violation of Rule .1828 of this Section related to linens changed as required shall equal no more than 3 points.
- (30) Violation of Rule .1828 of this Section related to linen clean and in good repair shall equal no more than 4 points.
- (31) Violation of Rule .1828 of this Section related to linen properly handled and stored shall equal no more than 3 points.
- (32) Violation of Rule .1828 of this Section related to housekeeping carts shall equal no more than 4 points.
- (33) Violation of Rule .1825 or Chapter 5 of the Food Code incorporated by reference in Rule .1825 of this Section or of Rule .1827 of this Section related to garbage and refuse disposal and facilities maintained shall equal no more than 2 points.
- (34) Violation of Rule .1826 or .1827 of this Section related to premises maintained to prevent breeding and harborage shall equal no more than 3 points.
- (35) Violation of Rule .1827 of this Section related to storage areas maintained clean, provided for maintenance equipment shall equal no more than 3 points.
- (36) Violation of Rule .1827 of this Section related to approved pesticide use shall equal no more than 3 points.
- (37) Violation of Rule .1827 of this Section related to household cleaning agents, sanitizers, and medicines properly stored and handled shall equal no more than 3 points.
- (38) Violation of Rule .1827 of this Section related to premises kept neat and clean shall equal no more than 2 points.

(e) Upon request of the permit holder or his or her representative a reinspection shall be made. In the case of establishments that request an inspection for the purpose of raising the alphabetical grade, and that hold unrevoked permits, the regulatory authority shall make an unannounced inspection within 15 days from the date of the request.

History Note: Authority G.S. 130A-4; 130A-6; 130A-248; 130A-249; Eff. October 1, 2017.

15A NCAC 18A .1832 GRADING

(a) The grading of lodging establishments shall be based on a system of scoring. A lodging establishment that earns a score of:

- (1) 90 percent or more shall receive a grade A;
- (2) 80 percent and less than 90 percent shall receive a grade B;
- (3) 70 percent and less than 80 percent shall receive a grade C.

(b) Permits shall be immediately revoked in accordance with G.S. 130A-23(d) for lodging establishments receiving a score of less than 70 percent.

History Note: Authority G.S. 130A-4; 130A-6; 130A-4; 130A-6; 130A-248; 130A-249;
Eff. October 1, 2017.

15A NCAC 18A .1833 APPLICATION AND PLAN REVIEW

(a) Plans drawn to scale for new lodging establishments shall be submitted for review and approval to the local health department prior to initiating construction, or prior to construction of additions or renovations, excluding cosmetic or nonstructural changes to existing lodging establishments.

(b) An applicant shall submit an application for a permit or transitional permit at least 30 days before the date planned for opening the lodging establishment. The applicant shall submit to the regulatory authority a written application for a permit on a form provided by the regulatory authority.

(c) The application form shall include:

- (1) The name, mailing address, telephone number, and signature of the person applying for the permit and the name, mailing address, and location of the lodging establishment;
- (2) Information specifying whether the lodging establishment is owned by an association, corporation, individual, partnership, or other legal entity;
- (3) The name, title, address, and telephone number of the person in charge responsible for the lodging establishment;
- (4) A statement specifying the number of guest rooms or units and whether the lodging establishment is an operation that includes one or more of the following:
 - (A) Prepares, or serves potentially hazardous food (time/temperature control for safety food) for guests;
 - (B) Prepares only food that is not potentially hazardous (time/temperature control for safety food) for guests;
 - (C) Does not prepare, but serves only prepackaged food that is not potentially hazardous (time/temperature control for safety food) for guests;
- (5) Number and type of meals served, and the menu;
- (6) Source of water supply and wastewater disposal; and
- (7) A statement signed by the applicant that attests to the accuracy of the information provided in the application.

History Note: Authority G.S. 130A-4; 130A-6; 130A-248;
Eff. October 1, 2017.

15A NCAC 18A .1834 INFORMAL REVIEW PROCESS

(a) If a permit holder disagrees with a decision of the local health department on the enforcement of the rules of this Section the permit holder may request an informal review in accordance with Paragraphs (b) and (c) of this Rule.

(b) If the permit holder requests an informal review, the request shall be in writing and shall be postmarked or hand delivered to the local health department within seven days of notice of the decision giving rise to the review. The request shall state the issues in dispute. The informal review shall be conducted by a Registered Environmental Health Specialist authorized as an agent of the Department. If the inspection giving rise to the informal review was conducted by the Environmental Health Supervisor in the county or area where the lodging establishment is located, or when the county or area has only one Registered Environmental Health Specialist assigned to inspect lodging establishments, the Departmental Environmental Health Regional Specialist assigned to that county or area shall conduct the local informal review. As soon as possible, but no later than 30 days of receipt of the request, the person conducting the review shall:

- (1) Contact the permit holder;
- (2) Provide that permit holder an opportunity to be heard on the issues in dispute; and
- (3) Issue a written decision addressing the issues raised in the informal review.

Copies of the decision shall be delivered by the local health department to the permit holder and to the State Health Director. That decision shall be followed by the Department for the purposes of future inspections of the establishment in question unless modified pursuant to Paragraph (c) of this Rule.

(c) Following receipt of the written decision issued pursuant to Paragraph (b) of this Rule, the permit holder who initiated the informal review may request a State informal review of the resulting decision to an Informal Review Officer employed by and

designated by the Department as responsible for final decisions on requests for State informal review from throughout the State. Notice of the request for State informal review shall be in writing, shall include a copy of the Environmental Health Supervisor's or his or her representative's decision, and shall be postmarked or hand-delivered to the local health department and to the Department within seven days of receipt of the written decision issued pursuant to Paragraph (b) of this Rule. Within 35 days of receipt of this request for State informal review, the designated Informal Review Officer shall hold a conference in Wake County. At least 10 days prior to the conference, the Informal Review Officer shall provide notice of the time and place of this conference to the permit holder and the Environmental Health Supervisor for the county or area where the issue arose. Within 10 days following the date of the conference, the Informal Review Officer shall issue a written decision addressing the issues raised in the State informal review and that decision shall be followed by the Department for purposes of future inspections of the establishment in question.

(d) If the informal review results in a change in the score resulting from an inspection of the establishment, the regulatory authority shall post a new grade card reflecting that new score.

(e) Nothing in this Rule shall impact the right of a permit holder to a reinspection pursuant to Rule .1831 of this Section.

(f) Nothing in this Rule shall prohibit the permit holder from seeking remedies as set forth under G.S. 150B.

History Note: Authority G.S. 130A-4; 130A-6; 130A-248; 248-249;
Eff. October 1, 2017.

SECTION .1900 - SEWAGE TREATMENT AND DISPOSAL SYSTEMS

Rules .1901 - .1968 of Title 15A Subchapter 18A of the North Carolina Administrative Code (T15A.18A .1901 - .1968); has been transferred and recodified from Rules .1901 - .1968 of Title 10 Subchapter 10A of the North Carolina Administrative Code (T10.10A .1901 - .1968), effective April 4, 1990.

15A NCAC 18A .1901	PURPOSE
15A NCAC 18A .1902	PROPER DISPOSAL
15A NCAC 18A .1903	DEFINITIONS
15A NCAC 18A .1904	SEWAGE DISPOSAL REQUIREMENTS
15A NCAC 18A .1905	PRIVY AND SEPTIC TANK CONSTRUCTION
15A NCAC 18A .1906	PREFABRICATED TANKS
15A NCAC 18A .1907	MINIMUM STANDARDS FOR PREFABRICATED SEPTIC TANKS
15A NCAC 18A .1908	SITE EVALUATION
15A NCAC 18A .1909	APPLICATION RATES
15A NCAC 18A .1910	SITE CLASSIFICATION
15A NCAC 18A .1911	SPACE REQUIREMENTS
15A NCAC 18A .1912	LOCATION OF SEPTIC TANK SYSTEMS AND PRIVIES
15A NCAC 18A .1913	MAINTENANCE OF PRIVIES
15A NCAC 18A .1914	MAINTENANCE OF SEPTIC TANK SYSTEMS
15A NCAC 18A .1915	PERMITS
15A NCAC 18A .1916	RESPONSIBILITIES
15A NCAC 18A .1917	TECHNICAL GUIDE
15A NCAC 18A .1918	SITE FACTORS
15A NCAC 18A .1919	TOPOGRAPHY
15A NCAC 18A .1920	SOIL CHARACTERISTICS
15A NCAC 18A .1921	PERCOLATION TESTS
15A NCAC 18A .1922	DETERMINATION OF SOIL SUITABILITY
15A NCAC 18A .1923	AVAILABLE SPACE
15A NCAC 18A .1924	OTHER APPLICABLE FACTORS
15A NCAC 18A .1925	ESTIMATES OF SEWAGE QUANTITIES
15A NCAC 18A .1926	POSSIBLE MODIFICATIONS OF INITIAL CLASSIFICATIONS
15A NCAC 18A .1927	INTERPRETATION AND TECHNICAL ASSISTANCE
15A NCAC 18A .1928	APPLICABILITY OF RULES
15A NCAC 18A .1929	EXEMPTION
15A NCAC 18A .1930	DISUSE OF SEWAGE SYSTEM
15A NCAC 18A .1931	VIOLATIONS

15A NCAC 18A .1932 CONFLICTING RULES REPEALED
15A NCAC 18A .1933 SEVERABILITY

History Note: Authority G.S. 130-160; 166.23 through 166.28;
Eff. July 1, 1977;
Readopted Eff. December 5, 1977;
Amended Eff. July 1, 1982; March 31, 1981; June 30, 1980;
Repealed Eff. July 1, 1982.

15A NCAC 18A .1934 SCOPE
15A NCAC 18A .1935 DEFINITIONS

History Note: Authority G.S. 130A-335(e) and (f);
Eff. July 1, 1982;
Amended Eff. July 1, 1995; December 1, 1990; January 1, 1990; August 1, 1988; April 1, 1985;
Temporary Amendment Eff. June 24, 2003;
Amended Eff. June 1, 2006; May 1, 2004;
Repealed Eff. January 1, 2024.

15A NCAC 18A .1936 REQUIREMENTS FOR SEWAGE TREATMENT AND DISPOSAL

History Note: Authority G.S. 130A-335(e);
Eff. July 1, 1982;
Repealed Eff. January 1, 1990.

15A NCAC 18A .1937 PERMITS
15A NCAC 18A .1938 RESPONSIBILITIES
15A NCAC 18A .1939 SITE EVALUATION
15A NCAC 18A .1940 TOPOGRAPHY AND LANDSCAPE POSITION
15A NCAC 18A .1941 SOIL CHARACTERISTICS (MORPHOLOGY)
15A NCAC 18A .1942 SOIL WETNESS CONDITIONS
15A NCAC 18A .1943 SOIL DEPTH
15A NCAC 18A .1944 RESTRICTIVE HORIZONS
15A NCAC 18A .1945 AVAILABLE SPACE
15A NCAC 18A .1946 OTHER APPLICABLE FACTORS
15A NCAC 18A .1947 DETERMINATION OF OVERALL SITE SUITABILITY
15A NCAC 18A .1948 SITE CLASSIFICATION
15A NCAC 18A .1949 SEWAGE FLOW RATES FOR DESIGN UNITS
15A NCAC 18A .1950 LOCATION OF SANITARY SEWAGE SYSTEMS
15A NCAC 18A .1951 APPLICABILITY OF RULES
15A NCAC 18A .1952 SEPTIC TANK, EFFLUENT FILTER, DOSING TANK AND LIFT STATION DESIGN
15A NCAC 18A .1953 PREFABRICATED SEPTIC TANKS AND PUMP TANKS
15A NCAC 18A .1954 MINIMUM STANDARDS FOR PRECAST REINFORCED CONCRETE TANKS
15A NCAC 18A .1955 DESIGN INSTALLATION CRITERIA FOR CONVENTIONAL SEWAGE SYSTEMS
15A NCAC 18A .1956 MODIFICATIONS TO SEPTIC TANK SYSTEMS
15A NCAC 18A .1957 CRITERIA FOR DESIGN OF ALTERNATIVE SEWAGE SYSTEMS
15A NCAC 18A .1958 NON-GROUND ABSORPTION SEWAGE TREATMENT SYSTEMS
15A NCAC 18A .1959 PRIVY CONSTRUCTION
15A NCAC 18A .1960 MAINTENANCE OF PRIVIES
15A NCAC 18A .1961 MAINTENANCE OF SEWAGE SYSTEMS
15A NCAC 18A .1962 APPLICABILITY

History Note: Authority G.S. 89C; 89E; 89F; 90A; 130A-335(e),(f),(f1); 130A-342;
Eff. July 1, 1982;

Amended Eff. January 1, 1990; August 1, 1988; February 1, 1987; April 1, 1985; January 1, 1984; October 1, 1983; July 1, 1983, January 1, 1983; October 1, 1982;
Temporary Amendment Eff. June 30, 1990, for a period of 180 days to expire on December 27, 1990;
Amended Eff. May 1, 1991; December 1, 1990; October 1, 1990;
Temporary Amendment Eff. July 3, 1991, for a period of 180 days to expire on December 30, 1991;
Amended Eff. July 1, 1995; April 1, 1993; February 1, 1992; August 1, 1991;
Temporary Amendment Eff. January 20, 1997;
Amended Eff. August 1, 1998;
Temporary Amendment Eff. January 1, 1999;
Amended Eff. August 1, 2000; November 1, 1999;
Temporary Amendment Eff. June 24, 2003; April 17, 2002;
Amended Eff. August 1, 2007; June 1, 2006; May 1, 2004;
Repealed Eff. January 1, 2024.

15A NCAC 18A .1963 DISUSE OF SEWAGE SYSTEM

History Note: Authority G.S. 130A-335(e);
Eff. July 1, 1982;
Repealed Eff. August 1, 1988.

15A NCAC 18A .1964 INTERPRETATION AND TECHNICAL ASSISTANCE

15A NCAC 18A .1965 APPEALS PROCEDURE

15A NCAC 18A .1966 SEVERABILITY

15A NCAC 18A .1967 INJUNCTIONS

15A NCAC 18A .1968 PENALTIES

History Note: Authority G.S. 130A-335(e);
Eff. July 1, 1982;
Amended Eff. January 1, 1990; February 1, 1987; January 1, 1985;
Repealed Eff. January 1, 2024.

15A NCAC 18A .1969 APPROVAL AND PERMITTING OF ON-SITE SUBSURFACE WASTEWATER SYSTEMS, TECHNOLOGIES, COMPONENTS, OR DEVICES

History Note: Authority G.S. 130A-335(e),(f); 130A-343;
Eff. April 1, 1993;
Temporary Amendment Eff. June 24, 2003; February 1, 2003;
Amended Eff. June 1, 2006; February 1, 2005; May 1, 2004;
Repealed Eff. January 1, 2024.

15A NCAC 18A .1970 ADVANCED WASTEWATER PRETREATMENT SYSTEM

History Note: Authority G.S. 130A-334; 130A-335; 130A-336; 130A-337; 130A-340; 130A-342; 130A-343;
Eff. June 1, 2006;
Amended Eff. October 1, 2011;
Repealed Eff. January 1, 2024.

15A NCAC 18A .1971 ENGINEERED OPTION PERMIT

History Note: Authority G.S. 130A-335; 130A-336.1;
Temporary Adoption Eff. July 1, 2016;
Eff. April 1, 2017;
Repealed Eff. January 1, 2024.

SECTION .2000 - ADMINISTRATIVE PENALTIES

Rules .2001 - .2011 of Title 15A Subchapter 18A of the North Carolina Administrative Code (T15A.18A .2001 - .2011); has been transferred and recodified from Rules .2001 - .2011 Title 10 Subchapter 10A of the North Carolina Administrative Code (T10.10A .2001 - .2011), effective April 4, 1990.

15A NCAC 18A .2001	DEFINITIONS
15A NCAC 18A .2002	ADMINISTRATIVE PENALTIES
15A NCAC 18A .2003	WHO MAY ASSESS PENALTIES
15A NCAC 18A .2004	WHEN PENALTIES MAY BE ASSESSED
15A NCAC 18A .2005	AMOUNT OF PENALTY ASSESSMENT
15A NCAC 18A .2006	CONSIDERATIONS IN ASSESSING ADMINISTRATIVE PENALTIES
15A NCAC 18A .2007	PROCEDURE FOR ASSESSMENT
15A NCAC 18A .2008	PAYMENTS: HEARING
15A NCAC 18A .2009	STAY OF PENALTY ASSESSMENT
15A NCAC 18A .2010	WAIVER OF ADMINISTRATIVE HEARING
15A NCAC 18A .2011	REFERRAL

History Note: Authority G.S. 130A-22(f);
Eff. January 1, 1984;
Amended Eff. May 1, 1987;
Repealed Eff. July 1, 1990 in accordance with G.S. 150B-59(c).

SECTION .2100 - RULES GOVERNING THE SANITATION AND SAFETY OF MIGRANT HOUSING

Rules .2101 - .2103 of Title 15A Subchapter 18A of the North Carolina Administrative Code (T15A.18A .2101 - .2103); have been transferred and recodified from Rules .2114 - .2116 Title 10 Subchapter 10A of the North Carolina Administrative Code (T10.10A .2114 - .2116). Rules .2104 - .2105 of Title 15A Subchapter 18A of the North Carolina Administrative Code (T15A.18A .2104 - .2105); have been transferred and recodified from Rules .2118 - .2119 Title 10 Subchapter 10A of the North Carolina Administrative Code (T10.10A .2118 - .2119). Rules .2106 - 2116 of Title 15A Subchapter 18A of the North Carolina Administrative Code (T15A.18A .2106 - .2116) have been transferred and recodified from Rules .2121 - .2131 of Title 10 Subchapter 10A of the North Carolina Administrative Code (T10.10A .2121 - .2131), effective April 4, 1990.

15A NCAC 18A .2101	DEFINITIONS
15A NCAC 18A .2102	PERMITS
15A NCAC 18A .2103	INSPECTIONS
15A NCAC 18A .2104	RIGHT OF ENTRY
15A NCAC 18A .2105	GRADING
15A NCAC 18A .2106	SITE
15A NCAC 18A .2107	BUILDINGS

History Note: Authority G.S. 130A-239;
Eff. January 1, 1985;
Amended Eff. June 1, 1989; January 1, 1989; February 1, 1987; July 1, 1986;
Repealed Eff. July 1, 1990 in accordance with G.S. 150B-59(c).

15A NCAC 18A .2108 WATER SUPPLY

History Note: Authority G.S. 130A-239;
Eff. January 1, 1985;
Amended Eff. June 1, 1989; January 1, 1989; July 1, 1986;
Repealed Eff. October 1, 1990.

15A NCAC 18A .2109	TOILET FACILITIES
15A NCAC 18A .2110	SEWAGE DISPOSAL FACILITIES

15A NCAC 18A .2111	LAUNDRY: HANDWASHING: AND FACILITIES
15A NCAC 18A .2112	LIGHTING AND ELECTRICAL OUTLETS
15A NCAC 18A .2113	SOLID WASTE DISPOSAL
15A NCAC 18A .2114	KITCHEN AND DINING FACILITIES
15A NCAC 18A .2115	INSECT: RODENT: AND ANIMAL CONTROL
15A NCAC 18A .2116	FIRST AID

History Note: Authority G.S. 130A-239;
Eff. January 1, 1985;
Amended Eff. June 1, 1989; January 1, 1989;
Repealed Eff. July 1, 1990 in accordance with G.S. 150B-59(c).

15A NCAC 18A .2117 WATER SANITATION AND QUALITY

- (a) A water supply shall be provided that complies with the provisions of 15A NCAC 18A .1700.
- (b) Prior to occupancy of a migrant housing facility, water samples for bacteriological analysis shall be collected by an environmental health specialist and submitted to the Division of Laboratory Services of the Department of Environment and Natural Resources or another laboratory certified pursuant to 15A NCAC 20D for analysis. A sample negative for coliform organisms shall be obtained prior to the issuance of health department approval.
- (c) An environmental health specialist may collect water samples after occupancy for analysis by the Division of Laboratory Services of the Department or another laboratory certified pursuant to 15A NCAC 20D to determine the continued safety of the water supply for domestic use. The water supply shall be deemed unsafe for domestic use and action taken as follows:
- (1) The water supply shall be deemed immediately unsafe upon confirmation of the presence of fecal coliform bacteria or, upon determination by the Environmental Epidemiology Section of the Department that the presence of chemical constituents poses an immediate threat to life. Under these circumstances, the Department shall immediately contact both the migrant housing operator and the Migrant Housing Division, North Carolina Department of Labor. All verbal contact made by the environmental health specialist shall be confirmed in writing.
 - (2) The water supply shall be deemed unsafe for long-term usage upon confirmation of a positive total coliform test or upon determination by the Environmental Epidemiology Section of the Department that the presence of chemical constituents poses a threat to health. Under these circumstances, the Department shall, within three days, notify the migrant housing operator and the Migrant Housing Division, North Carolina Department of Labor. All verbal contacts made by the environmental health specialist shall be confirmed in writing.

History Note: Authority G.S. 95-225;
Eff. October 1, 1990;
Amended Eff. January 1, 2003;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

SECTION .2200 - SANITATION OF BED AND BREAKFAST HOMES

15A NCAC 18A .2201	DEFINITIONS
15A NCAC 18A .2202	PERMITS
15A NCAC 18A .2203	INSPECTIONS: VISITS: POSTING OF GRADE CARD
15A NCAC 18A .2204	INSPECTION FORMS
15A NCAC 18A .2205	GRADING
15A NCAC 18A .2206	FLOORS
15A NCAC 18A .2207	WALLS AND CEILINGS
15A NCAC 18A .2208	LIGHTING AND VENTILATION
15A NCAC 18A .2209	TOILET: HANDWASHING: LAUNDRY: AND BATHING FACILITIES
15A NCAC 18A .2210	WATER SUPPLY
15A NCAC 18A .2211	DRINKING WATER FACILITIES: ICE HANDLING
15A NCAC 18A .2212	DISPOSAL OF WASTES
15A NCAC 18A .2213	VERMIN CONTROL: PREMISES
15A NCAC 18A .2214	STORAGE: MISCELLANEOUS

15A NCAC 18A .2215	BEDS: LINEN: FURNITURE
15A NCAC 18A .2216	FOOD SERVICE UTENSILS AND EQUIPMENT
15A NCAC 18A .2217	FOOD SUPPLIES
15A NCAC 18A .2218	FOOD PROTECTION
15A NCAC 18A .2219	FOOD SERVICE PERSONS
15A NCAC 18A .2220	SEVERABILITY
15A NCAC 18A .2221	APPEALS PROCEDURE

History Note: Authority G.S. 130A-250;
Eff. April 1, 1984;
Amended Eff. November 1, 2006; November 1, 2002; October 1, 1993; April 1, 1992; August 1, 1991;
September 1, 1990; March 1, 1988; February 1, 1987; July 1, 1986;
Repealed October 1, 2017.

SECTION .2300 - DELEGATION OF AUTHORITY TO ENFORCE COMMISSION FOR PUBLIC HEALTH'S SANITATION RULES

Rules .2301 - .2306 of Title 15A Subchapter 18A of the North Carolina Administrative Code (T15A.18A .2301 - .2306); has been transferred and recodified from Rules .2301 - .2306 Title 10 Subchapter 10A of the North Carolina Administrative Code (T10.10A .2301 - .2306). Rule .2307 of Title 15A Subchapter 18A of the North Carolina Administrative Code (T15A.18A .2307); has been transferred and recodified from Rule .2308 Title 10 Subchapter 10A of the North Carolina Administrative Code (T10.10A .2308), effective April 4, 1990.

15A NCAC 18A .2301	SCOPE OF DELEGATED AUTHORITY
15A NCAC 18A .2302	ELIGIBILITY FOR DELEGATION OF AUTHORITY
15A NCAC 18A .2303	DELEGATION OF AUTHORITY
15A NCAC 18A .2304	EVALUATION

History Note: Authority G.S. 130A-4(b); 130A-5(3);
Eff. October 1, 1985;
Amended Eff. December 1, 1990; September 1, 1990;
Repealed Eff. March 1, 1998.

15A NCAC 18A .2305 AGENTS SERVING AS CONTRACTORS

The Division may allow an agent who is authorized in a specific local health department to contract with another local health department to provide services to the other local health department. When a local health department contracts for such services, the contracting department shall provide a statement to the Division on progress made to employ an individual who may be considered for authorization.

- (1) A contract shall be created between the contracting local health department and the agent (contractor) to include at least the following provisions:
 - (a) Names and addresses of each party.
 - (b) Scope of work to be performed.
 - (c) A requirement that the original public records remain in the local health department in which the work is performed. The public records shall be left at the local health department or with an individual employed by the local health department who shall be responsible for returning said records to the local health department within two business days of the service provided.
 - (d) Designation of the party responsible for maintaining public records created by the agent.
 - (e) A requirement that the contracting agent be available for consultation to the public being served during usual business hours.
 - (f) A requirement that the contracting agent be available for any hearing or other legal proceeding which may ensue from activities conducted by the agent.
- (2) The contracting agent shall maintain a list of each activity and the date performed for review in accordance with Item (3) of this Rule.

- (3) Each public record created by the contracting agent shall be reviewed, dated, and initialed by an authorized agent of the contracting local health department. In addition, at least 10 percent of the activities performed by the agent shall be reviewed in the field by an authorized agent employed by the contracting local health department. If the contracting local health department has no authorized employee, the Division shall conduct a review of each public record created by the contracting agent. In addition, at least 10 percent of the activities performed by the agent shall be reviewed on-site in the field by the Division. The review shall be conducted each month and shall cover the previous month's activities conducted by the agent.

History Note: Authority G.S. 130A-4; 130A-29;
Eff. October 1, 1985;
Amended Eff. July 1, 1998; September 1, 1990;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .2306 RE-AUTHORIZATION

History Note: Authority G.S. 130A-4(b); 130A-5(3);
Eff. October 1, 1985;
Repealed Eff. March 1, 1998.

15A NCAC 18A .2307 EVALUATION

The regional specialist may, at any time, evaluate the performance of an authorized agent and recommend that the Director, Division of Environmental Health, take corrective action.

History Note: Authority G.S. 130A-4(b); 130A-5(3);
Eff. February 1, 1987;
Amended Eff. July 1, 1998; September 1, 1990;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .2308 RESERVED FOR FUTURE CODIFICATION

15A NCAC 18A .2309 RESERVED FOR FUTURE CODIFICATION

15A NCAC 18A .2310 APPEALS PROCEDURES

Appeals concerning denials, suspensions and revocations of authorization under these Rules shall be made in accordance with G.S. 150B. An individual whose authorization has been suspended or revoked and who timely requests an appeal may continue to work as an authorized agent until a final agency decision is made pursuant to G.S. 150B-36; however, all inspection forms and permits completed by the agent during that period must be countersigned by another authorized agent who concurs with the findings and conclusions reflected on the inspection forms and permits.

History Note: Authority G.S. 130A-4; 130A-29;
Eff. July 1, 1998;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

SECTION .2400 - SANITATION OF PUBLIC: PRIVATE: AND RELIGIOUS SCHOOLS

Rules .2401 - .2417 of Title 15A Subchapter 18A of the North Carolina Administrative Code (T15A.18A .2401 - .2417); has been transferred and recodified from Rules .2401 - .2417 Title 10 Subchapter 10A of the North Carolina Administrative Code (T10.10A .2401 - .2417), effective April 4, 1990.

15A NCAC 18A .2401 DEFINITIONS

The following definitions shall apply throughout this Section:

- (1) "Central toilet" means a toilet which exits into a hallway or corridor and has more than one water closet.
- (2) "Department" means the Department of Environment and Natural Resources and its authorized agents.
- (3) "Home school" means a school as defined in G.S. 115C-563.
- (4) "Principal" means the executive head of a school.

- (5) "Private or religious school" means a school which is not supported by funds appropriated by the General Assembly of North Carolina, by the federal government, or through local governmental sources.
- (6) "Public school" means a school supported by public funds appropriated by the General Assembly of North Carolina, by the federal government, and through local governmental sources.
- (7) "Sanitarian" means a person authorized to represent the Department in enforcing the rules of this Section.
- (8) "Superintendent" means the chief administrative head of a local school administrative unit.

History Note: Authority G.S. 130A-236;
 Eff. January 1, 1986;
 Amended Eff. November 1, 2002; September 1, 1990;
 Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .2402 INSPECTIONS

- (a) An inspection of each school shall be made by the Department at least once a year to determine compliance with this Section.
- (b) An inspection report shall be completed by the sanitarian upon completion of the inspection.
- (c) If the conditions found at the time of the inspection of a public school are dangerous to the health of the students, or if an imminent hazard exists, the sanitarian shall notify the office of the local superintendent immediately by telephone or other direct means. A copy of the inspection report shall be immediately forwarded to the local and state superintendents.
- (d) If the conditions found at the time of the inspection of a private or religious school are dangerous to the health of the students, or if an imminent hazard exists, the sanitarian shall notify the Office of Non-Public Education, 532 N. Wilmington Street, Raleigh, N.C. 27604, immediately by telephone or other direct means. A copy of the inspection report shall be immediately forwarded to that office.

History Note: Authority G.S. 130A-236;
 Eff. January 1, 1986;
 Amended Eff. September 1, 1990;
 Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .2403 CLASSIFICATION

- (a) Schools shall be classified as follows: schools which receive a score of at least 90 percent shall be classified A; schools which receive a score of at least 80 percent and less than 90 percent shall be classified B; schools which receive a score of at least 70 percent and less than 80 percent shall be classified C; and schools which receive a score of less than 70 percent shall be classified as unapproved. When the school is classified as unapproved, the sanitarian shall provide notification in accordance with Rule .2402(c) or (d) as appropriate. Grade cards shall not be posted in schools.
- (b) The grading of schools shall be based on the standards of operation and construction as set forth in Rules .2405 through .2415 of this Section.

History Note: Authority G.S. 130A-236;
 Eff. January 1, 1986;
 Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .2404 REINSPECTIONS

Upon request of the principal, a reinspection shall be made for the purpose of improving a classification. An unannounced inspection shall be made after the lapse of a reasonable period of time, not to exceed 30 days, from the date of the request.

History Note: Authority G.S. 130A-236;
 Eff. January 1, 1986;
 Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .2405 WATER SUPPLY

- (a) The water supply shall be from an approved source and shall be adequate and of a safe, sanitary quality.
- (b) The water supply used shall be located, constructed, maintained, and operated in accordance with the Commission for Public Health's rules governing water supplies. Copies of 15A NCAC 18A .1700 and 15A NCAC 18C may be obtained from the Department. A sample of water from a private or public non-community water supply serving a school shall be collected

by the sanitarian and submitted at least once a year to the Division of Laboratory Services or other laboratory certified by the Department to perform bacteriological examination.

(c) Backflow connections and cross-connections with unapproved water supplies are prohibited.

(d) Hot and cold running water under pressure shall be provided to food preparation areas, and any other areas in which water is required for operations and maintenance cleaning.

(e) The well house shall be kept clean and free of storage.

History Note: Authority G.S. 130A-236;

Eff. January 1, 1986;

Amended Eff. September 1, 1990;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .2406 DRINKING FOUNTAINS

(a) Drinking fountains shall be provided and installed as required by the North Carolina State Building Code. Copies of the North Carolina State Building Code may be obtained from the North Carolina Department of Insurance, P.O. Box 26387, Raleigh, N.C. 27611.

(b) Fountains shall be provided with adequate water pressure, properly regulated, kept clean and in good repair.

History Note: Authority G.S. 130A-236;

Eff. January 1, 1986;

Amended Eff. September 1, 1990;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .2407 SANITARY SEWAGE DISPOSAL

All sewage and other liquid wastes shall be disposed of in a public sewer system or, in the absence of a public sewer system, by an approved, properly operating sanitary sewage system.

History Note: Authority G.S. 130A-236;

Eff. January 1, 1986;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .2408 TOILET FACILITIES

(a) Toilet facilities shall be provided and installed as required by the North Carolina State Building Code. Copies of the North Carolina State Building Code may be obtained from the North Carolina Department of Insurance, P.O. Box 26387, Raleigh, N.C. 27611.

(b) Walls and ceilings of toilet facilities shall be constructed of non-absorbent, washable materials and shall be kept clean.

(c) Floors of toilet facilities shall be impervious and kept clean.

(d) Toilet fixtures shall be kept clean and in good repair.

History Note: Authority G.S. 130A-236;

Eff. January 1, 1986;

Amended Eff. September 1, 1990;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .2409 LAVATORY FACILITIES

(a) Lavatory facilities shall be provided and installed as required by the North Carolina State Building Code. Copies of the North Carolina State Building Code may be obtained from the North Carolina Department of Insurance, P.O. Box 26387, Raleigh, N.C. 27611.

(b) Fixtures shall be kept clean and in good repair.

(c) Soap and individual towels or approved hand-drying devices shall be provided.

History Note: Authority G.S. 130A-236;

Eff. January 1, 1986;

Amended Eff. September 1, 1990;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .2410 FLOORS: WALLS: AND CEILINGS

Floors, walls, and ceilings of all areas shall be kept clean and in good repair.

History Note: Authority G.S. 130A-236;
Eff. January 1, 1986;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .2411 STORAGE SPACES

Storage spaces and custodians' closets shall be kept clean and arranged so as to facilitate cleaning. All storage shall be at least 15 inches (38.1 centimeters) above the floor or otherwise arranged so as to permit thorough cleaning.

History Note: Authority G.S. 130A-236;
Eff. January 1, 1986;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .2412 LIGHTING AND VENTILATION

(a) Lighting and ventilation shall be provided and installed as required by the North Carolina State Building Code. Copies of the North Carolina State Building Code may be obtained from the North Carolina Department of Insurance, P.O. Box 26387, Raleigh, N.C. 27611.

(b) All windows and fixtures (grills, vents, blinds, drapes, lighting fixtures, etc.) shall be kept clean and in good repair.

History Note: Authority G.S. 130A-236;
Eff. January 1, 1986;
Amended Eff. September 1, 1990;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .2413 DRESSING ROOMS AND SHOWERS

(a) Floors, walls, and ceilings shall be kept clean and in good repair.

(b) Floors, walls, and ceilings of shower areas shall be washable and non-absorbent.

(c) Showers shall be provided and installed as required by the North Carolina State Building Code. Copies of the North Carolina State Building Code may be obtained from the North Carolina Department of Insurance, P.O. Box 26387, Raleigh, N.C. 27611.

(d) All fixtures shall be kept clean and in good repair.

(e) Adequate facilities for storage of clothes and other personal items shall be provided and kept clean.

(f) A clean bath towel and soap shall be provided for each person using the showers.

(g) All bath towels shall be stored in a sanitary manner.

History Note: Authority G.S. 130A-236;
Eff. January 1, 1986;
Amended Eff. September 1, 1990;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .2414 SOLID WASTE DISPOSAL

(a) Impervious, cleanable containers with lids, approved by the Department, shall be provided for the storage of solid waste.

(b) Solid waste containers shall be kept clean, in good repair, and emptied when full, but not less than once a week.

(c) All solid waste shall be disposed of in an approved landfill or by a method approved by the Department in accordance with state laws and rules.

History Note: Authority G.S. 130A-236;
Eff. January 1, 1986;
Amended Eff. September 1, 1990;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .2415 PREMISES: MISCELLANEOUS

- (a) The premises of the school under control of the principal shall be kept neat and clean at all times. Waste material, unnecessary articles, rubbish, litter, or garbage shall not be allowed to accumulate on the premises. There shall be no fly or mosquito breeding places, rodent harborages, or undrained areas on the premises.
- (b) Pesticides and other toxic materials shall be used as directed on the label and handled and stored as to avoid health hazards.

History Note: Authority G.S. 130A-236;
Eff. January 1, 1986;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .2416 REQUIREMENTS FOR HOME SCHOOLS

Home schools shall be exempt from this Section.

History Note: Authority G.S. 130A-236;
Eff. January 1, 1986;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .2417 APPEALS PROCEDURE

Appeals concerning the interpretation and enforcement of the rules in this Section shall be made in accordance with G.S. 150B.

History Note: Authority G.S. 130A-236;
Eff. January 1, 1986;
Amended Eff. September 1, 1990; February 1, 1987;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

SECTION .2500 - PUBLIC SWIMMING POOLS

Rules .2501 - .2507 of Title 15A Subchapter 18A of the North Carolina Administrative Code (T15A.18A .2501 - .2507); have been transferred and recodified from Rules .2501 - .2507 Title 10 Subchapter 10A of the North Carolina Administrative Code (T10.10A .2501 - .2507), effective April 4, 1990.

15A NCAC 18A .2501	DEFINITIONS
15A NCAC 18A .2502	PUBLIC SWIMMING POOL OPERATION PERMITS
15A NCAC 18A .2503	INSPECTIONS
15A NCAC 18A .2504	DESIGN AND CONSTRUCTION STANDARDS
15A NCAC 18A .2505	WATER QUALITY STANDARDS
15A NCAC 18A .2506	REVOCATION OF PERMITS
15A NCAC 18A .2507	APPEALS

History Note: Authority S.L. 1989, c. 577;
Eff. May 1, 1990;
Repealed Eff. May 1, 1991.

15A NCAC 18A .2508 DEFINITIONS

The following definitions apply throughout this Section:

- (1) "Department" means North Carolina Department of Health and Human Services.
- (2) "Equipment replacement" means replacement of individual components of the hydraulic and disinfection systems such as pumps, filters, and automatic chemical feeders.
- (3) "Public swimming pool" means public swimming pool as defined in G.S. 130A-280. Public swimming pools are divided into five types:
 - (a) "Swimming pools" are public swimming pools used primarily for swimming.
 - (b) "Spas" are public swimming pools designed for recreational and therapeutic use that are not drained, cleaned, or refilled after each individual use. Spas may include units designed for hydrojet circulation, hot water, cold water mineral bath, air induction bubbles, or any combination

- thereof. Common terminology for spas includes "therapeutic pool," "hydrotherapy pool," "whirlpool," "hot spa," and "hot tub."
- (c) "Wading pools" are public swimming pools designed for use by children, including wading pools for toddlers and children's activity pools designed for casual water play ranging from splashing activity to the use of interactive water features placed in the pool.
 - (d) "Water recreation attractions" are pools designed for special purposes that differentiate them from swimming pools, wading pools, and spas. They include:
 - (i) water slide plunge pools and run out lanes, which transfer the kinetic energy of the users' velocity through friction to the slide;
 - (ii) wave pools;
 - (iii) rapid rides;
 - (iv) lazy rivers;
 - (v) interactive play attractions that incorporate devices using sprayed, jetted, or other water sources contacting the users and that do not incorporate standing or captured water as part of the user activity area;
 - (vi) training pools deeper than a 24 inch deep wading pool and shallower than a 36 inch deep swimming pool; and
 - (vii) artificial swimming lagoons as defined in G.S. 130A-280.
 - (e) "Special purpose and therapy pools" are pools designed and used for therapeutic treatments or physical training and fitness outside of a licensed medical facility or practice of a licensed physical therapist. They include:
 - (i) float tanks used for float therapy in a salt brine solution;
 - (ii) swim spa training pools which use jetted water for stationary swimming against a water current;
 - (iii) exercise therapy and treadmill pools equipped for water resistance exercise therapy; and
 - (iv) scuba pools designed and used for training swimmers to use self-contained underwater breathing apparatus.
 - (f) "Display spa at a temporary event" or "DSTE" is a portable, above ground spa that contains water but is not used for body immersion and is displayed at a temporary event.
- (4) "Registered Design Professional" means an individual who is registered or licensed to practice engineering as defined by G.S. 89C or architecture as defined by G.S. 83A.
 - (5) "Remodeled" means renovated in a manner requiring disruption of the majority of the pool shell or deck, changes in the pool profile, or redesign of the pool hydraulic system.
 - (6) "Repair" means returning existing equipment to working order, replastering or repainting of the pool interior, replacement of tiles or coping, and similar maintenance activities. This term includes replacement of pool decks where the Department has determined that no changes are needed to underlying pipes or other pool structures.
 - (7) "Safety vacuum release system" means a system or device capable of providing vacuum release at a suction outlet caused by a high vacuum occurrence due to suction outlet flow blockage.
 - (8) "Splash zone" means the area of an interactive play attraction that sheds water to a surge tank or container to be recirculated.
 - (9) "Temporary event" means a non-permanent fair, carnival, circus, festival, or public exhibition.
 - (10) "Unblockable drain" means a drain of any size and shape that a human body cannot sufficiently block to create a suction entrapment hazard.
 - (11) "Water feature" means any component within a public swimming pool that pumps, jets, or sprays water above the waterline.

History Note: Authority G.S. 130A-280; 130A-282;
 Eff. May 1, 1991;
 Temporary Amendment Eff. June 1, 1994 for a period of 180 days or until the permanent rule becomes effective, whichever is sooner;
 Amended Eff. April, 1, 2013; May 1, 2010; March 1, 2004; April 1, 1999; January 1, 1996; October 1, 1994;
 Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019;
 Temporary Amendment Eff. December 3, 2019;

Amended Eff. July 1, 2022; October 1, 2020.

15A NCAC 18A .2509 PLAN REVIEW AND APPROVAL

- (a) Public swimming pools plans and specifications shall be prepared by a registered design professional if required by G.S. 89C Engineering or G.S. 83A Architecture, and shall be approved by the Department prior to construction. If required by G.S. 87-1 General Contractors, public swimming pools shall be constructed by swimming pool contractors licensed by the North Carolina Licensing Board for General Contractors.
- (b) The owner shall submit a minimum of two complete sets of plans to the local Health Department for review. Plans shall be drawn to scale and accompanied by specifications so as to permit a clear, comprehensive review by the local health department. All prints of drawings shall be a minimum of 18 x 24 inches and a maximum size of 36 x 42 inches. These plans shall include:
- (1) Plan and sectional view dimensions of both the pool and the area enclosed by the barrier fences to include the bathhouse and the equipment room and pool accessories;
 - (2) Specifications of all treatment equipment used and their layout in the equipment room;
 - (3) A piping schematic showing piping, pipe size, inlets, main drains, skimmers, gutter outlets, vacuum fittings and all other appurtenances connected to the pool-piping system;
 - (4) Layout of the chemical storage room; and
 - (5) Specifications for the water supply and wastewater disposal systems that include aspects such as well location and backwash water disposal where applicable.
- (c) The Department shall approve, disapprove, or provide written comments on plans and specifications for public swimming pools within 30 days of their receipt. If such action is not taken within 30 days, the plans and specifications shall be deemed approved.
- (d) If construction is not initiated within one year from the date of approval, the approval is void.
- (e) The swimming pool contractor shall contact the local health department when pool pipes are in place and visible so that the local health department may conduct an open-pipe inspection of the pool piping.
- (f) Prior to issuance of the operation permit, the owner shall submit to the local health department a statement signed by a registered design professional stating that construction is complete and in accordance with approved plans and specifications and approved modifications. Observation of construction and a final inspection for design compliance by the certifying registered design professional or his representative are required for this statement.
- (g) Upon completion of construction, the contractor shall notify the local health department and the owner. The contractor shall provide the owner with a complete set of drawings, which show as built, the location of all pipes and the connections of all equipment and written operating instructions for all equipment.

History Note: Authority G.S. 130A-282;

Eff. May 1, 1991;

Amended Eff. May 1, 2010; July 1, 1992;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .2510 PUBLIC SWIMMING POOL OPERATION PERMITS

- (a) No public swimming pool shall commence or continue operation unless the owner or operator has an operation permit issued by the Department for each public swimming pool. Unless suspended or revoked, the operation permit shall be valid for the period of operation specified in the application but in no event shall it be valid for more than 12 months. For public swimming pools which are constructed or remodeled, plans and specifications shall have been approved by the Department in accordance with Rule .2509. Compliance with the design and construction requirements in Rules .2514 through .2534 and approval of plans and specifications shall not be required for public swimming pools constructed or remodeled prior to May 1, 1993. No public swimming pool shall commence or continue operation after May 1, 2010 unless documentation of compliance with pool drain safety requirements of Rule .2539 of this Section has been submitted to the local health department.
- (b) Equipment replacement shall comply with Rules .2514 through .2534 and shall be approved by the Department prior to installation. However, for existing swimming pools with recirculation systems unable to meet the pool volume turnover rates specified in the rules of this Section, pump replacement shall match the flow capabilities of the system. Repairs do not require prior approval by the Department.
- (c) A separate application for an operation permit must be submitted for each public swimming pool. The owner or operator shall apply annually to the Department for an operator's permit. The application form shall be obtained from the Department and shall include the following information:

- (1) the owner's name, address, and phone number;
- (2) the operator's name, address, and phone number;
- (3) street address of the public swimming pool;
- (4) the physical location of the public swimming pool;
- (5) type of public swimming pool;
- (6) construction date;
- (7) proposed operating dates;
- (8) type of disinfection; and
- (9) signature of owner or designated representative.

History Note: Authority G.S. 130A-282;

Eff. May 1, 1991;

Amended Eff. May 1, 2010; January 1, 1996;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .2511 INSPECTIONS

(a) Each public swimming pool shall be inspected by the Department to determine compliance with the rules of this Section. Where an operation permit is issued prior to inspection of a public swimming pool, an inspection shall be completed within 60 days following issuance of the permit. Pools that open on or after April 1 and close on or before October 31 shall be inspected at least once during the period of operation. All other pools shall be inspected at least twice a year.

(b) Inspections of public swimming pools shall be conducted by Environmental Health Specialists authorized by the Department to enforce the rules of this Section. Inspections shall be documented on Inspection of Swimming Pool Form DENR 3960. Items on the grade sheet shall be divided into two, four and six-demerit items. Six-demerit items are failures to maintain minimum water quality or safety standards and warrant immediate suspension of an operation permit under G.S. 130A-23(d). Four-demerit items are rule violations which warrant denial of an operation permit or notification of an intent to suspend an operation permit. Two-demerit items are rule violations that do not warrant permit action unless such violation causes an imminent hazard, a failure to meet water quality or safety standard, or a suction hazard. Demerits shall be assessed for each item found not to be in compliance with the rules of this Section. Demerits shall be assessed as follows:

- (1) Violation of Rule .2535(2) of this Section regarding water clarity shall be assessed six demerits.
- (2) Violation of Rule .2531(a)(10), .2531(b)(3), .2535(3), (4), (5), (7), (8), or (9), or .2543(d)(7) or (e)(2) of this Section regarding disinfectant residuals shall be assessed six demerits.
- (3) Violation of Rule .2535(1) of this Section regarding pool water pH shall be assessed six demerits.
- (4) Violation of Rule .2535(12) of this Section or regarding control of water temperature in heated pools shall be assessed six demerits.
- (5) Violation of Rule .2535(10), (11), or (13), .2537(c), or .2540 of this Section regarding pool operator training, water quality records and test kits shall be assessed four demerits.
- (6) Violation of Rule .2518(j), .2537(b)(7) or (16), or .2539 of this Section regarding pool drains and suction hazards shall be assessed six demerits.
- (7) Violation of Rule .2537(b)(3), (8), (9) or (14) of this Section regarding maintenance of pool walls and floor shall be assessed four demerits.
- (8) Violation of Rule .2518(k) or (l), .2531(4), .2532(4)(b) or .2537(b)(14) of this Section regarding water surface skimmers shall be assessed four demerits.
- (9) Violation of Rule .2523 or .2537(b)(6) of this Section regarding depth markers and no diving markers shall be assessed four demerits.
- (10) Violation of Rule .2515(d) or (f), .2523(e) or .2537(b)(12) of this Section regarding floating safety ropes and contrasting color bands at breakpoints shall be assessed two demerits.
- (11) Violation of Rule .2517, .2521, .2527, .2537(b)(10), .2527, or .2542 of this Section regarding diving equipment, slides, ladders, steps, handrails and in-pool exercise equipment shall be assessed two demerits.
- (12) Violation of Rule .2518(i) or .2537(b)(8) of this Section regarding inlets and other fittings shall be assessed four demerits.
- (13) Violation of Rule .2516(b), .2521(b)(4), .2532(13) or .2537(b)(12) of this Section regarding contrasting color bands on seats or benches shall be assessed four demerits.
- (14) Violation of Rule .2532(7) or .2537(b)(11) of this Section regarding spa timers shall be assessed four demerits.

- (15) Violation of Rule .2530(a), or (b), or .2537(b)(1) of this Section regarding lifesaving equipment shall be assessed six demerits.
- (16) Violation of Rule .2528, .2531(a)(7) or .2537(b)(5) of this Section regarding fences, barriers and gates shall be assessed four demerits.
- (17) Violation of Rule .2522 or .2537(b)(2) of this Section regarding decks shall be assessed four demerits.
- (18) Violation of Rule .2530(c) of this Section regarding No Lifeguard warning signs shall be assessed four demerits.
- (19) Violation of Rule .2530(d) or .2543(d)(13) of this Section regarding pet and glass container signs shall be assessed four demerits.
- (20) Violation of Rule .2532(15) through (17), or .2537(b)(13) of this Section regarding caution signs at hot water spas shall be assessed four demerits.
- (21) Violation of Rule .2524, or .2537(b)(4) of this Section regarding pool and deck lighting and ventilation shall be assessed four demerits.
- (22) Violation of Rule .2530(f) of this Section regarding emergency telephones shall be assessed six demerits.
- (23) Violation of Rule .2535(6) of this Section regarding automatic chlorine or bromine feeders shall be assessed four demerits.
- (24) Violation of Rule .2518 .2519, .2525, .2531(a)(1) through (3), .2532(1) through (6), or .2543(b), (d)(1) through (6) or (e)(1) of this Section regarding pool filter and circulation systems shall be assessed four demerits.
- (25) Violation of Rule .2533, .2534 or .2537(b)(15) of this Section regarding equipment rooms and chemical storage rooms shall be assessed two demerits.
- (26) Violation of Rule .2518(d) of this Section regarding identification of valves and pipes shall be assessed two demerits.
- (27) Violation of Rule .2513(b) of this Section regarding air gaps for filter backwash shall be assessed two demerits.
- (28) Violation of Rule .2526 or .2543(d)(11) of this Section regarding accessible dressing and sanitary facilities shall be assessed two demerits.
- (29) Violation of Rule .2526 of this Section regarding maintenance and cleaning of dressing and sanitary facilities and fixtures shall be assessed two demerits.
- (30) Violation of Rule .2512 of this Section regarding water supplies shall be assessed two demerits.
- (31) Violation of Rule .2513(a) of this Section regarding sewage disposal shall be assessed two demerits.
- (32) Violation of Rule .2526(c) of this Section regarding floors in dressing and sanitary facilities shall be assessed two demerits.
- (33) Violation of Rule .2526(c), or (d) of this Section regarding hose bibs and floor drains in dressing and sanitary facilities shall be assessed two demerits.

History Note: Authority G.S. 130A-282;

Eff. May 1, 1991;

Amended Eff. May 1, 2010; March 1, 2004; January 1, 1996;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .2512 WATER SUPPLY

(a) The water supply serving the swimming pool and all plumbing fixtures including drinking fountains, lavatories, toilets, and showers, shall meet all requirements in 15A NCAC 18A .1700 or be an approved public water supply in accordance with 15A NCAC 18C. However, the Department may approve the use of water from natural sources, including the use of saline water, for the swimming pool.

(b) The water distribution system serving the swimming pool and auxiliary facilities shall be protected against backflow. Water introduced into the pool, either directly or by the circulation system, shall be supplied through an air gap (American National Standards Institute A112.1.2-1979), a pipe-applied atmospheric vacuum breaker (ANSI/American Society of Sanitary Engineering No. 1001-1971), a pressure type anti-siphon vacuum breaker (ANSI/ASSE No. 1020-1976), or a reduced-pressure principle backflow preventer (ASSE No. 1013-1979, American Water Works Association No. C506-1978), which are hereby adopted by reference in accordance with G.S. 150B-14(c) or equivalent.

(c) Whenever an over-the-rim spout is used to introduce water into the swimming pool, it shall be shielded so as not to create a hazard. The open end of the spout shall have no sharp edges, shall not protrude more than two inches (5.1 cm) beyond the

edge of the pool and shall be at least two pipe diameters above the deck or pool overflow level. The over-the-rim spout shall be located under the diving board or within six inches of a ladder or handrail.

History Note: Authority G.S. 130A-282;

Eff. May 1, 1991;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .2513 SEWAGE SYSTEMS AND OTHER WASTEWATER DISPOSAL

(a) Sewage shall be disposed of in a public sewer system or, in the absence of a public sewer system, by an approved, properly operating sanitary sewage system.

(b) There shall be no direct physical connection between the sewer system and any drain from the swimming pool or circulation system. Overflow from the swimming pool, and discharges from the circulation system, when discharged to the sewer system, storm drain or other approved natural drainage course, shall be discharged through a suitable air gap so as to preclude the possibility of back flow of sewage or other waste water into the swimming pool or the swimming pool piping system. Deck drainage shall be discharged through an indirect drain.

History Note: Authority G.S. 130A-282;

Eff. May 1, 1991;

Amended Eff. April 1, 1999; July 1, 1992;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .2514 MATERIALS OF CONSTRUCTION

(a) Pools and appurtenances shall be constructed of materials which are inert, non-toxic to man, impervious and permanent, which can withstand design stresses and which can provide a water-tight tank with a smooth and cleanable surface. Use of vinyl liners is prohibited; however, liners no less than 60 mil thick may be used provided the underlying pool shell is of approved construction. If this material is used for repairs, the existing pool shall be remodeled in accordance with this Rule.

(b) Sand or earth bottoms are prohibited in swimming pool construction.

(c) Pool finish, including bottom and sides, shall be of white or light colored material determined visually to contrast least with a value of gray whiter than 50 percent black on an artists gray scale, or shown by reflectance testing to reflect more than 50 percent of visible light.

(d) Pool surfaces in areas which are intended to provide footing for bathers including steps, ramps, and pool bottoms in areas with water less than three feet deep, shall be designed to provide a slip-resistant surface.

History Note: Authority G.S. 130A-82;

Eff. May 1, 1991;

Amended Eff. May 1, 2010;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .2515 DESIGN DETAILS

(a) Pools shall be designed and constructed to withstand all loadings for both full and empty conditions.

(b) A hydrostatic relief valve shall be provided for in-ground swimming pools which extend more than two feet below the grade of surrounding land surface unless a gravity drainage system is provided.

(c) Provisions shall be made for complete, continuous circulation of water through all areas of the swimming pool. Swimming pools shall have a circulation system with approved treatment, disinfection, and filtration equipment as required in the rules of this Section.

(d) The minimum depth of water in the swimming pool shall be three feet (0.91 m) except where a minimum depth of less than three feet is needed to provide non-swimming areas such as children's activity areas and sun shelves.

(e) The maximum depth at the shallow end of a swimming pool shall be three and a half feet (1.07 m) except for pools used for competitive swimming, diving or other uses which require water deeper than three and a half feet.

(f) Connections for safety lines shall be recessed in the walls in a manner which presents no hazard to swimmers.

(g) Decorative features such as planters, umbrellas, fountains and waterfalls located on pool decks shall comply with the following:

(1) Decorative features shall not occupy more than 20 percent of the pool perimeter;

(2) If located adjacent to a water depth of greater than five feet, decorative features shall not be more than 20 feet wide;

- (3) Decorative features shall not provide handholds or footholds that could encourage climbing above deck level;
- (4) A walkway shall be provided to permit free access around decorative features and shall be as wide as the lesser of five feet or the deck width required in Rule .2528 of this Section;
- (5) Decorative features shall not obstruct the view of any part of the pool from any seating area; and
- (6) Features with moving water shall be separate from the pool recirculation system.

History Note: Authority G.S. 130A-282;
 Eff. May 1, 1991;
 Amended Eff. May 1, 2010; August 1, 2000; April 1, 1999;
 Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .2516 POOL PROFILE

- (a) The vertical walls of a public swimming pool shall not exceed 11 degrees from plumb. Corners formed by intersection of walls and floors shall be coved or radiused. Hopper bottomed pools are prohibited.
- (b) Underwater ledges or protrusions are prohibited; except that underwater stairs, sun shelves, seats and benches may be installed in areas of the pool no more than four feet deep. Underwater benches shall have a maximum seat depth of two feet from the water surface, protrude no more than 18 inches from the wall and be marked by a two inch contrasting color band on the leading edge. Underwater protrusions may provide seating at swim-up bars located in offset areas away from swim lanes. Underwater stairs may adjoin a sun shelf to deeper water provided the depth at the bottom of the stairs is no more than four feet and the stairs meet all provisions of Rule .2521 of this Section.
- (c) The slope of the bottom of any portion of any public swimming pool having a water depth of less than five feet (1.52 m) shall not be more than one foot vertical change in 10 feet (10 cm in one meter) of horizontal distance and the slope shall be uniform.
- (d) In portions of pools with water depths greater than five feet (1.52 m), the slope of the bottom shall not be more than one foot vertical in three feet (33.3 cm in one meter) of horizontal distance.
- (e) Design of diving areas shall be in accordance with Tables 1A and 1B of Rule .2517 of this Section.
- (f) Fountains installed in public swimming pools shall be approved prior to installation and shall comply with the following:
 - (1) Fountains shall not be installed in an area with a water depth exceeding 18 inches;
 - (2) Fountains shall be recommended by the manufacturer for use in a public swimming pool;
 - (3) Fountains shall be installed in accordance with the manufacturer's instructions;
 - (4) Fountains shall be separate from the pool water recirculation system; and
 - (5) Fountains shall not release water at a velocity greater than 10 feet per second.

History Note: Authority G.S. 130A-82;
 Eff. May 1, 1991;
 Amended Eff. May 1, 2010; February 1, 2004; January 1, 1996;
 Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .2517 DIVING EQUIPMENT

- (a) When diving equipment is installed in a public swimming pool, it shall be located in the diving area of the pool so as to provide the minimum dimensions as shown in Tables 1A and 1B of this Rule and shall conform to the following specifications:
 - (1) Diving equipment shall be designed for swimming pool use and shall be installed in accordance with the manufacturer's recommendations.
 - (2) Installation instructions and specifications shall be provided with each unit.
 - (3) A label shall be permanently affixed to the diving equipment and shall include:
 - (A) manufacturer's name and address;
 - (B) board length;
 - (C) type of diving board;
 - (D) fulcrum setting specifications if applicable.
 - (4) Diving equipment shall have slip-resistant tread surfaces.
- (b) Supports, platforms, and steps for diving equipment shall be of sufficient strength to carry safely the maximum anticipated loads. Steps shall be of corrosion-resistant design. Handrails shall be provided at all steps and ladders leading to diving boards that are one meter or more above the water.

(c) There shall be a completely unobstructed clear vertical distance of 13 feet above any diving board measured from the center of the front end of the board. This area shall extend horizontally at least eight feet behind, eight feet to each side, and 16 feet ahead of Point A in Table 1A.

Table 1A

Maximum Board Length	Maximum Board Height Above Water	Board Overhang (Pt. A)		Minimum Water Depths		
		Max	Min	D1	D2	D3
12 feet	30 in	5 feet	4 feet	8'0"	9'0"	8'3"
16 feet	1 meter	6 feet	5 feet	8'6"	10'0"	8'6"
16 feet	3 meters	6 feet	5 feet	11'6"	12'0"	11'6"

KEY TO ABBREVIATIONS:

Pt A is the point on the water line of the pool directly beneath the end of the diving board.

D1 is the depth of the water measured from the water line to the floor at the beginning of the radius connecting the end wall with the floor at the deep end of the pool.

D2 is the depth of the water at the deepest point in the pool.

D3 is the depth of the water at the point where the deep area of the pool meets the transition to the shallow area of the pool.

Table 1B

Maximum Board Length	Horizontal Distances						Minimum Pool Width	Minimum Separation Distances	
	L1	L2	L3	L4	L5	L6		F	G
12 feet	3'	7'	10'3"	9'9"	30'	4'	20'	10'	10'
16 feet	5'	5'	11'6"	10'6"	32'	4'	24'	12'	10'
16 feet	5'	5'	7'6"	19'6"	37'	3'	28'	14'	12'

KEY TO ABBREVIATIONS:

L1 is the radius of the curve connecting the side wall to the floor at the deep end of the pool.

L2 is the distance between the center of the radius connecting the end wall to the floor at the deep end of the pool and the deepest point in the pool.

L3 is the distance between the deepest point in the pool and the beginning of the transition to the shallow area of the pool.

L4 is the length of the transition zone.

L5 is the total of L1 + L2 + L3 + L4.

L6 is the length of the shallow area of the pool.

F is the distance between the side wall of the pool and the centerline of the diving board.

G is the distance between the center lines of two adjacent diving boards.

(d) Public pools with diving facilities in excess of three meters in height, or pools designed for platform diving, shall meet the Federation Internationale De Nation Amateur (FINA) guidelines that are incorporated by reference in accordance with G.S. 130B-21.6 including any subsequent amendments or additions.

(e) Starting platforms used for racing starts during competition shall be secured from use when the pool is open for general use by removal; covering; or signage and active supervision. Minimum water depth for starting platforms shall be measured at a distance of 3 feet, 3 ½ inches (1.0 meter) to 16 feet, 5 inches (5.0 meters) from the end wall. Height of starting platforms shall not exceed the following:

- (1) In pools with water depth less than 3 feet, 6 inches (1.07 meters) at the starting end, raised starting platforms shall be prohibited.
- (2) In pools with water depth 3 feet, 6 inches (1.07 meters) to less than 4 feet (1.22 meters) at the starting end, starting platforms shall be no more than 18 inches (0.46 meter) above the water surface.
- (3) In pools with a water depth of 4 feet (1.22 meters) or greater at the starting end, starting platforms shall be no more than 30 inches (0.762 meter) above the surface of the water. Starting platforms shall be constructed to be easily removed from the deck when the swimming pool is used for other than competitive purposes.

History Note: Authority G.S. 130A-282;

Eff. May 1, 1991;

Amended Eff. February 1, 2004; April 1, 1999; January 1, 1996;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .2518 CIRCULATION SYSTEM

- (a) Public swimming pools shall be equipped with a water circulation system.
- (b) The water circulation system shall circulate and filter the entire volume of public swimming pool water four times or more in 24 hours. The water circulation system shall be operated 24 hours per day at no more than the maximum velocity allowed under Paragraph (d) of this Rule during the operating dates set out in the permit.
- (c) The water circulation system piping shall be designed and installed so that the flow from the public swimming pool shall be from main drains or the surface overflow system. If both main drains and a surface overflow system are used, the water circulation system piping shall be designed such that the flow of water from the public swimming pool is simultaneous from the surface overflow system and the main drains. Skimmer piping constructed after May 1, 2010 shall be sized to handle 100 percent of the flow rate determined by the Registered Design Professional in the pool design. Perimeter overflow system piping constructed after May 1, 2010 shall be sized to handle 100 percent of the flow rate determined by the Registered Design Professional in the pool design. Main drain piping constructed after May 1, 2010 shall be sized to handle 100 percent of the flow rate determined by the Registered Design Professional in the pool design.
- (d) Piping shall be designed to carry water at a maximum velocity not to exceed six feet per second for suction piping and not to exceed 10 feet per second for discharge piping, except for copper pipe where the velocity shall not exceed eight feet per second for discharge piping. Piping shall comply with NSF/ANSI Standard 14 Plastics Piping System Components and Related Materials, incorporated by reference, including any subsequent amendments or editions, and available at <http://webstore.ansi.org/> at a cost of one hundred sixty-five dollars (\$165.00), and be free of visible water leaks. Public swimming pools constructed after the effective date of this Rule shall use plastic pipe made of a minimum of Schedule 40 PVC. Flexible pipe shall not be used, except that flexible PVC hoses that meet the requirements of NSF/ANSI/CAN Standard 50 Equipment and Chemicals for Swimming Pools, Spas, Hot Tubs, and Other Recreational Water Facilities, incorporated by reference, including any subsequent amendments or editions, and available at <http://webstore.ansi.org/> at a cost of five hundred eighty dollars (\$580.00)(hereinafter referred to as "NSF Standard 50"), may be used when affixed to spa shells and rigid pipes do not provide the necessary angles to connect water circulation system components. Exposed pipes and valves shall be identified by a color code with a legend or labels.
- (e) The water circulation system shall have a strainer with a basket to prevent hair, lint, and other debris from reaching the pump. The owner of the public swimming pool shall keep a spare strainer basket onsite at the public swimming pool. Strainers shall be designed for use in pools with openings not more than ¼ inch (6.4 mm) in size that provide a free flow area at least four times the cross-section area of the pump suction line and are accessible for daily cleaning.
- (f) A swimming pool shall have a vacuum cleaning system to remove debris and foreign material that settles to the bottom of the swimming pool. Integral vacuum ports shall be located on the pool wall at least six inches and no greater than 18 inches below the water level. Skimmer vacuums may be used when connected to two or fewer skimmers that are isolated from the remaining water circulation system piping. Integral vacuum cleaning systems shall have valves and protective caps. Integral vacuum ports constructed after May 1, 2010 shall have self-closing caps designed to be opened with a tool. Portable vacuum equipment may be used to meet the requirements of this Rule.
- (g) A flow meter, reading in gallons per minute, shall be installed in accordance with the manufacturer's instructions. The flow meter shall measure flows between the minimum circulation turnover rate required in Paragraph (b) of this Rule and the maximum velocity permitted under Paragraph (d) of this Rule and shall be accurate within 10 percent of true flow.
- (h) A public swimming pool shall have a pump or pumps with capacity to recirculate the public swimming pool water four times or more in 24 hours. The pump or pumps shall not need to be primed, shall be self-priming, or shall utilize an automated priming device labeled for use in public pools by the manufacturer. Any single speed pump shall be capable of maintaining

required water turnover based on headloss calculations provided by a professional engineer licensed under G.S. Chapter 89C, the measurements of a flow meter installed in accordance with the manufacturer's instructions, or an assumed total dynamic head of 65 feet of water. Any variable speed pump or single speed pump utilizing a variable frequency drive shall be capable of maintaining water turnover as required by Paragraph (b) of this Rule based on a pump performance curve provided by the manufacturer and shall maintain the flow rate determined by the Registered Design Professional in the pool design. Pumps shall be certified by NSF International as meeting NSF Standard 50 or verified by an independent third-party testing laboratory to meet provisions of NSF Standard 50 applicable to pumps. Verification conducted by an independent third-party testing laboratory shall include testing and quality control inspections.

(i) All public swimming pools shall be equipped with water return inlets. The water return inlets shall meet the following requirements:

- (1) The water return inlets shall produce a uniform circulation of water and maintain a uniform disinfectant residual throughout the pool;
- (2) There shall be at least one water return inlet per 20 gallons per minute of return water flow with a minimum of four water return inlets for any swimming pool;
- (3) Water return inlets shall be located so that no part of the swimming pool is more than 25 feet of horizontal distance from the nearest water return inlet; and
- (4) Water return inlets shall be replaced when damaged or missing.

(j) Drains shall not be required in public swimming pools when an alternate method to drain the pool is provided. Public swimming pools constructed without main drains shall be designed with water return inlets positioned to return water uniformly throughout the public swimming pool. Public swimming pools constructed with main drains shall have the main drains installed in accordance with the manufacturer's instructions and meet the following requirements:

- (1) Public swimming pools with main drains shall be provided with one or more unblockable drains or two or more main drains located at the deepest section of the pool on a horizontal plane and connected by symmetrical "T" piping. Except when unblockable drains are used, piping between main drains shall be sized and configured such that blocking any one drain will not result in flow through the remaining drain covers exceeding the manufacturer's flow rating while handling 100 percent of the pump's maximum flow. Dual main drains connected by "T" piping shall be spaced not more than 30 feet apart, and not more than 15 feet away from the side walls of the pool. Main Drains shall be separated by at least three feet measured from the centers of the drain covers or installed with one main drain on a horizontal plane and one main drain on a vertical plane. Main drains with two or more outlets with a common suction line shall not be equipped with valves that allow the outlets to be isolated. Public swimming pools constructed prior to May 1, 2010 with a single drain or multiple drains closer than three feet apart shall protect against bather entrapment with an unblockable drain cover or a secondary method of preventing bather entrapment in accordance with Rule .2539 of this Section.
- (2) Drain outlets shall comply with the ANSI/APSP/ICC-16 2017 American National Standard for Suction Outlet Fittings Assemblies (SOFA) for Use in Pools, Spas, and Hot Tubs, which is hereby incorporated by reference, including any subsequent amendments or editions, and available at <https://webstore.ansi.org/> at a cost of one hundred sixty-five dollars (\$165.00).
- (3) Public swimming pool drains shall comply with ANSI/PHTA/ICC-7 2020 American National Standard for Suction Entrapment Avoidance in Swimming Pools, Wading Pools, Spas, Hot Tubs and Catch Basins, which is hereby incorporated by reference, including any subsequent amendments or editions, and available at <https://webstore.ansi.org> at a cost of one hundred and sixty-five dollars (\$165.00)(hereinafter referred to as "ANSI/PHTA/ICC-7").

(k) Public swimming pools shall have a surface overflow system that is an integral part of the water circulation system and that consists of a built-in-place perimeter overflow system, a pre-fabricated perimeter overflow system, or recessed automatic surface skimmers. The surface overflow system shall comply with the following:

- (1) When a public swimming pool uses a built-in-place perimeter overflow system or a pre-fabricated perimeter overflow system, the public swimming pool may be designed with the operating water level, perimeter overflow system, and deck at the same elevation. The perimeter overflow system shall:
 - (A) Be capable of handling 100 percent of the flow rate determined by the Registered Design Professional in the pool design without flooding the overflow troughs;
 - (B) Be capable of handling a water surge equal to one gallon per square foot, or 41 liters per square meter, of swimming pool water surface area. A surge tank may be used to meet this requirement;

- (C) Be capable of maintaining the water level of the swimming pool above the level of the overflow rim of the perimeter overflow system, except for time intervals of no more than 20 minutes when water is transferred between a surge tank and the public swimming pool;
 - (D) Be constructed so the dimensional tolerance of the overflow rim shall not exceed ¼ inch (6.4 mm) as measured between the highest point and the lowest point of the overflow rim;
 - (E) Be capable of providing continuous and automatic skimming of the water during quiescence;
 - (F) Be constructed so that the overflow troughs are installed continuously around the perimeter of the public swimming pool, except at steps, recessed ladders, and stairs, or except when used in combination with recessed automatic surface skimmers; and
 - (G) Provide a hand-hold on the exposed surfaces of the overflow trough.
- (2) When a public swimming pool uses recessed automatic surface skimmers, the recessed automatic surface skimmers shall be designed and constructed in accordance with NSF Standard 50 requirements for water circulation system components for swimming pools, spas, or hot tubs and be installed as follows:
- (A) The rate of water flowing through any one recessed automatic surface skimmer shall be no less than 20 gallons per minute and no more than the maximum flow the skimmer is certified to handle under NSF Standard 50;
 - (B) There shall be at least one recessed automatic surface skimmer for each 400 square feet of water surface area of the swimming pool or fraction thereof;
 - (C) When two or more recessed automatic surface skimmers are required, they shall be located to enable skimming of the entire swimming pool water surface;
 - (D) Skimmers shall not protrude into the water of the public swimming pool. Pools using recessed automatic surface skimmers without a perimeter overflow system shall be installed so that the operating water level of the pool is no more than nine inches below the level of the finished deck.
- (l) Where flooded suction on the pump is not possible to prevent cavitation and loss of prime, skimmers shall have a device or other protection to prevent air entrainment in the suction line. Skimmer equalizer lines shall be in compliance with ANSI/PHTA/ICC-7 or disabled. Skimmer equalizer lines shall be disabled by plugging the line under the skimmer basket and where the equalizer pipe exits the pool shell.
- (m) Nothing in this Section shall preclude the use of a surface overflow system that combines both a perimeter overflow system and a recessed automatic surface skimmer or skimmers that meet the requirements of this Rule.

History Note: Authority G.S. 130A-282;

Eff. May 1, 1991;

Amended Eff. May 1, 2010; February 1, 2004; April 1, 1999; January 1, 1996; July 1, 1992;

Readopted Eff. November 1, 2024.

15A NCAC 18A .2519 FILTERS

- (a) All swimming pools shall be equipped with a filtration system for the purpose of clarifying the swimming pool water; said filtration system shall be an integral part of the circulation system and shall consist of one or more units of sand type filters, of diatomaceous earth type filters, or of cartridge type filters.
- (b) All filter units shall be designed and constructed in accordance with Section 5 of the National Sanitation Foundation's Standard number 50 which is hereby adopted by reference in accordance with G.S. 150B-14(c), or equivalent.
- (c) When a sand type filter is installed on a swimming pool, it may be either a gravity or a pressure sand type filter, and it may be either a standard-rate sand type filter which shall be designed for filtration rates not in excess of three gallons per minute per square foot (122 L per minute per square meter) of sand bed area, or a high-rate sand type filter which shall be designed for filtration rates not in excess of 15 gallons per minute per square foot (612 L per minute per square meter) of sand bed area or the flow rate indicated for commercial pools in the most recent NSF listing.
- (d) When a sand type filter is installed on a swimming pool, it shall be designed and installed such that it may be backwashed at a rate recommended by the manufacturer or, in the absence of manufacturer's recommendations, at a rate not less than 15 gallons per minute per square foot (612 L per minute per square meter) of filter bed area. The backwash water shall be discharged to waste. A sight glass or other means for viewing the clarity of the backwash water shall be provided.
- (e) If the sand type filter is designed to be operated in conjunction with a coagulant, a chemical feeder shall be provided for adding the coagulant ahead of the filters.
- (f) When a diatomaceous earth type filter is installed on a swimming pool, it may be either a pressure or vacuum type and it may be designed to operate either with or without continuous body feed. Diatomaceous earth filters which operate with continuous body feed shall be designed for filtration rates not in excess of 2.5 gallons per minute per square foot (102 L per

minute per square meter) of filter area; and diatomaceous earth filters which operate without continuous body feed shall be designed for filtration rates not in excess of two gallons per minute per square foot (82 L per minute per square meter) of filter area.

(g) When a diatomaceous earth type filter is installed on a swimming pool, it shall be designed and installed with provisions for cleaning by one or more of the following methods:

- (1) backwashing at two gallons per minute per square foot minimum;
- (2) air-bump-assist backwashing;
- (3) spray wash, (either mechanical or manual); or
- (4) agitation.

(h) The water used in cleaning a diatomaceous earth type filter shall be discharged to waste, or in a manner approved by the Department.

(i) When a cartridge type filter is installed on a swimming pool, it shall be designed for filtration rates not in excess of 0.375 gallons per minute per square foot (15 L per minute per square meter) of effective filtration area.

(j) When a cartridge type filter is installed on a swimming pool, it shall be designed and installed with provisions being provided for cleaning or replacement as recommended by the manufacturer. Two sets of filter cartridges shall be provided to facilitate the cleaning and drying of one set while the filter is operating.

(k) All filters on swimming pools shall be designed and installed so as to provide easy accessibility for cleaning, operating, maintaining, and servicing. All filter tanks shall be so positioned as to provide adequate circulation of air beneath and around all sides, when necessary, to reduce corrosion and to facilitate cleaning. Whenever filter tanks are installed in the ground (i.e. buried), provisions shall be made so that the tanks are protected against corrosion and are installed in accordance with the recommendations of the manufacturer.

(l) Filters on swimming pools shall be equipped with an approved type pressure gauge or gauges.

(m) Filters on swimming pools shall be designed and installed with all the necessary valves and piping which may be needed to drain the filters completely.

(n) All pressure filters on swimming pools shall be designed and installed with an air-relief valve or valves which shall be located at or near the high point of the filters.

History Note: Authority G.S. 130A-282;

Eff. May 1, 1991;

Amended Eff. January 1, 1996;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .2520 CHEMICAL FEEDERS

History Note: Authority G.S. 130A-282;

Eff. May 1, 1991;

Repealed Eff. July 1, 1992.

15A NCAC 18A .2521 LADDERS, RECESSED STEPS, AND STAIRS

(a) If the vertical distance from the bottom of the swimming pool to the deck is over two feet (0.61 m), recessed steps, stairs, or ladders shall be provided in the shallow area of all swimming pools. Recessed steps or ladders shall be provided at the deep portion of all pools; and, if the swimming pool is over 30 feet (9.14 m) wide, such recessed steps or ladders shall be installed on each side near the deep end. A stairway, ladder or set of recessed steps shall be provided every 75 feet along the shallow area perimeter. Where stairs are provided in the shallow area of the pool, one ladder may be deleted in the shallow area for each stairway provided.

(b) Pool Stairs - The design and construction of pool ladders and stairs shall conform to the following:

- (1) Stair treads shall have a minimum unobstructed horizontal depth of 10 inches, a maximum horizontal depth of 36 inches, and a minimum unobstructed surface area of 240 square inches.
- (2) Risers at the centerline of the treads shall have a maximum height of 12 inches and shall be within one inch of a uniform height with the bottom riser height allowed to vary plus or minus two inches from the uniform riser height.
- (3) Each set of stairs shall be provided with at least one handrail to serve all treads and risers. For stairs wider than 20 feet, additional handrails shall be provided and spaced no more than 10 feet from adjacent handrails or stair ends.

- (A) Handrails, if removable, shall be installed in such a way than they cannot be removed without the use of tools.
- (B) The leading edge of handrails facilitating stairs and pool entry/exit shall be no more than 18 inches horizontally from the vertical plane of the bottom riser.
- (C) The outside diameter of handrails shall be between one inch and one and nine-tenths inches.
- (4) The leading edge of stair treads shall be marked with a contrasting color band or line at least two inches (5 cm) wide visible from above the stairs. Use of contrasting color tiles installed in the stair tread is acceptable provided the tiles are spaced no more than one inch (2.5 cm) from the edge of the tread or from adjacent tiles.
- (5) Swimming pool ladders shall be corrosion-resistant and shall be equipped with slip-resistant treads. All ladders shall be designed to provide a handhold and shall be installed rigidly. There shall be a clearance of not more than six inches (15.3 cm), nor less than three inches (7.6 cm), between any ladder and the swimming pool wall. If the steps are inserted in the walls or if step holes are provided, they shall be of such design that they may be cleaned easily and shall be arranged to drain into the swimming pool to prevent the accumulation of dirt thereon. Step holes shall have a minimum tread of five inches (12.7 cm) and a minimum width of 14 inches (35.6 cm).
- (6) When step holes or ladders are provided within the swimming pool, there shall be a handrail at each side.

History Note: Authority G.S. 130A-282;
 Eff. May 1, 1991;
 Amended Eff. May 1, 2010; January 1, 1996;
 Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .2522 DECKS

- (a) Outdoor swimming pools shall have a continuous deck extending completely around the swimming pool. The width of the deck or walkway shall provide at least six feet of clear walking space at all points. If the swimming area of the pool is 1600 square feet or larger, at least eight feet of clear walking space is required.
- (b) Indoor swimming pools shall have a continuous deck or walkway extending completely around the swimming pool. The width of the deck shall provide at least five feet of clear walking space at all points. Structures covering swimming pools, including temporary domes, shall be constructed to maintain a vertical clearance of at least seven feet from all parts of the required clear walk space.
- (c) Wading pools shall have a continuous deck extending completely around the wading pool. The width of the deck or walkway shall provide at least four feet of clear walking space at all points.
- (d) Spas shall have a continuous deck extending at least one-half way around the spa. The width of the deck or walkway shall provide at least four feet of clear walking space at all points.
- (e) There shall be at least five feet of clear walking space around any diving board, handrail, slide or other permanent structure installed on a swimming pool deck.
- (f) All deck areas and walkways shall be sloped at a grade of one-fourth inch to one-half inch per foot to a deck drain or sheet drain to deck edge. Deck drains shall not be connected to the circulation system in any manner.
- (g) All decks and walkways shall have a slip-resistant, impervious surface.
- (h) Sufficient hose bibs shall be provided to allow all areas of the deck to be reached with a 100 foot hose.
- (i) Special purpose pools such as waterslides and wave pools may vary from the minimum deck area requirements to the extent necessary to accommodate the special features of the pool.
- (j) Structures necessary to provide access to a public swimming pool by persons with disabilities shall be allowed to vary from the provisions of this Section to the extent necessary to accommodate such access. Such structures shall be approved on a case-by-case basis and shall be designed so as to minimize obstruction of the deck.
- (k) For all swimming pools constructed after April 1, 2000 decks shall be continuous with the top of the pool wall or gutter and shall not be more than nine inches above the standard operating water level.

History Note: Authority G.S. 130A-282;
 Eff. May 1, 1991;
 Amended Eff. February 1, 2004; April 1, 1999; January 1, 1996; July 1, 1992;
 Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .2523 DEPTH MARKINGS AND SAFETY ROPES

(a) On swimming pools the depth of the water shall be marked at or above the water surface on the vertical wall of the swimming pool where possible and on the edge of the deck next to the swimming pool. Where depth markers cannot be placed on the vertical walls at or above the water level, other means shall be used; provided the markings shall be visible to persons in the swimming pool. Depth markers shall be placed at the following locations:

- (1) at the points of maximum and minimum depths;
- (2) at the transition point where the slope of the bottom changes from the uniform slope of the shallow area;
- (3) if the pool is designed for diving, at points to denote the water depths in the diving area; and
- (4) at both ends of the pool.

(b) Depth markers shall be so spaced that the distance between adjacent markers is not greater than 25 feet (7.5 m) when measured along the perimeter of the pool.

(c) Depth markers shall be in Arabic numerals at least four inches (10 cm) high and of a color contrasting with the background. Depth markings shall indicate the depth of the pool in feet of water and shall include the word "feet" or symbol "ft" to indicate the unit of measurement. Depth markings installed in pool decks shall provide a slip resistant walking surface.

(d) "No Diving" markers shall be provided on the pool deck adjacent to all areas of the pool less than five feet deep. "No Diving" markers shall consist of the words "No Diving" in letters at least four inches high and of a color contrasting with the background or at least a six-by-six inch international symbol for no diving in red and black on a white background. The distance between adjacent markers shall not be more than 25 feet. Posting of "No Diving" markers shall not preclude shallow diving for racing starts and competitive swimming practice.

(e) A minimum of $\frac{3}{4}$ inch diameter safety rope shall be provided at the breakpoint where the slope of the bottom changes to exceed a 1 to 10 vertical rise to horizontal distance at a water depth of five feet (1.5 m) or less. The position of the rope shall be marked with colored floats at not greater than a five-foot spacing and a minimum two inch wide contrasting color band across the pool bottom. Float ropes shall be positioned within two feet on the shallow side of the breakpoint marker.

History Note: Authority G.S. 130A-282;

Eff. May 1, 1991;

Amended Eff. May 1, 2010; February 1, 2004; January 1, 1996; July 1, 1992;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .2524 LIGHTING AND VENTILATION

(a) Artificial lighting shall be provided at all pools that are to be used at night, or when natural lighting is insufficient to provide visibility in the pool area.

(b) Lighting fixtures shall be of such number and design as to illuminate all parts of the pool, the water, the depth markers, signs, entrances, restrooms, safety equipment and the required deck area and walkways.

(c) Fixtures shall be installed so as not to create hazards such as burning, electrical shock, mechanical injury, or temporary blinding by glare to the bathers, and so that lifeguards, when provided, can see every part of the pool area without being blinded by glare. The illumination shall be sufficient so that the floor of the pool can be seen at all times the pool is in use.

(d) If underwater lighting is used, it shall provide at least 0.5 watts or 8.35 lumens per square foot of water surface and deck lighting shall provide not less than 10 foot candles of light measured at 6 inches above the deck surface.

(e) Where underwater lighting is not used, and night swimming is permitted, area and pool lighting combined shall provide not less than 10 foot candles of light to all parts of the pool and required deck area.

(f) Mechanical ventilation is required for all indoor pools.

History Note: Authority G.S. 130A-282;

Eff. May 1, 1991;

Amended Eff. May 1, 2010; February 1, 2004; January 1, 1996; July 1, 1992;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .2525 HEATER AND TEMPERATURE REQUIREMENTS

(a) Pool heaters shall be designed for the purpose intended.

(b) Heaters shall be equipped with thermostatic controls capable of assuring that the maximum operating temperature of spa water does not exceed 104 degrees Fahrenheit (40 degrees C), and that the maximum operating temperature of other heated public swimming pools does not exceed 90 degrees Fahrenheit (32 degrees C). Such controls shall be accessible only to the operator.

History Note: Authority G.S. 130A-282;

Eff. May 1, 1991;

Amended Eff. February 1, 2004; August 1, 1991;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .2526 DRESSING AND SANITARY FACILITIES

(a) Dressing and sanitary facilities shall be provided at all pools, except for pools at hotels, motels, condominiums, and apartments where pool use is restricted to residents or guests. At hotels, motels, condominiums and apartments where the farthest unit is more than 300 feet from the pool, as measured along walkways provided for access by residents or guests to the pool area, a toilet and lavatory shall be provided. All public swimming pools shall post a sign visible upon entering the pool enclosure directing pool users to shower before entering the pool.

(b) Partitions shall be of material, not subject to damage by water and shall be designed so that a waterway is provided between partitions and floor to permit thorough cleaning of the walls and floor areas with hoses and brooms.

(c) Dressing facility floors shall be continuous throughout the areas. Floors shall have a slip-resistant surface that shall be smooth, to insure complete cleaning. Floor drains shall be provided, and floors shall be sloped not less than ¼ inch per foot toward the drains to insure positive drainage.

(d) Hose bibs shall be provided such that all parts of the dressing facility interior can be reached with a 50 foot hose.

(e) The minimum number of fixtures required in dressing and sanitary facilities shall be based upon the maximum bather load.

(f) One water closet, one lavatory, and one urinal shall be provided for the first 100 male users. One additional water closet, lavatory, and urinal shall be provided for each additional 200 male users up to a total of 500 users. Where user load exceeds 500 male users, two additional water closets or urinals and one lavatory shall be provided for each additional 250 male users. Where the maximum bather load includes less than 50 male users, one water closet and one lavatory will be sufficient.

(g) Two water closets and two lavatories shall be provided for the first 100 female users. One additional water closet and lavatory shall be provided for each additional 100 female users up to a total of 500 users. Where user load exceeds 500 female users, two additional water closets and one lavatory shall be provided for each additional 250 female users. Where the maximum bather load includes less than 50 female users, one water closet and one lavatory will be sufficient.

(h) Showers shall be provided in the proportion of one for each 200 persons at the time of maximum bather load.

(i) The water heater shall be inaccessible to users. The system shall be designed such that water temperature at the shower heads and lavatories cannot exceed 110° Fahrenheit.

(j) Soap dispensers with either liquid or powdered soap shall be provided at each lavatory or required shower. The dispenser shall be of all metal or plastic type, with no glass permitted in these units.

(k) If mirrors are provided, they shall be of shatterproof materials.

(l) Toilet paper holders with toilet paper shall be provided at each water closet.

(m) Dressing and sanitary facilities shall be kept clean and in good repair.

History Note: Authority G.S. 130A-282;

Eff. May 1, 1991;

Amended Eff. February 1, 2004; April 1, 1999; January 1, 1996; July 1, 1992;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .2527 SWIMMING POOL SLIDES

All swimming pool slides installed at a public swimming pool shall be labeled by the manufacturer for use in public pools, and shall be installed in accordance with manufacturer's instructions.

History Note: Authority G.S. 130A-282;

Eff. May 1, 1991;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .2528 FENCES

(a) Public Swimming pools shall be completely enclosed by a fence, wall, building, or other enclosure, or any combination thereof, which encloses the swimming pool area such that all of the following conditions are met:

- (1) The top of the barrier shall be at least 48 inches above grade measured on the side of the barrier that faces away from the swimming pool. The maximum vertical clearance between grade and the bottom of the barrier shall be two inches measured on the side of the barrier that faces away from the swimming pool;

- (2) Openings in the barrier shall not allow passage of a four-inch-diameter sphere and shall provide no external handholds or footholds. Solid barriers that do not have openings shall not contain indentations or protrusions except for normal construction tolerances and tooled masonry joints;
- (3) Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is 45 inches or more, spacing between the vertical members shall not exceed four inches. Where there are decorative cutouts within the vertical members, spacing within the cutouts shall not exceed 1.75 inches in width;
- (4) Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is less than 45 inches, the horizontal members shall be located on the swimming pool side of the fence. Spacing between the vertical members shall not exceed 1.75 inches in width. Where there are decorative cutouts within the vertical members, spacing within the cutouts shall not exceed 1.75 inches in width;
- (5) Maximum mesh size for chain link fences shall be a 2.25 inch square unless the fence is provided with slats fastened at the top or the bottom that reduce the openings to no more than 1.75 inches;
- (6) Where the barrier is composed of diagonal members, the maximum opening formed by the diagonal members shall be no more than 1.75 inches;
- (7) Access gates shall comply with the dimensional requirements for fences and shall be equipped to accommodate a locking device. Effective April 1, 2011, pedestrian access gates shall open outward away from the pool and shall be self-closing and have a self-latching device except where a gate attendant and lifeguard are on duty. Gates other than pedestrian access gates shall have a self-latching device. Where the release mechanism of the self-latching device is located less than 54 inches from the bottom of the gate, the release mechanism shall require the use of a key, combination or card reader to open or shall be located on the pool side of the gate at least three inches below the top of the gate, and the gate and barrier shall have no openings greater than 0.5 inch within 18 inches of the release mechanism; and
- (8) Ground level doors and windows opening from occupied buildings to inside the pool enclosure shall be self-closing or child protected by means of a barrier or audible alarm.

(b) Public swimming pool fences constructed prior to May 1, 2010 may vary from the provisions of Paragraph (a) of this Rule as follows:

- (1) the maximum vertical clearance between grade and the bottom of the barrier may exceed two inches, but shall not exceed four inches;
- (2) where the barrier is composed of vertical and horizontal members and the space between vertical members exceeds 1.75 inches, the distance between the tops of the bottom horizontal member and the next higher horizontal member may be less than 45 inches, but shall not be less than 30 inches;
- (3) gates other than pedestrian access gates are not required to have self-latching devices if the gates are kept locked; and
- (4) gates may swing towards a pool where natural topography, landscape position or emergency egress requirements prevent gates from swinging away from the pool.

(c) Public swimming pools permitted prior to April 1, 2010 with existing fences that do not comply with the dimensional requirements of Subparagraphs (a)(1) through (a)(6) and (b)(1) through (b)(2) shall not be denied an operation permit solely due to the preexisting non-compliance. Operation permits shall be denied to an owner or operator who fails to comply with Subparagraphs (a)(1) through (a)(6) and (b)(1) through (b)(2) of this Rule when:

- (1) at least fifty percent (50%) of the fence has been damaged or destroyed; or
- (2) the owner or operator elects to replace the fence.

History Note: Authority G.S. 130A-282;

Eff. May 1, 1991;

Amended Eff. May 1, 2010; February 1, 2004; April 1, 1999; January 1, 1996; July 1, 1992;

Temporary Amendment Eff. November 30, 2011;

Amended Eff. October 1, 2012;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .2529 USER LOADING

In determining the maximum number of persons allowed in the pool at any one time, the following criteria shall govern:

- (1) Fifteen square feet (1.39 sq m) of water surface area per person shall be provided in areas of the pool five feet (1.52 m) deep or less.

- (2) Twenty-four square feet (2.23 sq m) of water surface area per person shall be provided in areas of the pool greater than five feet (1.52 m) deep. Three hundred square feet (27.87 sq m) of pool area around each diving board or platform, where provided, shall not be included in computing this area for the purpose of determining maximum bather load.
- (3) Ten square feet (0.9 sq m) of water surface area per person shall be provided in spas.
- (4) Twenty-five square feet of splash zone area per person shall be provided at interactive play attractions.

*History Note: Authority G.S. 130A-282;
Eff. May 1, 1991;
Amended Eff. March 1, 2004; January 1, 1996;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.*

15A NCAC 18A .2530 SAFETY PROVISIONS

(a) Swimming pools shall have lifesaving equipment conspicuously and conveniently on hand at all times. A unit of lifesaving equipment shall include the following:

- (1) A pole not less than 12 feet long, with a body hook securely attached. The pole attached to the body hook shall be non-telescoping, non-adjustable and non-collapsible.
- (2) A minimum ¼ inch diameter throwing rope as long as one and one-half times the maximum width of the pool or 50 feet, whichever is less, attached to a U.S. Coast Guard approved ring buoy. A rescue tube or rescue can shall be accepted as a substitute for the ring buoy where it is accompanied by a lifeguard who has been trained to use it properly.

(b) Two units of lifesaving equipment must be provided for any pool that exceeds 3,000 square feet (186 sq m) of total surface area.

(c) When a swimming pool does not have at least one lifeguard on duty, a sign shall be posted with legible letters of at least four inches (10 cm) in height stating: "WARNING-NO LIFEGUARD ON DUTY." In addition there shall be signs legible from all bather entrances with a minimum letter size of one inch stating: "CHILDREN SHOULD NOT USE THE SWIMMING POOL WITHOUT ADULT SUPERVISION", and: "ADULTS SHOULD NOT SWIM ALONE". Wading pools that do not have a lifeguard inside the wading pool enclosure shall have a sign posted stating "WARNING NO LIFEGUARD ON DUTY". Such signs shall be mounted permanently.

(d) A sign prohibiting pets and glass containers in the pool area shall be provided.

(e) Pool closed signs shall be provided and shall be posted at bather entrances whenever an operation permit is suspended for water quality or safety violations.

(f) A telephone capable of directly dialing 911 or other emergency notification system shall be provided and accessible to all pool users. Effective April 1, 2005 the telephone shall be permanently affixed to a location inside the pool enclosure or outside the enclosure within 75 feet of a bather entrance. The telephone shall be visible from within the pool enclosure or a sign shall be posted indicating the location of the emergency telephone. A sign with legible letters shall be posted at the telephone providing dialing instructions, address of the pool location and the telephone number. Where the telephone does not directly access 911, the emergency notification system shall:

- (1) Provide 24 hour monitoring of all incoming calls by a telecommunicator who answers only emergency calls;
- (2) Be capable of routing calls to the local 911 telecommunicator via the 911 dedicated emergency trunk line; and
- (3) Electronically transfer Automatic Number Identification and Automatic Locator Identification for the emergency telephone at the pool to the Enhanced 911 system for all calls routed to 911.

*History Note: Authority G.S. 130A-282;
Eff. May 1, 1991;
Amended Eff. February 1, 2004; April 1, 1999; January 1, 1996; July 1, 1992;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.*

15A NCAC 18A .2531 WADING POOLS

(a) Wading pools shall meet all design specifications for swimming pools and wading pools included in Rules .2512 through .2530 of this Section with the following exceptions:

- (1) Wading pools shall be physically separate from other public swimming pools except that a fill pipe and valve from a swimming pool recirculation system may be used to introduce water to a wading pool.

- (2) Every wading pool shall be equipped with a circulation system that is separate from, and independent of, the circulation system of the swimming pool. Such circulation system shall at least consist of a circulating pump, piping, a filter, a rate-of-flow meter, a disinfectant feeder, two inlets, and one automatic surface skimmer. Individual components of a wading pool system must meet the criteria of Rule .2518 of this Section.
 - (3) The capacity of the circulation system shall be capable of filtering and disinfecting the entire volume of water in the wading pool 12 times in every 24 hours.
 - (4) Wading pools shall be equipped with a surface overflow system capable of removing floating material.
 - (5) Wading pools shall be no deeper than 24 inches (61 cm) at the deepest point.
 - (6) Wading pools' floor slope shall not exceed one foot in 12 feet.
 - (7) Wading pools shall be located in the vicinity of the shallow end of the swimming pool, and shall be separated from the swimming pool by a fence or structure similar to that described in Rule .2528 of this Section, that shall be equipped with self-closing and positive self-latching closure mechanisms, and shall be equipped with permanent locking devices. Wading pool entrance gates located inside another public swimming pool enclosure shall open away from the deeper pool. Wading pool fences constructed after April 1, 2000 shall be at least four feet high.
 - (8) Wading pools shall be designed to provide at least 10 square feet per child.
 - (9) Depth markers are not required at wading pools.
 - (10) The free chlorine residual in wading pools shall be maintained at no less than two parts per million.
 - (11) Wading pools are not required to provide the lifesaving equipment described in Rule .2530(a) of this Section.
- (b) Children's activity pools shall be constructed and operated in accordance with the rules of this Section including the requirements for wading pools with the following exceptions:
- (1) The filter circulation system shall be separate from any feature pump circulation system.
 - (2) The filter circulation system for stand-alone children's activity pools shall filter and return the entire water capacity in no more than one hour and shall operate 24 hours a day.
 - (3) The disinfectant residual in children's activity pools shall be maintained at a level of at least two parts per million of free chlorine measured in the pool water and at least one part per million in all water features.
 - (4) Valves shall be provided to control water flow to the features in accordance with the manufacturers' specifications.
 - (5) Children's activity pools built prior to February 1, 2004 that do not comply with this Paragraph may operate as built if no water quality or safety violations occur.

*History Note: Authority G.S. 130A-282;
Eff. May 1, 1991;*

Amended Eff. May 1, 2010; February 1, 2004; April 1, 1999; January 1, 1996;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .2532 SPAS AND HOT TUBS

Spas and hot tubs shall meet all design specifications for swimming pools and wading pools included in Rules .2512 through .2530 of this Section with the following exceptions:

- (1) The circulation system equipment shall provide a turnover rate for the entire water capacity at least once every 30 minutes.
- (2) The arrangement of water inlets and outlets shall produce a uniform circulation of water so as to maintain a uniform disinfectant residual throughout the spa.
- (3) A minimum of two inlets shall be provided with inlets added as necessary to maintain required flowrate.
- (4) Water outlets shall be designed so that each pumping system in the spa (filter systems or booster systems if so equipped) provides the following:
 - (a) Where drains are provided, drains shall be unblockable or shall consist of two or more drains connected by a "T" pipe. Connecting piping shall be of the same diameter as the main drain outlet. Filter system drains shall be capable of emptying the spa completely. In spas constructed after April 1, 2000 drains shall be installed at least three feet apart or located on two different planes of the pool structure.
 - (b) Filtration systems shall provide at least one surface skimmer per 100 square feet, or fraction thereof of surface area.

- (5) The water velocity in spa or hot tub discharge piping shall not exceed 10 feet per second (3.05 meters per second); except for copper pipe where water velocity shall not exceed eight feet per second (2.44 meters per second). Suction water velocity in any piping shall not exceed six feet per second (1.83 meters per second).
- (6) Spa recirculation systems shall be separate from companion swimming pools.
 - (a) Where a two-pump system is used, one pump shall provide the required turnover rate, filtration and disinfection for the spa water. The other pump shall provide water or air for hydrotherapy turbulence without interfering with the operation of the recirculation system. The timer switch shall activate only the hydrotherapy pump.
 - (b) Where a single two-speed pump is used, the pump shall be designed and installed to provide the required turnover rate for filtration and disinfection of the spa water at all times without exceeding the maximum filtration rates specified in Rule .2519 of this Section. The timer switch shall activate only the hydrotherapy portion of the pump.
 - (c) Where a single one-speed pump is used, a timer switch shall not be provided.
- (7) A timer switch shall be provided for the hydrotherapy turbulence system with a maximum of 15 minutes on the timer. The switch shall be placed such that a bather must leave the spa to reach the switch.
- (8) The maximum operational water depth shall be four feet (1.22 m) measured from the water line.
- (9) The maximum depth of any seat or sitting bench shall be two feet (61 centimeters) measured from the waterline.
- (10) A minimum height between the top of the spa/hot tub rim and the ceiling shall be seven and a half feet.
- (11) Depth markers are not required at spas.
- (12) Steps, step-seats, ladders or recessed treads shall be provided where spa and hot tub depths are greater than 24 inches (61 centimeters).
- (13) Contrasting color bands or lines shall be used to indicate the leading edge of step treads, seats, and benches.
- (14) A spa or hot tub shall be equipped with at least one handrail (or ladder equivalent) for each 50 feet (15.2 meters) of perimeter, or portion thereof, to designate points of entry and exit.
- (15) Where water temperature exceeds 90 degrees Fahrenheit (32 degrees Celsius), a caution sign shall be mounted adjacent to the entrance to the spa or hot tub. It shall contain the following warnings in letters at least ½ inch in height:

CAUTION:

 - Pregnant women; elderly persons, and persons suffering from heart disease, diabetes, or high or low blood pressure should not enter the spa/hot tub without prior medical consultation and permission from their doctor;
 - Do not use the spa/hot tub while under the influence of alcohol, tranquilizers, or other drugs that cause drowsiness or that raise or lower blood pressure;
 - Do not use alone;
 - Unsupervised use by children is prohibited;
 - Enter and exit slowly;
 - Observe reasonable time limits (that is, 10-15 minutes), then leave the water and cool down before returning for another brief stay;
 - Long exposure may result in nausea, dizziness, or fainting;
 - Keep all breakable objects out of the area.
- (16) Spas shall meet the emergency telephone and signage requirements for swimming pools in Rule .2530(f).
- (17) A sign shall be posted requiring a shower for each user prior to entering the spa or hot tub and prohibiting oils, body lotion, and minerals in the water.
- (18) Spas are not required to provide the lifesaving equipment described in Rule .2530(a) of this Section.
- (19) In spas less than four feet deep, the slope of the pool wall may exceed 11 degrees from plumb, but shall not exceed 15 degrees from plumb.

*History Note: Authority G.S. 130A-282;
 Eff. May 1, 1991;
 Amended Eff. May 1, 2010; January 1, 2006; July 1, 2004; February 1, 2004; April 1, 1999; January 1, 1996; July 1, 1992;
 Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.*

15A NCAC 18A .2533 EQUIPMENT ROOM

- (a) All pumps, chemical feeding apparatus and other mechanical and electrical equipment shall be enclosed in a weatherproof structure with a minimum ceiling height of seven feet. The equipment room shall be provided with a door with a permanent lock that must be kept locked when not in use by the pool operator. Filters located outside the equipment room shall be completely enclosed by a fence.
- (b) Lighting to allow the operator to read all gauges and control devices shall be provided.
- (c) Valves and control devices shall be accessible and visible to the pool operator. At least three feet of clear walkway shall be provided to allow access to equipment.
- (d) Drainage in and around the equipment room shall preclude the possibility of water entering or accumulating on any interior surface of the enclosure. Equipment room floors shall be sloped not less than ¼ inch per foot toward the drains.
- (e) Natural cross draft or continuous forced ventilation is required.
- (f) A permanent means of access shall be provided to all equipment rooms.
- (g) A hose bib with an approved backflow prevention device shall be provided within 50 feet of the equipment room.

*History Note: Authority G.S. 130A-282;
Eff. May 1, 1991;
Amended Eff. February 1, 2004; January 1, 1996;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.*

15A NCAC 18A .2534 CHEMICAL STORAGE ROOM

A separate chemical storage room that meets the following criteria shall be provided:

- (1) The chemical storage room shall be in a dry, weatherproof structure with a minimum ceiling height of seven feet.
- (2) For public swimming pools built after May 1, 1996, chemical storage space shall be provided based on a minimum of five square feet for the first 10,000 gallons of pool water plus one additional square foot for each additional 3,000 gallons or portion thereof up to a total area of 100 square feet. Public swimming pools constructed after April 1, 2004 shall provide a separate room for storage of pool chemicals.
- (3) Natural cross draft or continuous forced ventilation is required.
- (4) Provision shall be made for dry storage of all pool chemicals in waterproof containers or above the floor on shelves, pallets or dollies.
- (5) The chemical storage room shall be arranged so that chemicals which can react with other pool chemicals are stored separately and shall be constructed and arranged to permit easy cleanup of chemical spills.
- (6) Lighting shall be provided in chemical storage rooms.

*History Note: Authority G.S. 130A-282;
Eff. May 1, 1991;
Amended Eff. February 1, 2004; January 1, 1996;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.*

15A NCAC 18A .2535 WATER QUALITY STANDARDS

Whenever a public swimming pool is open for use, water quality shall be maintained in accordance with the following:

- (1) The chemical quality of the water shall be maintained in an alkaline condition at all times with the pH between 7.2 and 7.8.
- (2) The clarity of the water shall be maintained such that the main drain grate is visible from the pool deck at all times.
- (3) Disinfection shall be provided in accordance with manufacturers' instructions for all pools by a chemical or other process that meets the criteria listed as follows:
 - (a) registered with the U.S. Environmental Protection Agency for pool water or potable water;
 - (b) provides a residual effect in the pool water that can be measured by portable field test equipment;
 - (c) will not impart any immediate or cumulative adverse physiological effects to pool bathers when used as directed;
 - (d) will not produce any safety hazard when stored or used as directed;
 - (e) will not damage pool components or equipment; and

- (f) will demonstrate reduction of total coliform and fecal coliform to a level at least equivalent to free chlorine at a level of one part per million in the same body of water.
- (4) When chlorine is used as the disinfectant, a free chlorine residual of at least one part per million (ppm) shall be maintained throughout the pool whenever it is open or in use. Pools that use chlorine as the disinfectant must be stabilized with cyanuric acid except at indoor pools or where it can be shown that cyanuric acid is not necessary to maintain a stable free chlorine residual. The cyanuric acid level shall not exceed 100 parts per million.
- (5) When bromine or compounds of bromine are used as the disinfectant, a free bromine residual of at least two parts per million, shall be maintained throughout the pool whenever it is open or in use.
- (6) When chlorine or bromine are used as the disinfectant, automatic chemical feeders shall be used. Automatic chlorine or bromine feeders shall be manufactured and installed in accordance with NSF/ANSI Standard number 50. Automatic chlorine and bromine feeder pumps shall be automatically prevented from operating when the circulation pump is not in operation.
- (7) When biguanide is used as the disinfectant, a residual of 30 to 50 parts per million shall be maintained throughout the pool whenever it is open or in use.
- (8) When silver/copper ion systems are used, the copper concentration in the pool water shall not exceed one part per million and a chlorine residual must be maintained in accordance with Item (4) of this Rule.
- (9) The use of chlorine in its elemental (gaseous) form for disinfection of public swimming pools is prohibited.
- (10) Test kits or equipment capable of measuring disinfectant level, pH, and total alkalinity must be maintained at all public swimming pools. Pools using cyanuric acid or chlorinated isocyanurates must have a test kit capable of measuring cyanuric acid levels.
- (11) The pool operator shall inspect the pool at least daily and maintain written records of the operating conditions of each pool. Records shall be maintained at the pool site for a period of not less than six months. Records shall include the following:
 - (a) daily recording of the disinfectant residual in the pool;
 - (b) daily recording of pool water pH;
 - (c) daily recording of water temperature in heated pools; recording of activities pertaining to pool water maintenance including chemical additions and filter backwash cycles;
 - (d) weekly recording of total alkalinity and cyanuric acid levels; and
 - (e) daily recording of pool drain cover/grate inspection.
- (12) Water temperature in heated swimming pools shall not exceed 90 degrees Fahrenheit (32 degrees Celsius) and in heated spas shall not exceed 104 degrees Fahrenheit (40 degrees Celsius).
- (13) The pool operator shall take the following steps to manage fecal and vomitus accidents:
 - (a) Direct everyone to leave all pools into which water containing the feces or vomit is circulated and do not allow anyone to enter the pool(s) until decontamination is completed;
 - (b) Remove as much of the feces or vomit as possible using a net or scoop and dispose of it in a sewage treatment and disposal system;
 - (c) Raise the free available chlorine concentration to two ppm at a pH of 7.2 to 7.5 and test to assure the chlorine concentration is mixed throughout the pool; and
 - (d) For accidents involving formed stools or vomit, maintain the free available chlorine concentration at two ppm for at least 25 minutes or at three ppm for at least 19 minutes before reopening the pool. For accidents involving liquid stools increase the free chlorine residual and closure time to reach a CT inactivation value of 15,300 then backwash the pool filter before reopening the pool. CT refers to concentration (C) of free available chlorine in parts per million multiplied by time (T) in minutes.

History Note: Authority G.S. 130A-282;
Eff. May 1, 1991;
Amended Eff. May 1, 2010; February 1, 2004; April 1, 1999; January 1, 1996; July 1, 1992;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .2536 REVOCATION OF PERMITS

The Department may suspend or revoke permits in accordance with G.S. 130A-23.

History Note: Authority G.S. 130A-282;

Eff. May 1, 1991;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .2537 MAINTENANCE AND OPERATION

(a) All public swimming pools constructed or remodeled on or after May 1, 1991 shall be maintained and operated in accordance with the Rules of this Section.

(b) On or after May 1, 1993 all public swimming pools including those constructed prior to May 1, 1991 shall be maintained and operated in accordance with the following:

- (1) All safety provisions of Rule .2530 of this Section shall be met.
- (2) Decks shall be structurally sound and shall be maintained free of trip hazards or offsets greater than one-half inch resulting from deterioration or changes from the original deck profile.
- (3) There shall be no loose coping.
- (4) Artificial lighting shall be provided for all pools used when natural lighting is not sufficient to make all parts of the pool and pool area clearly visible.
- (5) Swimming pools shall be protected by a fence, wall, building, or other enclosure, or any combination thereof, that completely encloses the swimming pool area. All gates and doors shall be equipped with self-closing and positive self-latching closure mechanisms. Existing waterslide flumes and other appurtenances are not required to be located inside the fence.
- (6) Depth and safety markings shall be provided as required in Rule .2523 of this Section
- (7) Drain covers shall be in good condition and securely attached.
- (8) Damaged face plates or fittings shall be repaired or replaced.
- (9) Underwater light niches shall be maintained or covered so as not to present a potential hazard to bathers.
- (10) Diving equipment and pool slides including stairs and railing shall be maintained in good working order.
- (11) A timer switch that allows no more than 15 minutes of operation without manual resetting shall be used to control air blowers and hydrotherapy pumps on heated spas.
- (12) All breaks in grade of the pool bottom including the leading edges of stair treads and seats and the tops of breakpoints where the slope of the bottom changes at a depth of five feet (15m) or less shall be marked with a contrasting color band by May 1, 2000. Contrasting color bands are not required where a registered engineer, registered architect or licensed swimming pool contractor certifies in writing that structural weakness or materials of construction prevent the installation of permanent markings.
- (13) All heated spas shall post a caution sign as specified in Rule .2532 of this Section.
- (14) Pool maintenance shall include removal of debris from the water surface and bottom of the pool.
- (15) All pool chemicals shall be stored in a clean, dry, well ventilated area and shall be organized so as to prevent chemicals from reacting.
- (16) No submersible pumps or mechanical pool cleaning equipment shall be placed or used in the pool while bathers are in the pool.

(c) The owner of a public swimming pool shall provide for the operation of the pool by a person or persons who shall be responsible to the owner for operation, maintenance, pool safety and record keeping. The pool owner shall maintain documentation that the person responsible for operating the pool has been trained on pool equipment operation, disease and injury prevention, pool water chemistry and regulatory requirements for public swimming pools. A pool and spa operator certificate issued by the National Swimming Pool Foundation or other organization that provides training on those subjects shall be accepted as meeting this requirement.

History Note: Authority G.S. 130A-282;

Eff. July 1, 1992;

Temporary Amendment Eff. May 11, 1993 for a period of 180 days or until the permanent rule becomes effective, whichever is sooner.

The Codifier of Rules determined that the agency's findings of need did not meet the criteria listed in GS 150B-21.1(a);

Temporary Amendment Eff. May 1, 1993 for a period of 180 days or until the permanent rule becomes effective, whichever is sooner;

Amended Eff. February 1, 2004; April 1, 1999; January 1, 1996; October 1, 1993; May 1, 1993;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .2538 FILL AND DRAW POOLS

Fill and draw pools are prohibited. Provisions shall be made for filtration and recirculation of water in all public swimming pools, wading pools, and spas.

History Note: Authority G.S. 130A-282;

Eff. May 1, 1993;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .2539 SUCTION HAZARD REDUCTION

(a) At all public wading pools that use a single main drain for circulation of water, signs shall be posted stating, "WARNING: To prevent serious injury do not allow children in wading pool if drain cover is broken or missing." Signs shall be in letters at least one-half inch in height and shall be posted where they are visible to people entering the wading pool. Submerged suction outlets shall be prohibited in wading pools in accordance with ANSI/PHTA/ICC-7 2020 American National Standard for Suction Entrapment Avoidance in Swimming Pools, Wading Pools, Spas, Hot Tubs, and Catch Basins, which is incorporated by reference, including any subsequent amendments or editions, and available at <https://webstore.ansi.org/> at a cost of one hundred and sixty five dollars (\$165.00)(hereinafter referred to as "ANSI/PHTA/ICC-7").

(b) All submerged suction outlets in public swimming pools other than vacuum ports shall be protected by a cover in compliance with ANSI/APSP/ICC-16 2017 (PA 2021) American National Standard for Suction Outlet Fitting Assemblies (SOFA) for Use in Pools, Spas, and Hot Tubs, which is hereby incorporated by reference, including any subsequent amendments or editions, and available at <https://webstore.ansi.org/> at a cost of one hundred and sixty five dollars (\$165.00)(hereinafter referred to as "ANSI/APSP/ICC-16"). All submerged suction fittings shall be installed in accordance with the manufacturer's instructions.

(c) Public swimming pools that have a single main drain or single submerged suction outlet other than an unblockable drain, or that have multiple outlets in the same plane separated by less than three feet, measured from the centers of the covers, shall have one or more secondary methods of preventing bather entrapment. Secondary methods of preventing bather entrapment include:

- (1) A safety vacuum release system which ceases operation of the water pump, reverses the circulation flow, or otherwise provides a vacuum release at the suction outlet when a blockage has been detected, and that has been tested by a third party and found to conform with ANSI/PHTA/ICC-7. The operator of the public swimming pool shall test an installed safety vacuum release system using the methodology and at the frequency recommended by the manufacturer, and the test dates and results shall be recorded in the written records required by Rule .2535(11) of this Section. Safety vacuum release systems installed or replaced after the effective date of this Rule shall have a shut off valve for testing the device, if recommended by the manufacturer;
- (2) A suction-limiting vent system with an atmospheric opening inaccessible to the public;
- (3) A gravity drainage system that utilizes a surge tank;
- (4) An automatic pump shut-off system;
- (5) Disabling the submerged suction outlet; or
- (6) Any other system that complies with ANSI/PHTA/ICC-7.

(d) Owners of all public swimming pools shall provide documentation to the Department, as part of the application for an operation permit under Rule .2510(c) of this Section, to verify suction outlet safety compliance. This documentation shall include:

- (1) Documentation of the maximum possible flow rate for each [pump] with a submerged suction outlet. This shall be the pump's maximum flow shown on the manufacturer's pump performance curve except where flow reductions are justified with total dynamic head measurements or calculations. Flow reduction measurement documentation shall include photographs taken within two hours of backwashing or replacing the filter with all valves in the fully open position that show the levels of all the gauges used in the public swimming pool. All systems using a flow reduction to comply with this rule shall have a flow meter installed in accordance with manufacturer's instructions confirming that the water flow does not exceed the gallon per minute flow rating of the drain covers or a sealed statement from a Registered Design Professional showing calculations used to justify the reduction;
- (2) Documentation that drain covers are in compliance with ANSI/APSP/ICC-16 and the manufacturer's instructions. This includes documentation that each drain cover on a single or dual drain submerged suction outlet is rated to meet or exceed the pump's maximum flow or the measured flow of the water through the submerged suction outlets. Drain covers on a submerged suction system with three or more suction outlets shall together be rated to meet or exceed the pump's maximum flow with one drain completely blocked,

unless the combined flow of all unblockable drains meet or exceed the pump's maximum flow or the measured flow of the water; and

- (3) Documentation that drain sumps meet the dimensional requirements specified in the drain cover manufacturer's installation instructions.

(e) Operators of all public swimming pools shall inspect pools daily to ensure the drain covers are not missing, broken, or cracked and are securely attached. The operator shall close the public swimming pool until missing, broken, or cracked suction fittings are replaced and loose suction fittings are resecured.

*History Note: Authority G.S. 130A-282;
Temporary Adoption Eff. June 1, 1994 for a period of 180 days or until the permanent rule becomes effective, whichever is sooner;
Eff. October 1, 1994;
Amended Eff. May 1, 2010; January 1, 2006; February 1, 2004; April 1, 1999;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019;
Amended Eff. November 1, 2024.*

15A NCAC 18A .2540 REPORTING OF INJURY OR ILLNESS

The pool operator shall report any death, serious injury or complaint of illness attributed by a bather to use of a public swimming pool to the local health department within two working days of the incident or complaint. The report to the health department shall include the following:

- (1) Name and telephone number or address of the person injured or making a complaint.
- (2) Date of the incident or onset of illness.
- (3) Description of the type of injury or complaint.
- (4) Name and phone number of the person rendering assistance or first aid.
- (5) The name of any known hospital, rescue squad or physician providing medical assistance.
- (6) Names and phone numbers of available witnesses to the incident.

*History Note: Authority G.S. 130A-282;
Eff. January 1, 1996;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.*

15A NCAC 18A .2541 FLOW THROUGH POOLS

Tanks or structures built prior to May 1, 1995 which hold a flowing natural water source for public swimming, diving, wading or recreational use without physical or chemical treatment shall not be required to comply with the rules of this Section.

*History Note: Authority G.S. 130A-282;
Eff. January 1, 1996;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.*

15A NCAC 18A .2542 IN POOL EXERCISE EQUIPMENT

(a) Exercise equipment such as steps, weights, or floats used in a public swimming pool shall be designed and constructed so as not to pose a threat to water quality or bather safety and shall be removed from the pool after each use.

(b) Where in-pool exercise equipment such as underwater treadmills remain in a swimming pool when not in use, the following conditions shall be met:

- (1) The swimming pool shall be restricted to use only by adults or a lifeguard shall be on duty at all times when children are allowed in the pool.
- (2) Exercise equipment shall meet Underwriters' Laboratories Standard Number 1647 for exercise equipment as verified in writing by an independent third party testing laboratory.
- (3) The position of underwater equipment shall be marked with colored floats attached by a 3/4 inch diameter rope or other movable barrier that surrounds the equipment with a visible perimeter designed so as not to entangle or otherwise threaten bather safety.
- (4) Equipment shall be verified by the manufacturer to be designed for use in a public swimming pool and to be free of grease or oil that might negatively impact pool water quality.
- (5) Any cords or hoses attached to underwater exercise equipment shall not pose a threat of bather entanglement. Cords or hoses which cross a pool deck shall be covered or shielded to prevent tripping.

Covers that protrude more than one-half inch from the deck surface shall be sloped at an angle of no more than 30° from the horizontal deck surface.

*History Note: Authority G.S. 130A-282;
Eff. January 1, 1996;
Amended Eff. February 1, 2004;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.*

15A NCAC 18A .2543 WATER RECREATION ATTRACTIONS

(a) Upon written request and approval by the Department, water recreation attractions including water slides, wave pools, rapid rides, lazy rivers, artificial swimming lagoons, and other similar features may deviate from the requirements of this Section with respect to pool profile, depth, freeboard, flow dynamics and surface skimming systems. The Department shall approve the request upon a showing that such deviation performs in a manner equally to or more protective of public health than the requirements of this Section based upon design plans and technical specifications by the designing engineer or equipment manufacturer. Water recreation attractions shall meet all other requirements of this Section.

(b) Water slide landing pools with a capacity of less than 60,000 gallons shall have a circulation and filtration system capable of turning over the entire pool capacity every two hours. Where automatic chemical controllers are used the turnover time shall be no more than three hours. Landing pool dimensions shall be consistent with the slide manufacturer's recommendation.

(c) When waterfalls are incorporated in water recreation attractions, they shall be constructed with no handholds or footholds to a height of four feet to discourage climbing.

(d) Interactive play attractions shall be constructed and operated in accordance with the rules of this Section and shall comply with the following:

- (1) The recirculation system shall contain a water capacity equal to at least three minutes of maximum flow of all feature pumps and filter circulation pumps combined and shall not be less than 1,000 gallons. Where the water capacity exceeds 10,000 gallons, the minimum capacity shall be based on the lesser of three minutes of maximum feature flow or 7.5 gallons per square foot of splash zone watershed drained to the surge container.
- (2) Access shall be provided to the surge water container.
- (3) A filter circulation system shall be provided and shall be separate from the feature pump system except that both systems can draw water from a common drain pipe if the drain and pipe are sized to handle the flow of all pumps without exceeding the flow velocities specified in Rule .2518 of this Section.
- (4) The filter circulation system shall draw water from the surge container through a variable height surface skimmer and a bottom drain located no more than 6 inches from the bottom of the container.
- (5) The filter circulation system shall filter and return the entire water capacity in no more than 30 minutes and shall operate 24 hours a day.
- (6) Automatic chemical controllers shall be provided to monitor and adjust the disinfectant residual and pH of the water contained in the system.
- (7) The disinfectant residual in interactive play attractions shall be maintained at a level of at least two parts per million of free chlorine. Chlorine feeders shall be capable of producing 12 parts per million of free chlorine in the filter circulation piping.
- (8) Valves shall be provided to control water flow to the features in accordance with the manufacturers' specifications.
- (9) Splash zones shall be sloped to drains sized and located to remove all feature water to the surge tank without water accumulating on the surface.
- (10) Deck or walkway space is not required outside the splash zone.
- (11) Dressing and sanitary facilities shall not be required.
- (12) Interactive play features shall not be required to have a fence except the wading pool fence requirements shall apply to interactive play features located inside a swimming pool enclosure.
- (13) The safety provisions of Rule .2530 of this Section shall not apply except a sign shall be posted prohibiting pets and glass containers.
- (14) Interactive play attractions built prior to April 1, 2004, that do not comply with these design and construction requirements shall be permitted to operate as built if no water quality or safety violations occur under Rules .2535 and .2537 of this Section.

(e) Training pools shall meet the requirements for swimming pools with the following exceptions:

- (1) Training pools shall be equipped with a filter circulation system that filters and returns the entire pool capacity in no more than two hours.
- (2) The free chlorine residual in training pools shall be maintained at no less than two parts per million.
- (f) Artificial swimming lagoons shall meet the requirements for public swimming pools except as specified in this Rule:
 - (1) Pool shells shall not be required. Liners shall meet the requirements of Rule .2514 of this Section.
 - (2) Underwater components of the artificial swimming lagoon or float lines with openings greater than one-half inch shall not be allowed in swimming zones.
 - (3) All swimming zone float rope components shall be a color contrasting with the pool liner. Artificial swimming lagoons are not required to meet the float rope location requirements of Rule .2523(e) of this Section regarding breakpoint and slope. A contrasting color band shall not be required on the liner under the rope.
 - (4) Each swimming zone and water feature shall meet water quality standards as required in Rule .2535 of this Section. If the water quality of a swimming zone or water feature does not meet the requirements of Rule .2535 of this Section, the operator shall close the swimming zone or water feature and post a sign at the entrance of the swimming zone with legible letters of at least four inches (10 cm) in height stating "ATTENTION: THE SWIMMING ZONE IS CLOSED. SWIMMING IN THIS AREA IS NOT PERMITTED AT THIS TIME." The swimming zone or water feature shall remain closed until the water quality in the swimming zone or water feature complies with the requirements of Rule .2535 of this Section.
 - (5) All non-swimming zones shall be maintained so the bottom of the lagoon is visible in all areas.
 - (6) A sign shall be posted at all entrances to the artificial swimming lagoon with legible letters of at least four inches (10 cm) in height stating "NOTICE – NO SWIMMING ALLOWED OUTSIDE OF DESIGNATED SWIMMING ZONES."
 - (7) Signage shall be posted indicating swimming zones.
 - (8) Depth markings and no diving markers shall be provided on decks in swimming zones as required in Rule .2523 of this Section. Signs shall be posted at all entrances to swimming zones with legible letters of at least four inches (10cm) in height stating "NO DIVING" and stating the maximum depth of the swimming zone in Arabic numerals and shall include the word "feet" or the symbol "ft" to indicate the unit of measure.
 - (9) Decks at zero entry areas located within swimming zones are not required to meet the minimum deck area requirements in Rule .2522 of this Section. Access to swimming zones shall be provided for emergency vehicles and personnel. No decks shall be required in non-swimming zones. The requirements of Rule .2515(g)(1) of this Section shall not apply to swimming zones and Rule .2515(g) of this Section shall not apply to non-swimming zones.
 - (10) Swimming zones shall meet all safety provisions as set out in Rule .2530 of this Section. Where swimming zones are separated by more than 75 feet, each swimming zone shall separately meet all safety provisions. Non-swimming zones are exempt from the requirements in Rule .2530 of this Section.
 - (11) A water treatment system that does not meet the requirements of Rules .2518 and .2519 of this Section shall be approved by the Environmental Health Section of the Department's Division of Public Health when the treatment system performs in a manner equal or superior to the systems described in Rules .2518 and .2519 of this Section in terms of water clarification, disinfection, and removal of debris, and results in a disinfectant residual and pH level as required in Subparagraph (f)(4) of this Rule.
 - (12) The requirements of Rule .2529 of this Section and Rule .2526(e)–(h) of this Section shall not apply. Sanitary facility requirements shall comply with the 2018 North Carolina State Building Code: Plumbing Code, which is incorporated by reference, including any subsequent amendments or editions and available free of charge at: <https://codes.iccsafe.org/content/NCPC2018>.
 - (13) Bacteriological samples shall be collected by the operator in non-swimming zones and tested weekly. One sample shall be collected for every 250 feet of shoreline, with no more than 300 feet and no less than 25 feet between any two sampling locations. The samples shall be collected at least one foot below the surface, in at least three feet of water. The samples shall be analyzed by a laboratory accredited by the North Carolina Drinking Water Laboratory Certification Program, the North Carolina Wastewater/Groundwater Laboratory Certification Program, or the National Environmental Laboratory Accreditation Program. The test results shall be maintained as part of the records required in Rule .2535(11) of this Section.
 - (14) When the result of any test required by Subparagraph (f)(13) of this Rule exceeds the standards in Rule .3402(a) of this Subchapter, the operator shall:

- (A) notify the local health department that permitted the artificial swimming lagoon and resample the water within 24 hours of receipt of the result from the laboratory; and
- (B) close all non-swimming zones and post a sign at all non-swimming zone entrances with legible letters of at least four inches (10 cm) in height stating "ATTENTION: ALL NON-SWIMMING ZONES ARE CLOSED. RECREATIONAL ACTIVITIES IN THIS AREA ARE NOT PERMITTED AT THIS TIME." This sign shall remain posted until resampling determines that bacterial levels do not exceed the standards in Rule .3402(a) of this Subchapter.
- (15) Non-swimming zones shall not be required to comply with the lighting requirements of Rule .2524 of this Section. When night swimming is allowed, the operator shall provide lighting in swimming zones as required for public swimming pools.
- (16) The requirements of Rule .2537(b)(16) of this Section shall not apply. Submersible pumps or mechanical pool cleaning equipment shall not be used in swimming zones or within 25 feet of swimming zones when a swimming zone is open to bathers. If submersible pumps or mechanical pool cleaning equipment are used in non-swimming zones when a non-swimming zone is open to users, the following conditions shall apply:
 - (A) A registered design professional shall provide design plans or technical specifications that demonstrate that any underwater suction outlets perform in a manner that is equally protective or more protective than the Pool and Hot Tub Alliance's ANSI/APSP/ICC-7 2013 Standard for Suction Entrapment Avoidance in Swimming Pools, which is incorporated by reference, including any subsequent amendments or editions, and available for a fee of one hundred sixty-five dollars (\$165.00) at <https://www.apsp.org/store1>; and
 - (B) All floating components of submersible pumps or mechanical pool cleaning equipment shall be labeled with a sign above the water line with legible letters of at least four inches (10 cm) in a contrasting color stating: "DANGER: MECHANICAL EQUIPMENT IN USE. STAY BACK 25 FEET."
- (17) The requirements of Rules .2521 and .2516(f)(1) of this Section shall not apply to non-swimming zones.

History Note: Authority G.S. 130A-280; 130A-282; S.L. 2011-39; S.L. 2019-88;
 Eff. April 1, 1999;
 Amended Eff. March 1, 2004;
 Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019;
 Temporary Amendment Eff. December 3, 2019;
 Amended Eff. October 1, 2020.

15A NCAC 18A .2544 SPECIAL PURPOSE AND THERAPY POOLS

- (a) Special purpose and therapy pools shall comply with the requirements for public swimming pools and spas except as specified in this Rule.
- (b) Float tanks:
 - (1) The requirement in Rule .2522 of this Section for a deck or walkway continuous with the top of the pool wall does not apply to isolation float tanks where a clear floor space of at least eight feet by four feet is provided adjacent to the entrance to the tank.
 - (2) The requirement in Rule .2532 of this Section for the minimum ceiling height of 7 ½ feet above the rim of the pool does not preclude use of a canopy of a lower height to enclose an isolation float tank provided the canopy can be opened to allow users a standing entry and exit from the float tank.
 - (3) The minimum lighting requirement in Rule .2524 of this Section does not apply to float tanks provided lighting is available for cleaning and is sufficient to provide visibility for entry and exit from the float tank.
 - (4) The requirements in Rule .2518 of this Section that recirculation pumps operate 24 hours per day do not preclude turning off the pump during float sessions when a sanitizing cycle is provided that filters and disinfects the entire capacity of the float tank system at least twice before every user enters the pool. When the float tank is not being used, the pump shall either operate continuously or intermittently to filter and disinfect the capacity of the pool twice every hour.
 - (5) The requirement in Rule .2518 of this Section that pool pumps three horsepower or smaller meet NSF/ANSI Standard 50 is not applicable when the mineral content of the brine in a float tank is incompatible with standard pool pumps. Pumps that do not meet NSF/ANSI standard 50 shall be approved by the Department when the viscosity of the mineral solution in the float tank requires a pump impeller or

magnetic coupling designed to pump viscous liquids. Electrical safety of such pumps shall be verified by an independent third-party testing lab to meet applicable Underwriters Laboratories (UL) Standards.

- (6) The requirement in Rule .2532 of this Section for a caution sign at spas with a water temperature above 90 degrees Fahrenheit is not applicable to float tanks that do not exceed an operating temperature of 95 degrees Fahrenheit. Float tanks that exceed an operating temperature of 95 degrees Fahrenheit shall have a posted sign with the same warnings required for hot spas except references to spas may be reworded to reference float tanks or float spas.

(c) Swim Spas:

- (1) Irrespective of Rule .2522(k) of this Section, swim spa training pools that use jetted water for training swimmer athletes under constant supervision of a swim coach may be located above deck level. Swim spa training pools located above deck level shall be in an enclosure secured against unauthorized access or use when a swim coach is not present.
- (2) The maximum operational water depth of four feet required for spas in Rule .2532 of this Section does not apply to swim spas.
- (3) Ladders, steps or stairs required by Rule .2521 of this Section are not required for an above-ground swim spa where a handhold or handrail is provided to facilitate transfer over the pool wall.

(d) Exercise Therapy and Treadmill Pools:

- (1) The maximum operational water depth of four feet required for spas in Rule .2532 of this Section does not apply to exercise therapy and treadmill pools.
- (2) The 30 minute turnover rate required for spa recirculation systems in Rule .2532 of this Section does not apply to exercise therapy or treadmill pools with a water capacity exceeding 1,000 gallons provided that the turnover time does not exceed two hours.

(e) Scuba Training Pools:

- (1) The prohibition of underwater ledges in Rule .2516(b) of this Section does not preclude drop-off ledges to the deep-diving portion of pools designed and used for training swimmers to use self-contained underwater breathing apparatus.
- (2) Scuba pools shall comply with the requirements for swimming pools and are not required to meet the requirements for spas in Rule .2532 of this Section.

History Note: Authority G.S. 130A-282;

Eff. April 1, 2013;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .2545 DISPLAY SPA AT A TEMPORARY EVENT

A display spa at a temporary event (DSTE) shall not be required to comply with the Rules of this Section except as specified in this Rule.

- (1) A DSTE shall not operate without a permit that has been issued by the local health department that serves the county in which the temporary event is located. The duration of a permit for a DSTE shall be no more than 21 consecutive calendar days. The applicant may apply for additional permits to operate a DSTE for multiple 21-day periods at the same temporary event.
- (2) One permit application shall be submitted for each DSTE. The applicant shall submit the application for a permit at least 15 calendar days before commencing operation of a DSTE. The application form shall be submitted to the local health department that serves the county in which the temporary event is located and shall include the following information:
 - (a) applicant's name, address, and phone number;
 - (b) name of the temporary event;
 - (c) street address of the temporary event;
 - (d) proposed operating dates; and
 - (e) signature of the applicant.
- (3) A DSTE shall meet the requirements of Rule .2535 of this Section, except as follows:
 - (a) automatic chemical feeders shall not be required;
 - (b) written records shall only be required to include disinfectant concentration, pH, and the type and amount of chemicals added to the DSTE;
 - (c) disinfectant residual shall be measured every day before opening the DSTE to the public and every four hours thereafter until the DSTE is closed for the day;

- (d) disinfectant concentrations shall be maintained at or above 3 ppm free chlorine or 4 ppm free bromine; and
- (e) pH shall be maintained between 7.0-7.8.
- (4) A sign shall be posted on each permitted DSTE that states: "DISPLAY SPA – ONLY HANDS AND FOREARMS ALLOWED IN WATER." The text on the sign shall be at least 2 inches in height.
- (5) When the water in a DSTE does not meet the water quality standards set out in Item (3) of this Rule or is closed for the day, the DSTE shall be kept closed with a latched or locked cover that prevents the public from coming into contact with the DSTE water. The applicant shall post a sign on the DSTE that states: "SPA CLOSED." The text on the sign shall be at least 2 inches in height.
- (6) The applicant shall keep water quality records required under Sub-Item (3)(b) of this Rule on site during the temporary event and for six months after the completion of the temporary event. The applicant shall provide water quality records to the local health department that issued the DSTE permit and the Department upon request.
- (7) All pool chemicals stored on-site at the temporary event shall be stored in a water resistant, covered container in an area that is not used by the public.
- (8) When the applicant or applicant's designee is not available to supervise a DSTE, the DSTE shall be kept closed with a latched or locked cover that prevents the public from coming into contact with the DSTE water.
- (9) The permit for each DSTE shall be posted for the duration of the temporary event in a location that is visible to the public.
- (10) The applicant or the applicant's designee shall report any death, serious injury, or complaint of illness attributed to the applicant's DSTE in accordance with Rule .2540 of this Section.

History Note: Authority G.S. 130A-280; 130A-282;
Eff. July 1, 2022.

SECTION .2600 – THE SANITATION OF FOOD SERVICE ESTABLISHMENTS

15A NCAC 18A .2601 DEFINITIONS

15A NCAC 18A .2602 PERMITS

15A NCAC 18A .2603 PUBLIC DISPLAY OF GRADE CARD

15A NCAC 18A .2604 INSPECTIONS AND REINSPECTIONS

History Note: Authority G.S. 130A-248;
Eff. May 5, 1980;
Amended Eff. January 1, 1996; July 1, 1994; January 4, 1994; July 1, 1993; May 1, 1991; July 1, 1984;
February 1, 1990; March 1, 1988; July 1, 1986;
Temporary Amendment Eff. April 8, 1996;
Amended Eff. July 1, 2008; August 1, 2007; April 1, 2005; October 1, 2004; January 1, 2002; August 1, 1998; April 1, 1997;
Repealed Eff. September 1, 2012.

15A NCAC 18A .2605 INSPECTION FORMS

History Note: Authority G.S. 130A-248;
Eff. May 5, 1980;
Amended Eff. May 1, 1991; July 1, 1984;
Repealed Eff. August 1, 1998.

15A NCAC 18A .2606 GRADING

15A NCAC 18A .2607 STANDARDS AND APPROVAL OF PLANS

History Note: Authority G.S. 130A-248;
Eff. May 5, 1980;

Amended Eff. January 1, 1996; July 1, 1994; January 4, 1994; July 1, 1993; July 1, 1992; May 1, 1991; March 1, 1988; July 1, 1984;
Temporary Amendment Eff. April 8, 1996;
Amended Eff. July 1, 2008; August 1, 2007; January 1, 2006; April 1, 2005; October 1, 2004; August 1, 2004; January 1, 2002; August 1, 1998; April 1, 1997;
Repealed Eff. September 1, 2012.

15A NCAC 18A .2608 SOURCES OF FOOD
15A NCAC 18A .2609 REFRIGERATION: THAWING: AND PREPARATION OF FOOD
15A NCAC 18A .2610 STORAGE: HANDLING: AND DISPLAY OF FOOD
15A NCAC 18A .2611 RE-SERVING OF FOOD
15A NCAC 18A .2612 SHELLFISH

History Note: Authority G.S. 130A-248;
Eff. May 5, 1980;
Amended Eff. July 1, 1994; April 1, 1994; October 1, 1993; July 1, 1992; May 1, 1991; October 1, 1990; July 1, 1984;
Temporary Amendment Eff. February 1, 1998;
Amended Eff. August 1, 1998;
Temporary Amendment Eff. October 12, 1998;
Amended Eff. November 1, 2007; January 1, 2006; May 1, 2005; April 1, 2005; October 1, 2004; April 1, 1999;
Repealed Eff. September 1, 2012.

15A NCAC 18A .2613 BARBECUE PLACES
15A NCAC 18A .2614 OUTDOOR DINING
15A NCAC 18A .2615 MILK AND MILK PRODUCTS
15A NCAC 18A .2616 REQUIREMENTS FOR EMPLOYEES
15A NCAC 18A .2617 UTENSILS AND EQUIPMENT
15A NCAC 18A .2618 CLEANING OF EQUIPMENT AND UTENSILS
15A NCAC 18A .2619 METHODS OF BACTERICIDAL TREATMENT
15A NCAC 18A .2620 STORAGE AND HANDLING OF UTENSILS AND EQUIPMENT
15A NCAC 18A .2621 DRINKING WATER FOUNTAINS
15A NCAC 18A .2622 STORAGE: HANDLING: AND USE OF ICE
15A NCAC 18A .2623 WATER SUPPLY
15A NCAC 18A .2624 TOILET FACILITIES
15A NCAC 18A .2625 LAVATORY FACILITIES
15A NCAC 18A .2626 DISPOSAL OF WASTES AND BY-PRODUCTS
15A NCAC 18A .2627 FLOORS
15A NCAC 18A .2628 WALLS AND CEILINGS

History Note: Authority G.S. 130A-248;
Eff. May 5, 1980;
Amended Eff. January 1, 1996; July 1, 1994; January 4, 1994; July 1, 1993; July 1, 1992; April 1, 1992; July 1, 1991; May 1, 1991; December 1, 1991; July 1, 1986; October 1, 1985; July 1, 1984;
Temporary Amendment Eff. April 8, 1996;
Amended Eff. September 1, 2010; November 1, 2007; August 1, 2007; April 1, 2005; October 1, 2004; February 1, 2004; January 1, 2002; September 1, 1999; August 1, 1998; April 1, 1997;
Repealed Eff. September 1, 2012.

15A NCAC 18A .2629 DOORS AND WINDOWS

History Note: Authority G.S. 130A-248;
Eff. May 5, 1980;
Amended Eff. April 1, 1992; May 1, 1991;

Repealed Eff. October 1, 2004.

15A NCAC 18A .2630 LIGHTING
15A NCAC 18A .2631 VENTILATION
15A NCAC 18A .2632 STORAGE SPACES
15A NCAC 18A .2633 PREMISES: MISCELLANEOUS: VERMIN CONTROL
15A NCAC 18A .2634 REQUIREMENTS FOR FOOD STANDS
15A NCAC 18A .2635 REQUIREMENTS FOR TEMPORARY FOOD ESTABLISHMENTS

History Note: Authority G.S. 130A-248;
Eff. May 5, 1980;
Amended Eff. September 1, 2010; October 1, 2004; January 1, 1996; August 1, 1998; April 1, 1992; May 1, 1991; February 1, 1987; July 1, 1986; October 1, 1985; July 1, 1984;
Repealed Eff. September 1, 2012.

15A NCAC 18A .2636 REQUIREMENTS FOR TEMPORARY RESTAURANTS

History Note: Authority G.S. 130A-248;
Eff. May 5, 1980;
Repealed Eff. January 1, 1996.

15A NCAC 18A .2637 EMPLOYEES' COOK TENTS
15A NCAC 18A .2638 GENERAL REQUIREMENTS FOR PUSHCARTS AND MOBILE FOOD UNITS
15A NCAC 18A .2639 SPECIFIC REQUIREMENTS FOR PUSHCARTS
15A NCAC 18A .2640 SPECIFIC REQUIREMENTS FOR MOBILE FOOD UNITS
15A NCAC 18A .2641 PROCEDURE WHEN INFECTION SUSPECTED
15A NCAC 18A .2642 SEVERABILITY
15A NCAC 18A .2643 INFORMAL REVIEW PROCESS AND APPEALS PROCEDURE

History Note: Authority G.S. 130A-248;
Eff. May 5, 1980;
Amended Eff. November 1, 2007; August 1, 1998; January 4, 1994; September 1, 1991; May 1, 1991;
April 1, 1985; September 22, 1980;
Repealed Eff. September 1, 2012.

15A NCAC 18A .2644 REQUIREMENTS FOR CATERED ELDERLY NUTRITION SITES

History Note: Authority G.S. 130A-248;
Eff. March 1, 1989;
Amended Eff. July 1, 1993;
Repealed Eff. September 1, 2012.

15A NCAC 18A .2645 REQUIREMENTS FOR LIMITED FOOD SERVICE ESTABLISHMENTS

History Note: Authority G.S. 130A-248;
Eff. July 1, 1994;
Repealed Eff. September 1, 2012.

15A NCAC 18A .2650 GENERAL – ADOPTION BY REFERENCE

The 2017 Food Code and the accompanying 2017 Food Code Supplement, not including subsequent amendments and editions, established by the U.S. Department of Health and Human Services, Food and Drug Administration (hereinafter referred to as the "Food Code") are hereby incorporated by reference. A copy of the Food Code is available online and free of charge at: www.fda.gov/food/fda-food-code/food-code-2017.

History Note: Authority G.S. 130A-248; S.L. 2019-129;

Eff. September 1, 2012;
Readopted Eff. October 1, 2021.

15A NCAC 18A .2651 DEFINITIONS

The provisions of this Rule make amendments, additions, and deletions to the Food Code incorporated by reference in Rule .2650 of this Section. In Chapter 1, the following apply:

- (1) In Paragraph 1-201.10(B), add: "'Commissary' means a food establishment that services a mobile food unit or a pushcart."
- (2) In Paragraph 1-201.10(B), add: "'Congregate nutrition sites' means food establishments where food preparation is limited to same day service, reheating of time/temperature control for safety food, and operated under the rules of the Division of Aging and Adult Services, N.C. Department of Health and Human Services, which are found in 10A NCAC 05 and 06."
- (3) In Paragraph 1-201.10(B), add: "'Department' means the N.C. Department of Health and Human Services."
- (4) In Paragraph 1-201.10(B), amend "Equipment (1)" to read: "means an article that is used in the operation of a food establishment such as a freezer, grinder, hood, ice maker, meat block, mixer, oven, reach-in refrigerator, scale, sink, slicer, stove, table, temperature measuring device for ambient air, or warewashing machine."
- (5) In Paragraph 1-201.10(B), amend "Food establishment (2)(b)" to read: "An operation that is conducted in a mobile, stationary, temporary, or permanent facility or location and where consumption is on or off the premises."
- (6) In Paragraph 1-201.10(B), amend "Food establishment (3)" to read: "'Food establishment' does not include entities exempted as described in G.S. 130A-250."
- (7) In Paragraph 1-201.10(B), add: "'Food stand' means a food establishment that prepares or serves food and that only provides seating facilities as set forth in G.S. 130A-248(a6)."
- (8) In Paragraph 1-201.10(B), add: "'Good repair' means equipment and utensils shall be maintained in a state of repair and condition that meets the requirements specified under Parts 4-1 and 4-2 of the Food Code as amended by Rule .2654."
- (9) In Paragraph 1-201.10(B), amend "Imminent health hazard" to read: "'Imminent health hazard' means an imminent hazard as defined in G.S. 130A-2(3)."
- (10) In Paragraph 1-201.10(B), add: "'Limited food services establishment' means a food establishment as defined in G.S. 130A-247(7)."
- (11) In Paragraph 1-201.10(B), add: "'Local health director' means a local health director as defined in G.S. 130A-2(6)."
- (12) In Paragraph 1-201.10(B), amend "Meat" to read: "'Meat' means the flesh of animals used as food including the dressed flesh of cattle, swine, sheep, or goat, other edible animals, and as defined in G.S. 106-549.15(14), except fish, poultry, and wild game animals as specified under Subparagraphs 3-201.17(A)(3) and (4)."
- (13) In Paragraph 1-201.10(B), add: "'Mobile food unit' means a food establishment with no permanent utility connections, except for an onsite electrical connection, that is designed to be moved and vend food and that does not provide seating facilities for customers to use while eating or drinking."
- (14) In Paragraph 1-201.10(B), amend "Person" to read: "'Person' means person as defined in G.S. 130A-2(7)."
- (15) In Paragraph 1-201.10(B), amend "Poultry (1)" to read: "Any domesticated bird (chickens, turkeys, ducks, geese, guineas, ratites, or squabs), whether live or dead, as defined in 9 CFR 381.1 Poultry Products Inspection Regulations Definitions, Poultry, and G.S. 106-549.51(26); and"
- (16) In Paragraph 1-201.10(B), add: "'Pushcart' means a mobile piece of equipment or vehicle used to vend food."
- (17) In Paragraph 1-201.10(B), add: "'Registered Environmental Health Specialist' means a Registered Environmental Health Specialist as defined in G.S. 90A-51(2b) and 90A-51(4) and authorized agent of the Department."
- (18) In Paragraph 1-201.10(B), amend "Regulatory Authority" to read: "'Regulatory Authority' means the Department or authorized agent of the Department."
- (19) In Paragraph 1-201.10(B), add: "'Restaurant' means a food establishment that prepares or serves food and provides seating."
- (20) In Paragraph 1-201.10(B), add: "'Supplemental cooking room' means a separate attached or detached structure in that food is cooked on grills, pits, or fireplaces and no other processing occurs."

- (21) In Paragraph 1-201.10(B), amend "Temporary food establishment" to read: "(1) 'Temporary food establishment' means a food establishment as defined in G.S. 130A-247(8). (2) 'Temporary food establishment' does not include domestic yard sales and businesses such as auctions and flea markets."
- (22) In Paragraph 1-201.10(B), add: "'Temporary food establishment commissary' means a food establishment affiliated with a temporary food establishment that prepares food in advance of or off-site from the event. The temporary food establishment commissary permit shall be valid for no more than the time period described in G.S. 130A-247(8) and shall be permitted no more than 7 days prior to commencement of the event. Food establishments that operate in the same location for more than the time period described in G.S. 130A-247(8) per calendar year are not eligible for a temporary food establishment commissary permit. Food shall not be sold from the temporary food establishment commissary. The temporary food establishment commissary shall comply with all temporary food establishment requirements as set forth in the rules at 15A NCAC 18A .2600."
- (23) In Paragraph 1-201.10(B), add: "'Transitional Permit' means as defined at G.S. 130A-248(c). The transitional permit shall expire 180 days after the date of issuance."
- (24) In Paragraph 1-201.10(B), delete the definition of "Vending machine."
- (25) In Paragraph 1-201.10(B), delete the definition of "Vending machine location."

History Note: Authority G.S. 130A-248; S.L. 2019-129;
 Eff. September 1, 2012;
 Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019;
 Amended Eff. October 1, 2021.

15A NCAC 18A .2652 MANAGEMENT AND PERSONNEL

The provisions of this Rule make amendments, additions, and deletions to the Food Code incorporated by reference in Rule .2650 of this Section. In Chapter 2, the following apply:

- (1) In Paragraph 2-101.11(B), amend to read: "In a food establishment with two or more separately permitted departments that are the legal responsibility of the same permit holder and that are located on the same premises, the permit holder may designate a single person in charge who is present on the premises during all hours of operation, and who is responsible for each separately permitted food establishment on the premises."
- (2) In Paragraph 2-102.11(A), amend to read: "Complying with this code by having no violations of priority items during the current inspection; or"
- (3) In Paragraph 2-102.12(B), amend to read: "This section does not apply to congregate nutrition sites and Risk Category I food establishments as defined in 10A NCAC 46 .0213."

History Note: Authority G.S. 130A-248; S.L. 2019-129;
 Eff. September 1, 2012;
 Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019;
 Amended Eff. October 1, 2021.

15A NCAC 18A .2653 FOOD

The provisions of this Rule make amendments, additions, and deletions to the Food Code incorporated by reference in Rule .2650 of this Section. In Chapter 3, the following apply:

- (1) In Paragraph 3-201.11(A), add at the end: "Food from food establishments in states adjacent to North Carolina may be sold within North Carolina if the food establishments are under jurisdiction of the local or state enforcement body in that originating state and approved by the regulatory authority in North Carolina in accordance with G.S. 130A-248(b). To determine the extent of compliance with this Code, the regulatory authority shall obtain reports regarding compliance and compliance history from responsible authorities in other jurisdictions where the food establishments are located."
- (2) Delete Section 3-305.13.
- (3) In Section 3-306.12, delete (B).

History Note: Authority G.S. 130A-248; S.L. 2019-129;
 Eff. September 1, 2012;
 Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019;

Amended Eff. October 1, 2021.

15A NCAC 18A .2654 EQUIPMENT, UTENSILS, AND LINENS

The provisions of this Rule make amendments, additions, and deletions to the Food Code incorporated by reference in Rule .2650 of this Section. In Chapter 4, the following apply:

- (1) Delete Sections 4-204.14, 4-204.19, 4-204.111, 4-204.121, and 4-204.123.
- (2) In Section 4-205.10, amend to read: "Except for toasters, mixers, microwave ovens, water heaters, and hoods, food equipment shall be used in accordance with the manufacturer's intended use and certified or classified for sanitation by an American National Standards Institute (ANSI)-accredited certification program. If the equipment is not certified or classified for sanitation, the equipment shall comply with Parts 4-1 and 4-2 of the Food Code as amended by this Rule. Nonabsorbent wooden shelves that are in good repair may be used in dry storage areas."
- (3) In Section 4-301.14, amend to read: "Ventilation hood systems and devices shall prevent grease or condensation from collecting on equipment, walls, and ceilings."
- (4) In Section 4-502.14, amend to read: "Except as permitted under G.S. 130A-248(c3), mollusk and crustacea shells shall not be used more than once as serving containers."

*History Note: Authority G.S. 130A-248; S.L. 2019-129;
Eff. September 1, 2012;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019;
Amended Eff. October 1, 2021.*

15A NCAC 18A .2655 WATER, PLUMBING, AND WASTE

The provisions of this Rule make amendments, additions, and deletions to the Food Code incorporated by reference in Rule .2650 of this Section. In Chapter 5, the following applies:

- (1) In Paragraph 5-202.12(A), change the risk designation from "priority foundation item" to "core item."
- (2) Delete Section 5-501.14.

*History Note: Authority G.S. 130A-248; S.L. 2019-129;
Eff. September 1, 2012;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019;
Amended Eff. October 1, 2021.*

15A NCAC 18A .2656 PHYSICAL FACILITIES

The provisions of this Rule make amendments, additions, and deletions to the Food Code incorporated by reference in Rule .2650 of this Section. In Chapter 6, the following apply:

- (1) Delete Section 6-202.17.
- (2) Delete Section 6-202.18.
- (3) In Paragraph 6-501.115(B), amend to read:
"Live animals are allowed in the following situations if the owner or operator does not permit animals to physically contact food, serving dishes, utensils, tableware, linens, unwrapped single-service and single-use articles or other food service items that may result in contamination of food or food-contact surfaces and does not permit animals to physically contact employees engaged in the preparation or handling of food:
 - (1) Fish or crustacea in aquariums or display tanks;
 - (2) Patrol dogs accompanying police or security officers in offices and dining, sales, and storage areas; and sentry dogs in outside fenced areas;
 - (3) Service animals accompanying persons with disabilities in areas that are not used for food preparation;
 - (4) Dogs (*Canis lupus familiaris*) and cats (*Feliscatus*) in outdoor dining areas; provided that dogs and cats are physically restrained, and do not pass through any indoor areas of the food establishment. Except for service animals described in Subparagraph (3) of this Paragraph, nothing in this Rule prohibits a food establishment from prohibiting dogs and cats in outdoor dining areas; and
 - (5) In areas that are not used for food preparation, storage, sales, display, or dining, in which there are caged animals or animals that are similarly confined, such as in a variety store that sells pets or a tourist park that displays animals."

History Note: Authority G.S. 130A-248; S.L. 2011-394, Section 15(a);
Eff. September 1, 2012;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .2657 POISONOUS OR TOXIC MATERIALS

The provisions of this Rule make amendments, additions, and deletions to the Food Code incorporated by reference in Rule .2650 of this Section. In Chapter 7, the following apply:

- (1) In Section 7-101.11, add at the end: "Only those pesticides that have been registered with the EPA and with the N.C. Department of Agriculture and Consumer Services shall be used. If the manufacturer's label is missing from a pesticide container, the container shall be identified with the manufacturer's product brand name, percentage of each active ingredient, and EPA registration number."
- (2) In Section 7-203.11, add at the end: "Sanitizing solutions shall not be stored in or dispensed from containers previously containing other poisonous or toxic materials."

History Note: Authority G.S. 130A-248; S.L. 2011-394, Section 15(a);
Eff. September 1, 2012;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .2658 COMPLIANCE AND ENFORCEMENT

The provisions of this Rule make amendments, additions, and deletions to the Food Code incorporated by reference in Rule .2650 of this Section. In Chapter 8, the following apply:

- (1) In Section 8-103.10, add the following to the end: "Variance requests shall be submitted to a committee including a food scientist and representatives from industry and state and local public health agencies appointed by the Department."
- (2) In Section 8-201.11, add the following to the beginning: "Plans drawn to scale for franchised or chain food establishments shall be submitted for review and approval to the Environmental Health Services Branch, N.C. Division of Public Health. Plans drawn to scale for independent food establishments shall be submitted for review and approval to the local health department."
- (3) In Paragraph 8-201.12(A), amend to read: "Intended menu and plan review application;"
- (4) In Paragraph 8-302.14(G), amend to read: "A statement signed by the applicant that attests to the accuracy of the information provided in the application."
- (5) In Paragraph 8-302.14(G), delete (1) and (2).
- (6) In Section 8-303.20, delete "Permit Renewal" from the heading.
- (7) In Section 8-303.20, amend to read: "As applicable, the regulatory authority may issue a permit in accordance with 15A NCAC 18A .2659, to a new owner of an existing food establishment after an application is submitted, reviewed, and approved, and an inspection shows that the establishment is in compliance with this Code. If the establishment is not in compliance with the Code, a transitional permit may be issued in accordance with G.S. 130A-248 (b) and (c) and Rule .2659(b)."
- (8) Delete Section 8-304.10.
- (9) Delete Paragraph 8-304.11(A).
- (10) Delete Section 8-304.20.
- (11) In Section 8-401.10, delete (A) and replace with: "The regulatory authority shall inspect a food establishment in accordance with 10A NCAC 46 .0213."
- (12) In Section 8-401.10, delete (B) and (C).
- (13) Delete Section 8-401.20.
- (14) Delete Section 8-402.10.
- (15) In Subparagraph 8-402.20(A)(1), amend to read: "The permit holder shall allow access to the regulatory authority as specified under Section 8-402.11 of the Code and G.S. 130A-17 and 130A-249."
- (16) In Subparagraph 8-402.20(A)(3), amend to read: "If access is denied, an administrative warrant may be obtained according to G.S. 15-27.2."
- (17) In Section 8-402.40, amend heading to read: "Administrative Warrant to Gain Access."
- (18) In Section 8-402.40, amend to read: "If denied access to a food establishment for an authorized purpose and after complying with Section 8-402.20 of the Food Code as amended by Rule .2658, the regulatory

authority may issue, or apply for the issuance of, an administrative warrant to gain access as provided by G.S. 15-27.2."

- (19) In Section 8-403.20, delete the reference to Section 8-406.11.
- (20) Delete Section 8-406.11.
- (21) Delete Subpart 8-501.

History Note: Authority G.S. 130A-248; S.L. 2011-394, Section 15(a);
Eff. September 1, 2012;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .2659 PERMITS

(a) No permit for a food establishment shall be issued to a person until an evaluation by the regulatory authority shows that the establishment complies with this Section. However, the regulatory authority shall allow a period of 210 days after the date of issuance to comply with the certified food protection manager requirements in Sections 2-102.11 and 2-102.12 of the Food Code as amended by Rule .2652 of this Section.

(b) Upon transfer of ownership of an existing food establishment, the regulatory authority shall complete an evaluation. If the establishment satisfies all the requirements of the rules, a permit shall be issued. If the establishment does not satisfy all the requirements of the rules, a permit shall not be issued. A transitional permit shall be issued if the regulatory authority determines that the noncompliant items are construction or equipment problems that do not represent a threat to public health or no certified food protection manager is on the premises. The transitional permit shall expire 180 days after the date of issuance unless suspended or revoked before that date and shall not be renewed. Upon expiration of the transitional permit, the permit holder shall have corrected the noncompliant items and obtained a permit or the food establishment shall not continue to operate.

(c) The regulatory authority shall impose conditions on the issuance of a permit or transitional permit if necessary to ensure that a food establishment remains in compliance with this Section. Conditions may be specified for one or more of the following areas:

- (1) The number of seats or consumers served.
- (2) The categories of food served.
- (3) Time schedules in completing minor construction items.
- (4) Modification or maintenance of water supplies.
- (5) Use of facilities for more than one purpose.
- (6) Continuation of contractual arrangements upon which basis the permit was issued.
- (7) Submission and approval of plans for renovation.
- (8) Any other areas necessary for a food establishment to remain in compliance with this Section.

(d) If a permit or transitional permit has been suspended, the suspension shall be lifted if the regulatory authority has evaluated the food establishment and found that the violations causing the suspension have been corrected. If a permit or transitional permit has been revoked, a new permit shall be issued only after the regulatory authority has evaluated the food establishment and found it to comply with all applicable rules. The evaluations shall be conducted within 15 days after the request is made by the permit holder.

History Note: Authority G.S. 130A-248; S.L. 2011-394, Section 15(a);
Eff. September 1, 2012;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .2660 PUBLIC DISPLAY OF GRADE CARDS

(a) Upon initial inspection of a food establishment or if a renovation or other change in the establishment makes the grade card inconspicuous, the regulatory authority shall designate the location for posting the grade card. The grade card shall be located in a conspicuous place where it may be readily observed by the public upon entering the food establishment. If the person in charge of the food establishment objects to the location designated by the regulatory authority then the person in charge may suggest an alternative location which meets the criteria of this Rule.

(b) When an inspection of a food establishment is made, the regulatory authority shall remove the existing grade card, issue a new grade card, and post the new grade card in the same location where the grade card was previously posted as long as that location remains conspicuous. The person in charge of the food establishment shall keep the grade card posted at the designated location at all times. The grade card may be posted in another location which meets the criteria of this Rule if agreed upon by the person in charge and the regulatory authority.

(c) On a mobile food unit and pushcart, the grade card shall be located where it is visible to the public when purchasing food. The grade card shall be maintained on the mobile food unit and pushcart and may be removed during transport to operating locations and the person in charge shall repost the grade card in the original location prior to commencing operation.

History Note: Authority G.S. 130A-248; S.L. 2011-394, Section 15(a);

Eff. September 1, 2012;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .2661 INSPECTIONS AND REINSPECTIONS

(a) Upon entry into a food establishment for an inspection or reinspection, the regulatory authority shall provide identification and the purpose in visiting that establishment. The regulatory authority shall inquire as to the identity of the person in charge and invite the person in charge to accompany the regulatory authority during the inspection. If no employee is identified as the person in charge, the regulatory authority shall invite an employee to accompany the regulatory authority on the inspection. Following the inspection, the regulatory authority shall offer to review the results of the inspection with the person in charge or employee, as applicable.

(b) The grading of food establishments shall be conducted using an inspection form furnished by the regulatory authority. The form shall provide for the following information:

- (1) the name and mailing address of the food establishment;
- (2) the name of the permit holder;
- (3) the permit status and score given;
- (4) standards of construction and operation as listed in .2651 through .2677 of this Section;
- (5) an explanation for all points deducted;
- (6) the signature of the regulatory authority; and
- (7) the date.

(c) The grading of food establishments shall be based on the standards of operation and construction as set forth in Rules .2650 through .2676 of this Section.

(d) The Food Establishment Inspection form shall be used to document points assessed for violation of the rules of this Section as follows:

- (1) Violation of Chapter 2 of the Food Code as amended by Rule .2652 of this Section related to person in charge present, demonstration of knowledge, or performance of duties shall equal no more than 1 point.
- (2) Violation of Chapter 2 of the Food Code as amended by Rule .2652 of this Section related to the person in charge being a certified food protection manager by having certification from an accredited program shall equal no more than 1 point.
- (3) Violation of Chapter 2 of the Food Code as amended by Rule .2652 of this Section related to management awareness, policy present, and allergy awareness shall equal no more than 2 points.
- (4) Violation of Chapter 2 of the Food Code as amended by Rule .2652 of this Section related to proper use of reporting, restriction, and exclusion shall equal no more than 3 points.
- (5) Violation of Chapter 2 of the Food Code as amended by Rule .2652 of this Section related to procedures responding to vomiting and diarrheal events shall equal no more than 1 point.
- (6) Violation of Chapters 2 and 3 of the Food Code as amended by Rules .2652 and .2653 of this Section related to proper employee eating, tasting, drinking, or tobacco use shall equal no more than 1 point.
- (7) Violation of Chapter 2 of the Food Code as amended by Rule .2652 of this Section related to no discharge from eyes, nose, and mouth shall equal no more than 1 point.
- (8) Violation of Chapter 2 of the Food Code as amended by Rule .2652 of this Section related to hands clean and properly washed shall equal no more than 4 points.
- (9) Violation of Chapter 3 of the Food Code as amended by Rule .2653 of this Section related to no bare hand contact with ready-to-eat food or approved alternate method properly followed shall equal no more than 4 points.
- (10) Violation of Chapters 5 and 6 of the Food Code as amended by Rules .2655 and .2656 of this Section related to handwashing facilities supplied and accessible shall equal no more than 2 points.
- (11) Violation of Chapters 3 and 5 of the Food Code as amended by Rules .2653 and .2655 of this Section related to food obtained from an approved source shall equal no more than 2 points.
- (12) Violation of Chapter 3 of the Food Code as amended by Rule .2653 of this Section related to food received at proper temperature shall equal no more than 2 points.

- (13) Violation of Chapter 3 of the Food Code as amended by Rule .2653 of this Section related to food in good condition, safe, and unadulterated shall equal no more than 2 points.
- (14) Violation of Chapter 3 of the Food Code as amended by Rule .2653 of this Section related to required records available, shellstock tags, and parasite destruction shall equal no more than 2 points.
- (15) Violation of Chapter 3 of the Food Code as amended by Rule .2653 of this Section related to food separated and protected shall equal no more than 3 points.
- (16) Violation of Chapter 4 of the Food Code as amended by Rule .2654 of this Section related to food-contact surfaces cleaned and sanitized shall equal no more than 3 points.
- (17) Violation of Chapter 3 of the Food Code as amended by Rule .2653 of this Section related to disposition of returned, previously served, reconditioned, and unsafe food shall equal no more than 2 points.
- (18) Violation of Chapter 3 of the Food Code as amended by Rule .2653 of this Section related to cooking time and temperatures shall equal no more than 3 points.
- (19) Violation of Chapter 3 of the Food Code as amended by Rule .2653 of this Section related to reheating for hot holding shall equal no more than 3 points.
- (20) Violation of Chapter 3 of the Food Code as amended by Rule .2653 of this Section related to cooling time and temperatures shall equal no more than 3 points.
- (21) Violation of Chapter 3 of the Food Code as amended by Rule .2653 of this Section related to hot holding temperatures shall equal no more than 3 points.
- (22) Violation of Chapter 3 of the Food Code as amended by Rule .2653 of this Section related to cold holding temperatures shall equal no more than 3 points.
- (23) Violation of Chapter 3 of the Food Code as amended by Rule .2653 of this Section related to date marking and disposition shall equal no more than 3 points.
- (24) Violation of Chapter 3 of the Food Code as amended by Rule .2653 of this Section related to time as a public health control procedures and records shall equal no more than 3 points.
- (25) Violation of Chapter 3 of the Food Code as amended by Rule .2653 of this Section related to consumer advisory provided for raw or undercooked foods shall equal no more than 1 point.
- (26) Violation of Chapter 3 of the Food Code as amended by Rule .2653 of this Section related to pasteurized foods used and prohibited foods not offered shall equal no more than 3 points.
- (27) Violation of Chapter 3 of the Food Code as amended by Rule .2653 of this Section related to food additives approved and properly used shall equal no more than 1 point.
- (28) Violation of Chapter 7 of the Food Code as amended by Rule .2657 of this Section related to toxic substances properly identified, stored, and used shall equal no more than 2 points.
- (29) Violation of Chapters 3, 4 and 8 of the Food Code as amended by Rules .2653, .2654, and .2658 of this Section related to compliance with variance, specialized process, and HACCP plan shall equal no more than 2 points.
- (30) Violation of Chapter 3 of the Food Code as amended by Rule .2653 of this Section related to pasteurized eggs used where required shall equal no more than 1 point.
- (31) Violation of Chapters 3 and 5 of the Food Code as amended by Rules .2653 and .2655 of this Section related to water from an approved source shall equal no more than 2 points.
- (32) Violation of Chapter 8 of the Food Code as amended by Rule .2658 of this Section related to variance obtained for specialized processing methods shall equal no more than 2 points.
- (33) Violation of Chapters 3 and 4 of the Food Code as amended by Rules .2653 and .2654 of this Section related to proper cooling methods used or adequate equipment for temperature control shall equal no more than 1 point.
- (34) Violation of Chapter 3 of the Food Code as amended by Rule .2653 of this Section related to plant food properly cooked for hot holding shall equal no more than 1 point.
- (35) Violation of Chapter 3 of the Food Code as amended by Rule .2653 of this Section related to approved thawing methods used shall equal no more than 1 point.
- (36) Violation of Chapter 4 of the Food Code as amended by Rule .2654 of this Section related to thermometers provided and accurate shall equal no more than 1 point.
- (37) Violation of Chapter 3 of the Food Code as amended by Rule .2653 of this Section related to food properly labeled or original container shall equal no more than 2 points.
- (38) Violation of Chapters 2 and 6 of the Food Code as amended by Rules .2652 and .2656 of this Section related to insects and rodents not present or no unauthorized animals or persons shall equal no more than 2 points.

- (39) Violation of Chapters 3 and 6 of the Food Code as amended by Rules .2653 and .2656 of this Section related to contamination prevented during food preparation, storage, and display shall equal no more than 2 points.
- (40) Violation of Chapter 2 of the Food Code as amended by Rule .2652 of this Section related to personal cleanliness shall equal no more than 1 point.
- (41) Violation of Chapters 3 and 4 of the Food Code as amended by Rules .2653 and .2654 of this Section related to wiping cloths properly used and stored shall equal no more than 1 point.
- (42) Violation of Chapters 3 and 7 of the Food Code as amended by Rules .2653 and .2657 of this Section related to washing fruits and vegetables shall equal no more than 1 point.
- (43) Violation of Chapter 3 of the Food Code as amended by Rule .2653 of this Section related to in-use utensils properly stored shall equal no more than 1 point.
- (44) Violation of Chapter 4 of the Food Code as amended by Rule .2654 of this Section related to utensils, equipment, and linens properly stored, dried and handled shall equal no more than 1 point.
- (45) Violation of Chapter 4 of the Food Code as amended by Rule .2654 of this Section related to single-use and single-service articles properly stored and used shall equal no more than 1 point.
- (46) Violation of Chapter 3 of the Food Code as amended by Rule .2653 of this Section related to gloves used properly shall equal no more than 1 point.
- (47) Violation of Chapters 3 and 4 of the Food Code as amended by Rules .2653 and .2654 of this Section related to equipment, food and non-food contact surfaces approved, cleanable, properly designed, constructed and used shall equal no more than 1 point.
- (48) Violation of Chapter 4 of the Food Code as amended by Rule .2654 of this Section related to warewashing facilities installed, maintained, used, and test strips shall equal no more than 1 point.
- (49) Violation of Chapter 4 of the Food Code as amended by Rule .2654 of this Section related to non-food contact surfaces clean shall equal no more than 1 point.
- (50) Violation of Chapter 5 of the Food Code as amended by Rule .2655 of this Section related to hot and cold water available and adequate pressure shall equal no more than 1 point.
- (51) Violation of Chapter 5 of the Food Code as amended by Rule .2655 of this Section related to plumbing installed and proper backflow devices shall equal no more than 2 points.
- (52) Violation of Chapter 5 of the Food Code as amended by Rule .2655 of this Section related to sewage and wastewater properly disposed shall equal no more than 2 points.
- (53) Violation of Chapters 5 and 6 of the Food Code as amended by Rules .2655 and .2656 of this Section related to toilet facilities properly constructed, supplied, and cleaned shall equal no more than 1 point.
- (54) Violation of Chapters 5 and 6 of the Food Code as amended by Rules .2655 and .2656 of this Section related to garbage and refuse properly disposed and facilities maintained shall equal no more than 1 point.
- (55) Violation of Chapters 4 and 6 of the Food Code as amended by Rules .2654 and .2656 of this Section related to physical facilities installed, maintained, and clean shall equal no more than 1 point.
- (56) Violation of Chapters 4 and 6 of the Food Code as amended by Rules .2654 and .2656 of this Section related to meets ventilation and lighting requirements and designated areas used shall equal no more than 1 point.

(e) In filling out the inspection form, points may be deducted only once for a single occurrence or condition existing within or outside of the food establishment. Deductions shall be based on actual violations of the rules of this Section observed during the inspection. The regulatory authority shall take zero, one-half, or a full deduction of points depending upon the severity or the recurring nature of the core item violations. Priority items or priority foundation items may be corrected during the inspection and no more than one-half of the total point value shall be deducted when the violation meets the following criteria:

- (1) the priority item or priority foundation item violation was not documented on the previous inspection; and
- (2) correction of the item is documented on the inspection form.

(f) At the time of inspection, if a priority item or priority foundation item violation is observed and not corrected, the regulatory authority shall take one-half or a full deduction of points depending upon the severity or the recurring nature of the violation.

(g) In determining whether items or areas of a food establishment are clean for purposes of enforcing the rules set forth in this Section and grading a food establishment, the regulatory authority shall consider, among other things:

- (1) the age of the accumulated material;
- (2) the cleaning practices of the food establishment; and
- (3) the health risk posed by the circumstances.

- (h) Upon request of the permit holder or his or her representative a reinspection shall be made. In the case of a food establishment that requests an inspection for the purpose of raising the alphabetical grade, and that holds an unrevoked permit, the regulatory authority shall make an unannounced inspection within 15 calendar days from the date of the request.
- (i) In the case of food establishments that have been closed for failure to comply with the rules of this Section, a reinspection to consider the issuance or reissuance of a permit shall be scheduled by the regulatory authority.
- (j) In Section 8-304.11 of the Food Code delete (K).

*History Note: Authority G.S. 130A-248; S.L. 2019-129;
Eff. September 1, 2012;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019;
Amended Eff. October 1, 2021.*

15A NCAC 18A .2662 GRADING

- (a) The grading of food establishments is based on a system of scoring. A food establishment that earns a score of at least:
 - (1) 90 percent shall receive a grade A;
 - (2) 80 percent and less than 90 percent shall receive a grade B;
 - (3) 70 percent and less than 80 percent shall receive a grade C.

Permits shall be immediately revoked in accordance with G.S. 130A-23(d) for food establishments receiving a score of less than 70 percent.

- (b) The posted grade card shall be black on a white background. All graphics, letters, and numbers for the grade card shall be approved as meeting the standards in this Paragraph by the State. The alphabetical and numerical rating shall be 1.5 inches in height. No other public displays representing sanitation level of the establishment may be posted by the regulatory authority, except for sanitation awards issued by the local health department. Sanitation awards shall be in a different color and size from the grade card and must be labeled as an award.

*History Note: Authority G.S. 130A-248; S.L. 2011-394, Section 15(a);
Eff. September 1, 2012;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.*

15A NCAC 18A .2663 OUTDOOR DINING AND BEVERAGE FACILITIES

- (a) A food establishment may provide outdoor dining and beverage service.
- (b) Beverages may be prepared outdoors if all equipment and utensils are provided with overhead protection.
- (c) Portable cooking, food, and beverage serving facilities shall be allowed for food service provided to a club, organization, or private individual as a planned event and from which the public is excluded. All open food and utensils shall be provided with overhead protection or otherwise equipped with individual covers such as domes, chafing lids, or cookers with hinged lids.
- (d) Food and beverage equipment and supplies shall be located in enclosed areas and protected from environmental contamination when not in operation.

*History Note: Authority G.S. 130A-248; S.L. 2011-394, Section 15(a);
Eff. September 1, 2012;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.*

15A NCAC 18A .2664 SUPPLEMENTAL COOKING ROOMS

The following construction standards apply to food establishments cooking on grills, pits, or fireplaces in supplemental cooking rooms:

- (1) Grills, pits, and fireplaces shall be kept clean, maintained in good repair, and located in an enclosed room as specified in Sections 6-202.15 and 6-202.16 of the Food Code as amended by Rule .2656 of this Section and shall comply with Parts 4-1 and 4-2 of the Food Code as amended by Rule .2654 of this Section.
- (2) Walls and ceilings shall be kept clean and in good repair.
- (3) Floors shall be constructed of easily cleanable concrete or equal and graded to drain.
- (4) Water under pressure shall be provided for floor cleaning.
- (5) Ventilation systems and devices shall prevent grease or condensation from collecting on walls and ceilings.
- (6) A handwashing sink shall be provided as specified in Section 5-202.12 of the Food Code as amended by Rule .2655 of this Section.

- (7) Lighting shall comply with Sections 6-202.11 and 6-303.11 of the Food Code as amended by Rule .2656 of this Section.
- (8) All food shall be processed in an area meeting the requirements for operation and construction as set forth in Rules .2650 through .2657 of this Section.

*History Note: Authority G.S. 130A-248; S.L. 2011-394, Section 15(a);
Eff. September 1, 2012;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.*

15A NCAC 18A .2665 TEMPORARY FOOD ESTABLISHMENT AND TEMPORARY FOOD ESTABLISHMENT COMMISSARY PERMIT REQUIREMENTS

(a) A permit shall be issued by the regulatory authority to each temporary food establishment and temporary food establishment commissary that complies with Rules .2665 through .2669 of this Section. Temporary food establishments and temporary food establishment commissaries are not eligible for transitional permits. A single permit shall be issued for a temporary food establishment that does not operate consecutive days as long as the total number of days does not exceed 21. The permit shall be posted in a conspicuous place designated by the regulatory authority. The permit shall include:

- (1) Name and location of the temporary food establishment and temporary food establishment commissary;
- (2) Permit holder;
- (3) Name and location of the event;
- (4) Dates of operation; and
- (5) Any other conditions necessary to remain in compliance with this Section.

(b) No food preparation shall occur prior to a permit being issued by the regulatory authority.

(c) When affiliated with a temporary food establishment for an event where the food will be served, a temporary food establishment commissary permit for prior food preparation may be issued for advance or off-site preparation. A temporary food establishment commissary may commence operation no more than 7 days prior to the event and operate for the length of the event up to a time period not to exceed 21 consecutive days.

(d) Temporary food establishments and temporary food establishment commissaries shall make application to the regulatory authority no fewer than 15 calendar days prior to commencing operation. This 15-day requirement does not prohibit the submission of applications for substitute vendors provided that these applications are submitted no fewer than 3 business days prior to the event. Applications shall be submitted to the regulatory authority and shall include the following:

- (1) Name, mailing address, and telephone number of the permit holder of the temporary food establishment or temporary food establishment commissary;
- (2) Name and location of the event at which the temporary food establishment operated immediately prior to the current event for which applying, if applicable;
- (3) Name, mailing address, and telephone number of the event organizer;
- (4) Event name, location, dates, and hours of operation;
- (5) Proposed menu, food handling procedures, including anticipated food volume and sources;
- (6) Food equipment list;
- (7) Proposed water supply;
- (8) Provisions for sewage and other waste disposal; and
- (9) Any information necessary to ensure compliance.

(e) The regulatory authority shall require documentation to verify any provision of Rules .2665 through .2669 of this Section.

(f) The regulatory authority may condition the permit to ensure compliance with Rules .2665 through .2669 of this Section.

*History Note: Authority G.S. 130A-248; S.L. 2011-394, Section 15(a);
Eff. September 1, 2012;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.*

15A NCAC 18A .2666 TEMPORARY FOOD ESTABLISHMENT FOOD HANDLING REQUIREMENTS

(a) All sources of food in temporary food establishments shall comply with Chapter 3 of the Food Code as amended by Rule .2653 of this Section.

(b) Raw meat, poultry, and fish in temporary food establishments shall be purchased in ready-to-cook portions, except that cutting and skewering shall be allowed where evaluation by the regulatory authority determines sufficient preparation areas and food equipment are provided.

- (c) Salads containing ingredients that are cooked and cooled shall not be prepared in the temporary food establishment or temporary food establishment commissary, but may be served.
- (d) Shellstock and shucked shellfish in temporary food establishments shall comply with Chapter 3 of the Food Code as amended by Rule .2653 of this Section.
- (e) All food in temporary food establishments shall be protected in accordance with Chapter 3 of the Food Code as amended by Rule .2653 of this Section and the following also apply:
 - (1) The regulatory authority may approve food preparation and storage for a temporary food establishment at a permitted temporary food establishment commissary or other permitted food establishment;
 - (2) Temporary food establishment or temporary food establishment commissary operations shall not be conducted in any room or area used for purposes not related to the temporary food establishment or other permitted food establishment;
 - (3) Food shall be secured in a manner to prevent tampering and contamination at all times;
 - (4) Ready-to-eat food shall not be stored in direct contact with ice; non-mechanical coolers must be provided with a drainage port;
 - (5) All food shall be stored above the ground or floor and arranged to prevent contamination of foods;
 - (6) Potentially hazardous food (time/temperature control for safety food) that has been heated at the temporary food establishment or temporary food establishment commissary shall not be sold or held for use on subsequent days. Approval shall be granted to allow cooling and reheating of potentially hazardous food (time/temperature control for safety food) if the food can be handled in accordance with the rules of this Section; and
 - (7) The regulatory authority shall further limit the food to be prepared or served, based on methods of preparation and the adequacy of facilities, equipment, utensils, and available utilities.
- (f) Food prepared at a previous event or potentially hazardous food (time/temperature control for safety food) removed from original packaging shall not be served at a subsequent event in a temporary food establishment.

History Note: Authority G.S. 130A-248; S.L. 2011-394, Section 15(a);
Eff. September 1, 2012;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .2667 TEMPORARY FOOD ESTABLISHMENT EMPLOYEE REQUIREMENTS

- (a) Food employees in temporary food establishments shall wear effective hair restraints, clean outer clothing, and maintain good hygienic practices as specified in Part 2-4 of the Food Code as amended by Rule .2652 of this Section.
- (b) Employees in temporary food establishments shall wash their hands in a handwashing facility before starting work, after each visit to the toilet, and as often as necessary to remove soil and contamination.
- (c) Employees in temporary food establishments shall not use tobacco in any form or consume food in food preparation, storage or serving areas, utensil washing, or utensil storage areas.
- (d) Employees in temporary food establishments may consume beverages in the food establishment only if covered and consumed in a manner to prevent contamination of food and food-contact surfaces.
- (e) Employees in temporary food establishments shall comply with the requirements in Subpart 2-201 of the Food Code as amended by Rule .2652 of this Section.

History Note: Authority G.S. 130A-248; S.L. 2011-394, Section 15(a);
Eff. September 1, 2012;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .2668 TEMPORARY FOOD ESTABLISHMENT EQUIPMENT AND UTENSIL REQUIREMENTS

- (a) Equipment and utensils in temporary food establishments shall be kept clean and maintained in good repair. Those surfaces that come into contact with food, drink, or utensils shall comply with Parts 4-1 and 4-2 of the Food Code as amended by Rule .2654 of this Section.
- (b) Equipment and utensils in temporary food establishments shall be cleaned, sanitized, stored, and handled in accordance with Parts 4-6 and 4-7 of the Food Code as amended by Rule .2654 of this Section.
- (c) When multi-use utensils other than eating and drinking utensils are used in temporary food establishments, three basins of sufficient size to submerge, wash, rinse, and sanitize utensils shall be provided. Other equivalent products and procedures may

be used in accordance with Part 4-7 of the Food Code as amended by Rule .2654 of this Section. At least one drainboard, table, or counter space shall be provided for air-drying.

(d) When multi-use eating and drinking utensils are used in temporary food establishments, a three-compartment sink of sufficient size to submerge, wash, rinse, and sanitize utensils must be provided. Drainboards shall be provided as specified in Section 4-301.13 of the Food Code as amended by Rule .2654 of this Section.

(e) Wash, rinse, and sanitizing solutions shall be maintained in temporary food establishments as specified in Sections 4-501.18 and 4-501.19 of the Food Code as amended by Rule .2654 of this Section.

(f) A food preparation sink must be provided for washing produce in temporary food establishments.

(g) Food shields or other effective barriers in temporary food establishments shall be installed in a manner to protect food and food contact surfaces from contamination.

*History Note: Authority G.S. 130A-248; S.L. 2011-394, Section 15(a);
Eff. September 1, 2012;*

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .2669 TEMPORARY FOOD ESTABLISHMENT PHYSICAL REQUIREMENTS

(a) A temporary food establishment shall be located in an area kept in a clean and sanitary condition. The arrangement of temporary food establishments shall restrict public access to all areas of the food establishment except dining areas.

(b) For outdoor cooking, overhead protection shall be provided such that all food, utensils, and equipment are protected. When bulk foods such as roasts, shoulders, and briskets are cooked, cooking equipment with attached lids, such as smokers, roasters, and other cooking devices, provide sufficient cover for the food being cooked. Food in individual servings such as hot dogs, hamburgers, and meat kabobs shall have additional overhead cover.

(c) Effective measures such as fans, screens, walls, or a combination thereof, shall be provided to keep dust, insects, rodents, animals, and other sources of potential contamination out of the food establishment and shall comply with Paragraph 6-501.115(B) of the Food Code as amended by Rule .2656 of this Section regarding live animals.

(d) Indoor/outdoor carpeting, matting, tarps, or similar nonabsorbent material is required as ground covering in the absence of asphalt, concrete, grass, or other surfaces that control dust or mud.

(e) The temporary food establishment and temporary food establishment commissary shall be equipped with a handwashing facility used only for employee handwashing. This facility shall consist of at least a two gallon container with an unassisted free flowing faucet such as a stopcock or turn spout, soap, single-use towels, and a wastewater receptacle. Warm water shall be used for handwashing.

(f) Water under pressure shall be provided as follows:

- (1) The water supply used shall be in accordance with 15A NCAC 18A .1700, 15A NCAC 18C, or 02 NCAC 09C .0703;
- (2) All potable water holding tanks, containers, and hoses used to transport or store water at the temporary food establishment shall be drained, washed, rinsed, and sanitized;
- (3) Containers and hoses used to store, haul, or convey potable water shall be approved for potable water use, shall not be used for any other purpose, and shall be protected from contamination. Potable water hoses and containers shall be labeled; and
- (4) Warm water shall be available and used for cleaning.

(g) Wastewater shall be disposed in accordance with 15A NCAC 18A .1900 or 15A NCAC 02H .0200. Portable wastewater containers may be used when the volume of potable water can be determined by the dimensions of sinks, basins, and interim storage containers and the portable wastewater containers are sized to contain the wastewater volume generated. Wastewater containers and hoses shall be labeled and not used for any other purpose. Wastewater containers shall not be emptied into waterways, storm drains, or on the ground.

(h) Employees must have access to toilet facilities that are kept clean and in good repair.

(i) Garbage and refuse shall be collected and stored in garbage containers with properly fitted lids. Nothing in this Rule shall prohibit uncovered garbage containers in the food establishment during periods of operation. Garbage and refuse shall be removed as needed and disposed in a manner to prevent vermin breeding and harborage. The premises shall be kept clean.

(j) Lighting shall comply with Section 6-202.11 of the Food Code as amended by Rule .2656 of this Section. Lighting is required for nighttime operations.

(k) Temporary food establishments and temporary food establishment commissaries shall remain connected to necessary utilities at all times food is prepared, served, or stored in the food establishment.

(l) Toxic materials shall be labeled, used, and stored to prevent the contamination of food, equipment, utensils, linens, and single-service articles and meet the provisions of Sections 7-101.11 and 7-203.11 of the Food Code as amended by Rule .2657 of this Section.

History Note: Authority G.S. 130A-248; S.L. 2011-394, Section 15(a);
Eff. September 1, 2012;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .2670 GENERAL REQUIREMENTS FOR PUSHCARTS AND MOBILE FOOD UNITS

Notwithstanding the provisions set forth in Rules .2671 and .2672 of this Section, pushcarts and mobile food units shall comply with all requirements in this Section with the following exceptions:

- (1) A permit shall be issued by the regulatory authority that inspects the commissary from which a pushcart or mobile food unit is to operate, if the regulatory authority determines that the pushcart or mobile food unit complies with the rules of this Section. The permit shall be maintained on the pushcart or mobile food unit and made available to the regulatory authority upon request.
- (2) The regulatory authority that issues the permit shall be provided by the permit holder a list of counties and locations where each pushcart or mobile food unit will operate.
- (3) Prior to initiating food service operations in a particular county, the pushcart or mobile food unit permit holder shall provide the regulatory authority in each county in which food service operations are proposed a list of locations where they will operate. Such lists must be kept current.
- (4) Pushcarts or mobile food units shall operate in conjunction with a permitted commissary and shall report at least daily to the commissary for supplies, cleaning, and servicing. Facilities, in compliance with this Section, shall be provided at the commissary for storage of all supplies. The pushcart shall also be stored in an area that protects it from dirt, debris, vermin, and other contamination. Water faucets used to supply water for pushcarts or mobile food units shall be protected to prevent contact with chemicals, splash, and other sources of contamination. Solid waste storage and liquid waste disposal facilities must also be provided on the commissary premises.
- (5) Single service articles shall be used for serving customers.

History Note: Authority G.S. 130A-248; S.L. 2019-129;
Eff. September 1, 2012;
Readopted Eff. October 1, 2021.

15A NCAC 18A .2671 SPECIFIC REQUIREMENTS FOR PUSHCARTS

- (a) Only hot dogs shall be prepared, handled, or served from a pushcart; however, food which has been prepared, pre-portioned, and individually pre-wrapped at a food establishment or commissary may be served from a pushcart.
- (b) Food and utensils on the pushcart exposed to the public or to dust or insects shall be protected by glass, or otherwise, on the front, top, and ends, and exposed only as much as may be necessary to permit the handling and serving of food.
- (c) Toilet facilities, handwashing sinks, and running water are not required. Single-service towels are required.
- (d) All pre-wrapped potentially hazardous food (time/temperature control for safety food) shall be maintained at temperatures as required in Chapter 3 of the Food Code as amended by Rule .2653 of this Section or as labeled on the food item. Each pre-wrapped food item shall contain the name of the food establishment at which it was prepared, the name of the food item, and the time and date of expiration. The wrapper shall enclose the food at all times but sealing is not required.
- (e) Pre-portioned, individually pre-wrapped food that remains after the specified time period has elapsed shall not be sold for human consumption.
- (f) Pushcarts shall not be provided with seating facilities.
- (g) Pushcarts shall not be used for consumer self-service.

History Note: Authority G.S. 130A-248; S.L. 2011-394, Section 15(a);
Eff. September 1, 2012;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .2672 SPECIFIC REQUIREMENTS FOR MOBILE FOOD UNITS

- (a) A mobile food unit shall be constructed and arranged so that food, drink, utensils, and equipment will not be exposed to insects, dust, and other contamination. Protection against flies and other insects shall be provided by screening or by effective

use of fans. Where food or griddles are exposed to the public or to dust or insects, they shall be protected by glass, or otherwise, on the front, top, and ends, and exposed only as much as may be necessary to permit the handling and serving of food.

(b) A mobile food unit shall have a potable water system under pressure. The system shall furnish hot and cold water for all food preparation, utensil cleaning, and handwashing. The water inlet shall be located so that it will not be contaminated by waste discharge, road dust, oil, or grease and it shall be kept capped unless being filled.

(c) Water heating facilities shall be provided.

(d) A handwashing sink with hot and cold water, combination supply faucet, soap, and single-service towels shall be provided.

(e) At least a one-compartment sink shall be provided. The sink shall be of sufficient size to submerge, wash, rinse, and sanitize utensils and shall have splashback protection. Drainboards shall be provided as specified in Section 4-301.13 of the Food Code as amended by Rule .2654 of this Section to accommodate the drying of washed utensils. However, in cases where no food is prepared on the mobile food unit and all utensils are effectively cleaned at the commissary, the equipment sink is not required.

(f) Sewage disposal must be provided either by means of an approved sewage disposal system or approved sewage storage tanks. Sewage storage tanks must be maintained in a manner so as not to create a health hazard or nuisance and to prevent contamination of food or water supply. Toilets are not required on the unit. Liquid waste that results from the operation of a mobile food unit shall be disposed in an approved sewage disposal system or stored in a permanently installed sewage storage tank that is of at least 15 percent larger capacity than the water supply tank. Liquid waste shall not be discharged from the sewage storage tank when the mobile food unit is in motion. All connections on the vehicle for servicing mobile food unit waste disposal facilities shall be of a different size or type than those used for supplying potable water to the mobile food unit. The waste connection shall be located lower than the water inlet connection to preclude contamination of the potable water system.

(g) A servicing area shall be established at a commissary for the mobile food unit. Potable water servicing equipment shall be installed, stored, and handled to protect the water and equipment from contamination. The mobile food unit's sewage storage tank shall be flushed and drained during servicing operation. All sewage shall be discharged to an approved sewage disposal system in accordance with 15A NCAC 18A .1900 or 15A NCAC 02H .0200.

History Note: Authority G.S. 130A-248; S.L. 2011-394, Section 15(a);
Eff. September 1, 2012;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .2673 CONGREGATE NUTRITION SITES

Congregate nutrition sites shall comply with all requirements in Rules .2650 through .2662 of this Section with the following exceptions:

- (1) Food preparation in a congregate nutrition site shall be limited to reheating food prepared in a food establishment or in a food processing plant or preparation of food that does not require cooking.
- (2) Potentially hazardous food (time/temperature control for safety food) that has been heated or reheated at the congregate nutrition site and remains at the end of the day shall not be served or placed in refrigeration to be used another day.
- (3) Only single-service articles shall be used.
- (4) Equipment in the congregate nutrition site that is not certified or classified for sanitation by an ANSI-accredited certification program that is in good repair and operating properly may be used. At least a two-compartment sink shall be provided. The sink shall be of sufficient size to submerge, wash, rinse, and sanitize utensils. At least one drainboard, table, or counter space shall be provided for air-drying.
- (5) Garbage can liners are required for all garbage receptacles unless the site has receptacle cleaning facilities as specified in Section 5-501.18 of the Food Code as amended by Rule .2655 of this Section.
- (6) Water used for mop or receptacle cleaning shall not be disposed in the utensil sink. Wastewater from mopping, receptacle cleaning, and other cleaning operations shall be disposed in a service sink or another approved manner in accordance with 15A NCAC 18A .1900 or 15A NCAC 02H .0200.

History Note: Authority G.S. 130A-248; S.L. 2011-394, Section 15(a);
Eff. September 1, 2012;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .2674 LIMITED FOOD SERVICES ESTABLISHMENTS

Limited food services establishments shall comply with all the requirements in Rules .2650 through .2662 of this Section, except as follows:

- (1) The permit for a limited food services establishment shall be posted in accordance with G.S. 130A-249. Permits for limited food services establishments shall expire one year from the date of issuance. A new permit from the regulatory authority shall be obtained before the limited food services establishment operates each year. Transitional permits shall not be issued.
- (2) The permit application shall be submitted to the local health department at least 30 days prior to construction or commencing operation. The permit application shall include a proposal for review and approval by the local health department that includes a menu, plans, and specifications for the proposed limited food services establishment, and location, hours, and dates of operation.
- (3) Limited food services establishments shall not prepare any time/temperature control for safety food prior to the day of sale.
- (4) Time/temperature control for safety food that has been heated at the limited food services establishment and remains at the end of the day shall not be served or placed in refrigeration to be used another day.
- (5) All meats, poultry, and fish shall be purchased in a pre-portioned and ready-to-cook form.
- (6) Equipment in the limited food services establishment that is not certified or classified for sanitation by an ANSI-accredited certificate program may be used. At least a two-compartment sink shall be provided. The sink shall be of sufficient size to submerge, wash, rinse, and sanitize utensils and shall have splashback protection. At least one drainboard, table, or counter space shall be provided for air-drying.
- (7) Only single-service articles shall be used as tableware as defined in Chapter 1 of the Food Code.
- (8) Limited food services establishments may reheat pre-cooked and cook food in accordance with the overhead protection requirements set forth in Rule .2669(b) of this Section.
- (9) Floors, walls, and ceilings of limited food services establishments shall meet the requirements of this Section, except those limited food services establishments preparing food in accordance with Rule .2669(b) of this Section.
- (10) All areas in which food is handled, prepared, or in which utensils are washed, shall be provided with artificial lighting that complies with Section 6-202.11 of the Food Code as amended by Rule .2656 of this Section.
- (11) A handwashing sink shall be provided in food service areas for use by employees only.
- (12) Toilet facilities shall be provided for use by employees. Public toilet facilities provided on the grounds of the facility where the event is taking place are acceptable. Toilet facilities for the public are not required.

History Note: Authority G.S. 130A-248; S.L. 2019-129;
Eff. September 1, 2012;
Readopted Eff. October 1, 2021.

15A NCAC 18A .2675 PROCEDURE WHEN INFECTION SUSPECTED

When the regulatory authority has reason to suspect the possibility of exposure to, or transmission of, infection within a food establishment from any person or from any food or drink, the local health director shall act in accordance with the Communicable Disease Laws and Rules (G.S. 130A-134 through 148, and 10A NCAC 41A.)

History Note: Authority G.S. 130A-248; S.L. 2011-394, Section 15(a);
Eff. September 1, 2012;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .2676 INFORMAL REVIEW PROCESS AND APPEALS PROCEDURE

(a) If a permit holder disagrees with a decision of the local health department on the interpretation, application, or enforcement of the rules of this Section the permit holder may:

- (1) Request an informal review pursuant to Paragraphs (d) and (e) of this Rule; or
- (2) Initiate a contested case in accordance with G.S. 150B.

(b) The permit holder is not required to complete the alternative dispute resolution prior to initiating a contested case in accordance with G.S. 150B.

(c) When a petition for a contested case is filed, the informal review process shall terminate.

(d) If the permit holder requests an informal review, the request shall be in writing and shall be postmarked or hand-delivered to the local health department within seven days of notice of the decision giving rise to the review. The request shall state the issues in dispute. If the inspection giving rise to the informal review was conducted by the Environmental Health Supervisor in the county or area where the food establishment is located, or when the county or area has only one registered environmental health specialist assigned to inspect food establishments, the Environmental Health Regional Specialist assigned to that county or area shall conduct the local informal review. As soon as possible, but at least within 30 days of receipt of the request, the person conducting the review shall contact the permit holder, provide that permit holder an opportunity to be heard on the issues in dispute and issue a written decision addressing the issues raised in the appeal. Copies of the decision shall be mailed to the permit holder and to the State Health Director. That decision shall be binding for the purposes of future inspections of the establishment in question unless modified pursuant to Paragraph (e) of this Rule or by the State Health Director.

(e) Following receipt of the written decision of the Environmental Health Supervisor or his or her representative issued pursuant to Paragraph (d) of this Rule, the permit holder who initiated the informal review may appeal the resulting decision to an Informal Review Officer designated by the Department to be responsible for final decisions on appeals from throughout the state. Notice of such appeal shall be in writing, shall include a copy of the Environmental Health Supervisor's or his or her representative's decision, and shall be postmarked or hand-delivered to the local health department and to the Department within seven days of receipt of the written decision issued pursuant to Paragraph (a) of this Rule. Within 35 days of receipt of this appeal, the designated Informal Review Officer shall hold a conference in Wake County. At least 10 days prior to the conference, the Informal Review Officer shall provide notice of the time and place of this conference to the permit holder and the Environmental Health Supervisor for the county or area where the issue arose. Within 10 days following the date of the conference, the Informal Review Officer shall issue a written decision addressing the issues raised in the appeal and that decision shall be binding for purposes of future inspections of the establishment in question unless modified pursuant to Paragraph (g) of this Rule or by the State Health Director.

(f) If the decision on appeal at the local or state level results in a change in the score resulting from an inspection of an establishment, the regulatory authority shall post a new grade card reflecting that new score.

(g) Appeals of the decision of the designated Informal Review Officer shall be in accordance with G.S. 150B.

(h) Nothing in this Rule shall impact the right of a permit holder to a reinspection pursuant to Rule .2661 of this Section.

History Note: Authority G.S. 130A-248; S.L. 2011-394, Section 15(a);

Eff. September 1, 2012;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

SECTION .2700 - SANITATION OF MEAT MARKETS

Rules .2701 - .2720 of Title 15A Subchapter 18A of the North Carolina Administrative Code (T15A.18A .2701 - .2720); has been transferred and recodified from Rules .0501 - .0520 Title 10 Subchapter 10A of the North Carolina Administrative Code (T10.10A .0501 - .0520). Rules .2721 - .2725 of Title 15A Subchapter 18A of the North Carolina Administrative Code (T15A.18A .2721 - .2725); has been transferred and recodified from Rules .0523 - .0527 Title 10 Subchapter 10A of the North Carolina Administrative Code (T10.10A .0523 - .0527), effective April 4, 1990.

15A NCAC 18A .2701	DEFINITIONS
15A NCAC 18A .2702	PERMITS
15A NCAC 18A .2703	PUBLIC DISPLAY OF GRADE CARD
15A NCAC 18A .2704	REINSPECTIONS
15A NCAC 18A .2705	APPROVAL OF PLANS
15A NCAC 18A .2706	INSPECTION FORMS
15A NCAC 18A .2707	GRADING
15A NCAC 18A .2708	FLOORS
15A NCAC 18A .2709	WALLS AND CEILINGS
15A NCAC 18A .2710	LIGHTING
15A NCAC 18A .2711	TOILET FACILITIES
15A NCAC 18A .2712	LAVATORY FACILITIES
15A NCAC 18A .2713	STORAGE SPACES
15A NCAC 18A .2714	WATER SUPPLY
15A NCAC 18A .2715	LIQUID WASTES

15A NCAC 18A .2716	SOLID WASTES AND BY-PRODUCTS
15A NCAC 18A .2717	VERMIN CONTROL: PREMISES
15A NCAC 18A .2718	MISCELLANEOUS
15A NCAC 18A .2719	EMPLOYEES
15A NCAC 18A .2720	UTENSILS AND EQUIPMENT: CLEANING AND STORAGE

History Note: Authority G.S. 130A-248;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. November 1, 2002; April 1, 1997; May 1, 1996; July 1, 1992; May 1, 1991;
March 1, 1988; July 1, 1986; July 1, 1984; June 30, 1980; June 10, 1978;
Repealed Eff. October 1, 2004.

15A NCAC 18A .2721	UTENSILS AND EQUIPMENT: INSTALLATION
15A NCAC 18A .2722	BARBECUE MACHINES
15A NCAC 18A .2723	REFRIGERATION
15A NCAC 18A .2724	HANDLING AND STORAGE OF MEAT AND OTHER FOOD PRODUCTS
15A NCAC 18A .2725	APPEALS PROCEDURE

History Note: Authority G.S. 130A-230; 130A-248;
Eff. July 1, 1984;
Amended Eff. May 1, 1991; February 1, 1987;
Repealed Eff. October 1, 2004.

SECTION .2800 - SANITATION OF CHILD CARE CENTERS

15A NCAC 18A .2801 DEFINITIONS

The following definitions shall apply throughout this Section:

- (1) "Adequate" means to be of the size, volume, or technical specifications necessary to effectively accommodate and support the planned, current, or projected workloads for the technology or constructed space.
- (2) "Approved Disinfectant" means a chlorine solution containing 500 to 800 parts per million (ppm) of chlorine or a disinfectant as defined at 40 C.F.R. 158.2203 that is registered with the United States Environmental Protection Agency (EPA) in accordance with 40 C.F.R. 152 with use indicated in schools and child care settings and that is prepared and maintained in accordance with Rule .2812(i) of this Section.
- (3) "Chain or Franchise Child Care Center" means a child care center that operates under the same business name and prototype design concept, with common ownership or management, as nine or more other child care centers pursuant to a franchise agreement under the same franchisor as nine or more other child care centers.
- (4) "Child Care Administrator" means as defined at G.S. 110-86(2a).
- (5) "Child Care Center" means as defined at 10A NCAC 09 .0102(6).
- (6) "Child Care Operator" or "Operator" means as defined at G.S. 110-86(7).
- (7) "Clean" means that an object or surface has been made free of garbage, soil, dust, hair, dander, food, bodily fluids and secretions, and feces.
- (8) "Communicable Condition" means as defined at G.S. 130A-2(1b).
- (9) "Communicable Disease" means as defined at G.S. 130A-2(1c).
- (10) "Department" or "DHHS" means the North Carolina Department of Health and Human Services or the Department's authorized agent pursuant to G.S. 130A-4.
- (11) "Designated Emergency Medication" means a medication needed to immediately treat a life-threatening medical event that is administered in accordance with 10A NCAC 09 .0803(10) and G.S. 110-102.1A.
- (12) "Detergent Solution" means a solution comprised of water and soap.
- (13) "Disinfect" means a non-sporicidal process of using an approved disinfectant on inanimate surfaces to destroy or irreversibly inactivate fungi, viruses, and bacteria.
- (14) "Food" means any raw, cooked, or processed edible substance, ice, beverage, or ingredient used or intended for use or for sale in whole or in part for human consumption.

- (15) "Food-contact surface" means as defined in Part 1-201.10 of the Food Code incorporated by reference at 15A NCAC 18A .2650 as amended by 15A NCAC 18A .2651.
- (16) "Food Preparation" means the handling of foods or utensils in the preparation of meals, including opening and closing of baby bottles, baby food jars, and cereal boxes, as well as the opening and closing of any other food items during the assembly of ingredients.
- (17) "Food Service" means the distribution of foods for consumption, including milk placed in a pitcher or other serving container, ice that is transported, stored and dispensed, the distribution of children's bagged lunches and snacks sent from home, and the use of utensils to prevent direct food contact.
- (18) "Frying" means to cook over direct heat in hot oil or fat. This includes the oil or fat that is generated by the food or added to the cooking utensil.
- (19) "Garbage" means as defined at G.S. 130A-290(a)(7).
- (20) "Good Repair" means as defined at 15A NCAC 18A .2651(8). Items that are in good repair shall be free of substrate damage, deterioration, peeling surfaces, and broken or missing parts and shall operate in accordance with the manufacturer's or builder's instructions.
- (21) "Hand Antiseptic" means as defined in Part 2-301.16 of the Food Code incorporated by reference at 15A NCAC 18A .2650 as amended by 15A NCAC 18A .2652.
- (22) "Handwash Lavatory" means a sink that is equipped with hot and cold water under pressure and is used primarily for handwashing.
- (23) "Hazard" means as defined in Part 1-201.10 of the Food Code incorporated by reference at 15A NCAC 18A .2650 as amended by 15A NCAC 18A .2651, except that "consumer" shall be replaced with "child."
- (24) "Hermetically Sealed Container" means as defined in Part 1-201.10 of the Food Code incorporated by reference at 15A NCAC 18A .2650 as amended by 15A NCAC 18A .2651.
- (25) "Licensing Agency" means the DHHS, Division of Child Development and Early Education.
- (26) "Local Health Department" means as defined at G.S. 130A-2(5).
- (27) "Milk Products" means as defined in Section 1 of the 2017 Grade "A" Pasteurized Milk Ordinance, including subsequent amendments and editions, established by the U.S. Department of Health and Human Services, Food and Drug Administration, which is hereby incorporated by reference and available free of charge at <https://www.fda.gov/media/114169/download>.
- (28) "Multi-Service Articles" means tableware, including flatware and hollowware that are designed, fabricated, and intended by the manufacturer to be washed, rinsed, sanitized, and re-used.
- (29) "Multi-Use Articles" means bulk food containers and utensils designed, fabricated, and intended by the manufacturer to be washed, rinsed, sanitized, and re-used. The term includes food storage containers, beverage pitchers, serving spoons and bowls, tongs, and spatulas. The term does not include multi-service articles as defined in this Rule.
- (30) "Outdoor Learning Environment" means as set forth at 10A NCAC 09 .0605.
- (31) "Pest" means as defined at G.S. 143-460(26a).
- (32) "Potable Water" means water from a potable water supply as defined at 15A NCAC 18C .0102(c)(18).
- (33) "Potentially Hazardous Food" means any food or ingredient, natural or synthetic, in a form capable of supporting the growth of infectious or toxigenic microorganisms, including *Clostridium botulinum*. This term includes raw or heat-treated food of animal origin, raw seed sprouts, and heat-treated foods of plant origin. The term does not include foods which have a pH level of 4.6 or below or a water activity value of 0.85 or less.
- (34) "Sanitize" means a process of using a sanitizing solution on inanimate surfaces to destroy or irreversibly inactivate bacteria.
- (35) "Sanitizing Solution" means a solution containing 50 to 200 parts per million (ppm) of chlorine or a sanitizer as defined at 40 C.F.R. 158.2203 that is registered with the EPA in accordance with 40 C.F.R. 152 that is approved by the EPA for use on food-contact surfaces, does not require a final rinse step, and has a testing method that can be used by child care center employees to confirm that the prescribed chemical concentrations are met and that is prepared and maintained in accordance with Rule .2812(j) of this Section.
- (36) "School Age" means a school-aged child as defined at 10A NCAC 09 .0102(42).
- (37) "Single-Service Articles" means tableware, including flatware and hollowware, carry-out utensils and other items such as bags, containers, stirrers, straws, toothpicks, and wrappers that are designed, fabricated and intended by the manufacturer for one-time use.

- (38) "Single-Use Articles" means bulk food containers and utensils intended by the manufacturer to be used once and discarded. The term includes formed buckets, bread wrappers, pickle barrels, and No. 10 cans. The term does not include single-service articles as defined in this Rule.
- (39) "Tempered Water" means water that is between 80 and 110 degrees Fahrenheit.
- (40) "Utensil" means any kitchenware, tableware, glassware, cutlery, containers or other equipment that food or drink comes in contact with during storage, preparation or serving.
- (41) "Water Play Center" means water tables or containers that allow children to scoop, splash, pour, and play with water to explore their senses.
- (42) "Work Surfaces" means surfaces used for food service, stove tops, food contact utensil and dishwashing sinks, surfaces used for air drying, drain boards, surfaces used for diaper changing, counter top surfaces, and children's work tables, desks, and easels.

History Note: Authority G.S. 110-91;
Eff. July 1, 1991;
Amended Eff. March 1, 1995;
Temporary Amendment Eff. April 15, 1998;
Amended Eff. July 1, 2006; January 1, 2006; April 1, 1999;
Readopted Eff. July 1, 2023.

15A NCAC 18A .2802 APPROVAL OF CONSTRUCTION AND RENOVATION PLANS

- (a) Construction plans drawn to scale and specifications for a new child care center that is not a chain or franchise child care center shall be submitted by the operator or the operator's designee to the local health department that serves the county in which the child care center is located for review and approval prior to initiating construction. Plans drawn to scale and specifications for changes to building dimensions, kitchen specifications, or other modifications to existing child care centers, including chain or franchise child care centers, shall also be submitted to the local health department for review and approval prior to initiating construction. Construction plans drawn to scale and specifications for prototype chain or franchise child care centers shall be submitted to DHHS, Division of Public Health, Environmental Health Section by mail at 5605 Six Forks Road, 1632 Mail Service Center, Raleigh, North Carolina 27699-1632. When requested by an operator of a child care center or by the Secretary of the Department, the local health department shall visit or inspect an existing or proposed center, within 30 days of the request, to determine compliance with this Section.
- (b) The local health department or the DHHS, Division of Public Health, Environmental Health Section, as applicable, shall approve plans described in Paragraph (a) of this Rule when the plans meet the requirements of the rules of this Section that pertain to the construction or renovation of child care centers.
- (c) Construction and modifications shall comply with the plans approved pursuant to this Rule.

History Note: Authority G.S. 110-91; 110-92;
Eff. July 1, 1991;
Temporary Amendment Eff. April 15, 1998;
Amended Eff. April 1, 1999;
Temporary Amendment Eff. December 1, 1999;
Amended Eff. January 1, 2006; April 1, 2001;
Readopted Eff. July 1, 2023.

15A NCAC 18A .2803 HANDWASHING

- (a) Child care center employees shall wash their hands as follows when at work in a child care center:
 - (1) upon reporting for work at the child care center;
 - (2) before and after handling or preparing food;
 - (3) before bottle feeding a child;
 - (4) before providing food service;
 - (5) before handling clean utensils;
 - (6) after toileting or handling of body fluids, including but not limited to saliva, nasal secretions, vomitus, feces, urine, blood, secretions from sores, and pustulant discharge;
 - (7) after diaper changing;
 - (8) after handling soiled items that are not clean;
 - (9) after being outdoors;

- (10) after handling animals or animal cages; and
 - (11) after removing disposable gloves.
- (b) The use of a hand antiseptic does not replace the requirements for handwashing in Paragraph (a) of this Rule except that an employee who is supervising a child or children outdoors may use a hand antiseptic while outdoors in lieu of handwashing, provided that the employee's hands are washed in accordance with Paragraph (e) of this Rule when the employee returns indoors. Hand antiseptic shall not be used in lieu of handwashing when the employee's action that necessitates handwashing is diapering, food preparation, or food service.
- (c) Child care center employees shall ensure that children wash their hands as follows:
- (1) upon arrival at the child care center;
 - (2) after each diaper change or visit to the toilet;
 - (3) before eating meals or snacks;
 - (4) before and after water play;
 - (5) after being outdoors; and
 - (6) after handling animals or animal cages.
- (d) Except when the action that necessitates handwashing is diapering and before eating meals or snacks, hand antiseptics may be used in lieu of handwashing while a child is outdoors, provided that the child's hands are washed when the child returns indoors.
- (e) Handwashing procedures shall include the following steps:
- (1) using liquid soap and tempered water;
 - (2) rubbing hands vigorously with soap and tempered water for 15 seconds;
 - (3) washing all surfaces of the hands, to include the backs of hands, palms, wrists, under fingernails, and between fingers;
 - (4) rinsing the hands under tempered water for 10 seconds;
 - (5) drying the hands with a paper towel or other hand-drying device; and
 - (6) turning off faucet with a paper towel or other method without recontaminating hands.

History Note: Authority G.S. 110-91;
Eff. July 1, 1991;
Amended Eff. February 1, 1995;
Temporary Amendment Eff. April 15, 1998;
Amended Eff. July 1, 2006; January 1, 2006; April 1, 1999;
Readopted Eff. July 1, 2023.

15A NCAC 18A .2804 FOOD SUPPLIES

- (a) In child care centers, food shall be kept free from spoilage, filth, or other contamination and shall be safe for human consumption. Potentially hazardous foods, including foods packaged in hermetically sealed containers, shall be obtained only from sources that are permitted or inspected by a local health department, the North Carolina Department of Agriculture and Consumer Services, or other government agency. The use of food packaged in hermetically sealed containers that was not prepared in a commercial food processing establishment is prohibited. Food prepared at home and sent to a child care center to be shared with other children shall be limited to baked goods that are not potentially hazardous foods.
- (b) Milk products that are used shall be Grade "A" milk and milk products, as set forth in Section 1 of the 2017 Grade "A" Pasteurized Milk Ordinance, including subsequent amendments and editions, established by the U.S. Department of Health and Human Services, Food and Drug Administration, which is hereby incorporated by reference and available free of charge at <https://www.fda.gov/media/114169/download>, in fluid form or evaporated milk. Unless prescribed by a health care provider, dry milk and dry milk products shall be used only for cooking purposes, including cooked pudding desserts and flavored hot beverages.
- (c) Steamed and uncooked shellfish, raw eggs, and products containing raw eggs including raw cookie dough, cake batter, brownie mix, milkshakes, and ice cream shall not be consumed by children. This requirement shall not apply when a pasteurized egg product is used as a substitute for raw eggs.
- (d) All human milk, formula, and other bottled beverages, including beverages in sippy cups, that are sent from home shall be fully prepared and labeled with the date received at the child care center and the name of the child to whom the milk, formula, or beverage belongs before being brought to the child care center. All human milk, formula, and other bottled beverages shall be sent home with the child whose name is on the label or discarded at the end of each day. Formula and other beverages that require refrigeration, baby food that has been opened, and human milk shall be labeled with the name of the child to whom the beverage, baby food, or milk belongs and shall be refrigerated at 45 degrees Fahrenheit or below.

- (e) Frozen human milk may be stored frozen for three months. Any frozen human milk stored beyond seven days shall be stored in the freezer compartment of a full-size refrigerator that has a separate door to the freezer, in a chest freezer, or in an upright deep freezer. Frozen human milk shall be thawed in accordance with of Rule .2807(i)(1) or (i)(2) of this Section and prepared in the child care center's kitchen or food preparation area. In addition to the labeling required by Paragraph (d) of this Rule, frozen human milk shall be labeled with the date that it is thawed for use. Human milk that was previously frozen and has been thawed shall be refrigerated and stored for no more than 24 hours from when it was thawed. Human milk that was previously frozen and has been thawed shall not be refrozen for storage at the child care center.
- (f) Formula provided by the child care center shall be commercial ready-to-feed formula that is pre-packaged in single-use containers. Formula that does not meet these requirements and human milk may be provided to a child by child care center employees as prescribed by the child's health care provider or as instructed, in writing, by the child's parent or guardian. Bottles and other drinking utensils provided by the child care center shall be sanitized in accordance with this Section.
- (g) After opening, jars of baby food shall be covered, labeled with the date on which they were opened, refrigerated and used within two days of opening, provided that the baby food is not served directly from the jar. Baby food may be served directly from the jar to one child if unused portions of the food are discarded after each feeding; otherwise, commercially prepared baby foods shall be served from a serving dish rather than the food jar.
- (h) After the completion of each feeding, any leftover formula, human milk, or other bottled beverages used during the feeding shall be discarded or sent home with the child whose name is on the label for the formula, human milk, or bottled beverage at the end of each day. Feeding is complete when the child care center employee has stopped feeding the child and the child has been removed from the feeding area in the child care center and returned to other activities. Bottles previously used for feeding shall not be returned to communal mechanical refrigeration. Nothing in these Rules shall prohibit human milk from being sent home at the end of the day with the child whose name is on the label for the human milk instead of being discarded when the child's parent or guardian has given the child care center written permission to send the human milk home.
- (i) A water bottle that a child brings to the child care center from home and that is used only for water consumption by that child shall be exempt from the requirements of Paragraph (h) of this Rule. Instead, the water bottle shall be labeled with the name of the child to whom the water bottle belongs, individually stored in the child's cubby, and sent home with the child at the end of the day.
- (j) Child care centers that receive and provide children with prepared meals or snacks from sources outside the child care centers, other than meals or snacks sent from home, shall use meals and snacks obtained from food establishments that are permitted by a local health department, organizations that only serve prepared meals to child care centers, or another child care center inspected by a local health department. Child care centers may also receive and provide children with prepared meals from organizations not licensed as child care centers only when these organizations are providing prepared meals to licensed child care centers and are inspected in the county where the meal is prepared in accordance with G.S. 110-91(1). The inspection of these organizations shall be made by the local health department at the same time the inspection of the licensed child care center receiving these prepared meals is done. The inspection report of the organization providing these meals shall be a part of the inspection of the licensed child care center receiving the prepared meals, unless the organization is a permitted food handling establishment. Food shall be transported to the child care center that is receiving the prepared meals in a manner that meets the requirements of the Rules of this Section relating to hazards, food protection, and storage.
- (k) Lunches, snacks, and other meals that a child brings from home to the child care center shall be labeled with the date on which the food is brought to the child care center and the name of the child to whom the food belongs at the child's home and shall be returned to the child's home or discarded at the end of each day. Lunches, snacks, and other meals containing potentially hazardous foods shall be refrigerated at 45 degrees Fahrenheit or below and stored in the child care center kitchen or approved food preparation area. Hot foods that a child brings from home to the child care center in double-walled, insulated thermos containers may be stored outside of refrigeration at the child care center with the written permission of the child's parent or guardian.
- (l) Nothing in the Rules of this Section shall prohibit the use of fresh fruits and vegetables, including those grown at the child care center, so long as the fruits and vegetables meet the requirements of the rules of this Section and are washed before being served.

History Note: Authority G.S. 110-91;
Eff. July 1, 1991;
Amended Eff. February 1, 1995; January 1, 1992;
Temporary Amendment Eff. April 15, 1998;
Amended Eff. July 1, 2006; January 1, 2006; April 1, 1999;
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15A NCAC 18A .2805 FOOD PROTECTION

*History Note: Authority G.S. 110-91;
Eff. July 1, 1991;
Repealed Eff. January 1, 2006.*

15A NCAC 18A .2806 FOOD STORAGE AND PROTECTION

- (a) Once pre-packaged food has been opened, the food shall be stored in clean, resealable bags or containers made of plastic or glass that are tightly covered and manufactured for the purpose of food storage.
- (b) Food that is stored in child care center classrooms or other rooms intended for child care use, shall be limited to foods that are individually packaged unless the classroom is equipped with a food preparation area.
- (c) Notwithstanding Paragraph (b) of this Rule, bulk dry goods or food stored in freezers may be stored in rooms in child care centers that are not equipped with a food preparation area when all food preparation involving the bulk dry goods or frozen food is done in the kitchen or an approved food preparation area.
- (d) Bulk food stored in a refrigerator shall be stored at 45 degrees Fahrenheit or below and stored in the child care center's kitchen or in an approved food preparation area equipped with a full-size refrigerator. Specialty bulk milk that is sent from home for consumption by a child while at the child care center may be stored as set forth in this Paragraph when the child's parent or guardian provides written permission and the specialty bulk milk is sent to the child care center at the beginning of each week unopened, labeled with the date received by the child care center, and labeled with the name of the child to whom the bulk specialty milk belongs. Any remaining bulk specialty milk shall be sent home at the end of the week with the child to whom the bulk specialty milk belongs.
- (e) Dry goods that are stored in containers shall be labeled.
- (f) Food and containers of food shall not be stored under exposed sewer lines. Food shall not be stored in toilet or laundry rooms, except that child care centers licensed for fewer than 13 children and located in a residence may store food in laundry rooms if the food is stored and protected as required in Paragraph (g) of this Rule.
- (g) Food shall be stored above the floor and in a manner to protect it from dust, pests, drip, splash, and other contamination.
- (h) Raw meats, poultry, fish, shellfish and eggs shall be stored in a refrigerator or freezer on shelving beneath and separate from other foods. The temperature of potentially hazardous food provided by the child care center for consumption by children shall be 45 degrees Fahrenheit or below, or at 135 degrees Fahrenheit or above at all times, including field trips, catering events, and outdoor service, except during periods of preparation and service immediately prior to consumption.
- (i) Sealed, commercially pre-packaged food may be stored in undrained ice as long as the food is not fully submerged in ice or water. Wrapped sandwiches and other foods shall not be stored in direct contact with ice.
- (j) The following shall apply to refrigerated storage of food:
 - (1) Refrigeration equipment shall be provided in such number and of such capacity to ensure the maintenance of potentially hazardous food at the required temperatures during storage. Each refrigerator shall be provided with a numerically scaled indicating thermometer that is accurate to ± 3 degrees Fahrenheit and located to measure the air temperature in the warmest part of the refrigerator. Recording thermometers that are accurate to ± 3 degrees Fahrenheit may be used in lieu of indicating thermometers.
 - (2) Potentially hazardous food requiring refrigeration after preparation shall be cooled to an internal temperature of 45 degrees Fahrenheit or below. Cooling of potentially hazardous foods shall be initiated upon completion of the food preparation or hot storage. Methods such as pouring into pans, agitation, and chilling with ice or water circulation external to the food containers shall be used to cool potentially hazardous food. Potentially hazardous food that will be transported cold shall be prechilled and held at a temperature of 45 degrees Fahrenheit or below.
 - (3) Ice used for cooling stored food and food containers shall not be used for human consumption.
- (k) The following shall apply to the hot storage of food:
 - (1) Hot food storage equipment shall be provided in sufficient number and capacity to ensure the maintenance of food at the required temperature during storage. Each hot food unit shall be provided with a numerically scaled indicating thermometer that is accurate to ± 3 degrees Fahrenheit and located to measure the air temperature in the coolest part of the unit. Recording thermometers that are accurate to ± 3 degrees Fahrenheit may be used in lieu of indicating thermometers. Where it is impractical to install thermometers on equipment such as steam tables, steam kettles, heat lamps, cal-rod units, or insulated food transport carriers, a metal stem-type, thin probe, numerically scaled indicating product thermometer that is accurate to ± 3 degrees Fahrenheit shall be used to check internal food temperature.

- (2) The internal temperature of potentially hazardous foods requiring hot storage shall be 135 degrees Fahrenheit or above except during periods of preparation and service. Potentially hazardous food that will be transported hot shall be held at a temperature of 135 degrees Fahrenheit or above during transportation.
- (l) In the event of a fire, flood, water supply interruption, power outage, or other event that results in the contamination of food, or that might prevent potentially hazardous food from being held at required temperatures, the person in charge shall either discard the food in question or contact the local health department for information on food safety.

History Note: Authority G.S. 110-91;
Eff. July 1, 1991.
Amended Eff. February 1, 1995;
Temporary Amendment Eff. December 1, 1999;
Amended Eff. July 1, 2006; January 1, 2006; April 1, 2001;
Readopted Eff. July 1, 2023.

15A NCAC 18A .2807 FOOD PREPARATION

- (a) In child care centers, the preparation of food shall take place only in the kitchen or space equipped as required in Rule .2810 of this Section.
- (b) Employees engaged in food preparation in the kitchen shall wear clean clothes and hair restraints, as set out in Part 2-402.11 of the Food Code incorporated by reference at 15A NCAC 18A .2650 as amended by 15A NCAC 18A .2652, and shall keep their fingernails trimmed. Hair spray is not a hair restraint for the purpose of this Rule. Employees engaged in food preparation who are wearing nail polish or artificial nails on their fingers shall wear intact gloves during food preparation.
- (c) Food shall be prepared using utensils, deli paper, or disposable gloves to prevent exposed, ready-to-eat-food from coming into direct contact with an employee's bare hands or exposed skin. Food shall be prepared on food-contact surfaces that have been cleaned, rinsed, and sanitized prior to use. Food-contact surfaces and utensils that are exposed to bacterial, viral, fungal, or hazard contaminants during use shall be made clean, free from hazards, and sanitized before continued use.
- (d) Raw fruits and raw vegetables shall be washed with potable water before being cooked or served.
- (e) Potentially hazardous foods requiring cooking shall be cooked to heat all parts of the food to a temperature of at least 145 degrees Fahrenheit, except that:
- (1) poultry, poultry stuffings, stuffed meats and stuffings containing meat shall be cooked to heat all parts of the food to at least 165 degrees Fahrenheit with no interruption of the cooking process;
 - (2) ground beef, other ground or comminuted meat or fish, and eggs pooled and cooked for hot storage shall be cooked to an internal temperature of at least 155 degrees Fahrenheit with no interruption in the cooking process; and
 - (3) roast beef shall be cooked to an internal temperature of at least 130 degrees Fahrenheit with no interruption in the cooking process.
- (f) Potentially hazardous foods that require cooking prior to consumption and cooked in a microwave oven shall be heated to an internal temperature of at least 165 degrees Fahrenheit.
- (g) Potentially hazardous foods that have been cooked and then refrigerated, if served above 45 degrees Fahrenheit, shall be reheated to an internal temperature of 165 degrees Fahrenheit or higher before being served or before being placed in a hot food storage unit except that commercially packaged food in intact packages may initially be reheated to 135 degrees Fahrenheit. Hot storage equipment shall not be used for reheating of potentially hazardous foods. Potentially hazardous foods reheated in a microwave oven shall be heated to an internal temperature of at least 165 degrees Fahrenheit.
- (h) Metal stem-type, thin probe, numerically scaled indicating product thermometers, accurate to ± 3 degrees Fahrenheit shall be used to ensure the maintenance of the internal cooking temperatures of all potentially hazardous foods required under this Rule.
- (i) Potentially hazardous foods that are frozen shall be thawed using one of the following methods:
- (1) in refrigerated units at a temperature not to exceed 45 degrees Fahrenheit;
 - (2) submerged under potable water of a temperature of 70 degrees Fahrenheit or below, with sufficient water velocity to agitate and float off loose food particles into the overflow;
 - (3) in a microwave oven only when the food will be immediately transferred to conventional cooking equipment as part of a continuous cooking process or when the entire, uninterrupted cooking process takes place in the microwave oven; or
 - (4) as part of the uninterrupted cooking process.

History Note: Authority G.S. 110-91;

Eff. July 1, 1991;
Amended Eff. January 1, 2006; February 1, 1995; October 1, 1993;
Readopted Eff. July 1, 2023.

15A NCAC 18A .2808 FOOD SERVICE

- (a) In child care centers, milk and milk products used for drinking purposes shall be stored in the original commercially filled container until the milk or milk product is served for drinking. Unused milk and milk products that are transferred from the original commercially filled container into a separate container, such as a pitcher, for serving shall be discarded and shall not be put back into the original commercial filled container or stored in the container that was used for serving.
- (b) Ice shall be protected against physical, chemical, and biological contamination and shall be kept clean. Ice shall be dispensed with scoops, tongs, or other ice-dispensing utensils or through automatic ice-dispensing equipment. Ice-dispensing utensils shall be stored on a clean surface or in the ice with the dispensing utensil's handle extended out of the ice. Between uses, ice transfer receptacles shall be kept clean. Ice storage bins shall be drained through an air gap in accordance with in Part 5-202.13 of the Food Code incorporated by reference at 15A NCAC 18A .2650 as amended by 15A NCAC 18A .2655.
- (c) Food that is leftover after serving shall not be served again unless the original package is unopened and the food is not a potentially hazardous food. Foods that have been placed on the table for family style or self-serve food service are considered served.
- (d) Between uses during service, utensils that are used to serve food shall be stored in the food with the utensil handle extended out of the food, in a container of water if the water is maintained at a temperature of at least 135 degrees Fahrenheit, or stored clean and dry.
- (e) Children shall not be in the kitchen except when participating in a supervised activity.
- (f) Nothing in this Section shall be construed as prohibiting family style or self-serve food service at child care centers provided that children are supervised by child care center employees for the duration of the meal. Notwithstanding the foregoing sentence, family style or self-serve food service shall be prohibited during the outbreak and investigation of a communicable disease or condition at the child care center.

History Note: Authority G.S. 110-91;
Eff. July 1, 1991;
Amended Eff. January 1, 2006; April 1, 1999; February 1, 1995;
Readopted Eff. July 1, 2023.

15A NCAC 18A .2809 FOOD SERVICE EQUIPMENT AND UTENSILS

In child care centers, material, construction, and use of food service equipment and utensils shall meet the following requirements:

- (1) Utensils shall be made of nonabsorbent material that is free from hazards, finished to have a smooth surface, and shall be kept clean and in good repair.
- (2) Food-contact surfaces shall be smooth, nonabsorbent, free of sharp corners, and kept clean and in good repair. Hard wood may be used for cutting boards, cutting blocks, or bakers' tables.
- (3) Other surfaces that do not come into contact with food shall be made of nonabsorbent material and shall be kept clean and in good repair.
- (4) Galvanized metal shall not be used for utensils, food-contact surfaces, or cooking equipment that comes into contact with food.
- (5) Linens shall not be used as food-contact surfaces, except that clean linen may be used in contact with bread and rolls.
- (6) Single-use and single-service articles shall be kept clean.
- (7) Reuse of single-service articles is prohibited.
- (8) Single-use articles shall be used only once, except that containers made of plastic, glass or other material intended for food storage, with smooth sides may be reused.
- (9) Water filters or any other water conditioning devices shall be kept clean and in good repair and shall be maintained in accordance with the manufacturer's instructions.
- (10) Filters and other grease extracting equipment shall be kept clean and in good repair and shall be maintained in accordance with the manufacturer's instructions.

History Note: Authority G.S. 110-91;
Eff. July 1, 1991;

*Amended Eff. January 1, 2006; February 1, 1995;
Readopted Eff. July 1, 2023.*

15A NCAC 18A .2810 SPECIFICATIONS FOR KITCHENS, FOOD PREPARATION AREAS AND FOOD SERVICE AREAS

(a) Each child care center shall have at least a two-compartment sink, drainboards or countertop space of adequate size, adequate refrigeration equipment and, when needed, adequate cooking equipment, except that this requirement shall not apply to child care centers located in a school that receives food supplies that are pre-prepared and ready to serve from a food service establishment permitted by a local health department, which is located at the same school campus and provides food during all hours of the child care center's operation. Child care centers shall be permitted to use domestic kitchen equipment. A child care center may use and wash multi-use articles and highchair feeding trays in a two-compartment sink, but shall not use or wash multi-service articles other than highchair feeding trays unless equipped with either:

- (1) a dishwasher and two-compartment sink, or
- (2) a three-compartment sink of sufficient size and depth to submerge, wash, rinse and sanitize utensils.

(b) A separate lavatory for handwashing is required in food preparation areas and kitchens. If the dishwashing area is separate from the food preparation area, an additional handwashing lavatory shall be required in the dishwashing area.

(c) A separate food preparation sink with drainboards or countertop space of adequate size shall be required when a review of construction plans, modifications, or change in child care procedures indicates that separate facilities are needed based on volume and preparation frequency.

(d) Except in child care centers licensed for fewer than 13 children and located in a residence, when domestic refrigeration equipment is used the following shall apply:

- (1) except for thawing in a refrigerator, potentially hazardous foods shall not be prepared prior to the day that such foods are to be served;
- (2) potentially hazardous foods that have been heated shall not be reheated or placed in refrigeration to be used in whole or in part on another day; and
- (3) salads containing potentially hazardous food shall not be prepared on site. Prohibited salads include chicken, egg, tuna, crab, and other salads containing meat.

(e) A commercial hood shall be installed in accordance with G.S. 110-91 when frying is used for food preparation on-site at the child care center.

(f) If food is prepared in a child care center classroom, then the classroom shall be equipped with a food preparation area. Water from a handwash lavatory shall not be used for bottle warming or to prepare formula, mix dry cereals, or other foods. Toy cleaning and sanitizing may be conducted in the food preparation area. This food preparation area shall contain a countertop that is kept clean and in good repair, a handwash lavatory, and refrigeration when items are stored that require refrigeration in accordance with Rules .2804 and .2806 of this Section. The food preparation counters, food, and food-contact surfaces shall be out of reach of children and the following shall apply to food preparation counters, food, food-contact surfaces, and equipment used in food preparation:

- (1) all equipment shall be kept clean. Bottle warming equipment shall be cleaned and sanitized as required in Rule .2812 of this Section and the manufacturer's instructions;
- (2) if bottles are warmed, bottles shall be warmed in the child care center's kitchen or food preparation area. Bottle warming equipment shall be kept out of reach of children. Microwaves and slow cookers shall not be used to thaw or warm human milk, baby food, formula, or other bottled beverages meant for consumption by children. Bottles shall be warmed by placing bottles under running potable water or in containers of potable water or by using bottle warming equipment that is used in accordance with the manufacturer's instructions. Temperature restrictions listed in Rule .2815(e) of this Section do not apply to equipment manufactured specifically for bottle warming. If other bottle warming methods are used in food preparation areas, compliance with temperature restrictions listed in Rule .2815(e) of this Section is required; and
- (3) after each use, multi-service articles provided by the child care center shall be cleaned and sanitized in the child care center kitchen.

*History Note: Authority G.S. 110-91;
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Amended Eff. March 1, 1995;
Temporary Amendment Eff. April 15, 1998;
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15A NCAC 18A .2811 CLEANING AND SANITIZING OF EQUIPMENT AND UTENSILS

*History Note: Authority G.S. 110-91;
Eff. July 1, 1991;
Repealed Eff. January 1, 2006.*

15A NCAC 18A .2812 CLEANING, SANITIZING, AND DISINFECTING EQUIPMENT, UTENSILS, AND OTHER AREAS

(a) Each child care center shall be equipped with adequate drainboards or countertop space for handling used utensils and air drying clean and sanitized utensils. For child care centers originally licensed on or after April 15, 1998, drainboards or countertop space shall be no less than 8 square feet. A domestic dishwasher may be used to provide the equivalent of 4 square feet of drainboard space. Drainboards or countertop space designated for clean equipment and utensils shall be on the opposite end of the sink from drainboards or countertop space designated for equipment and utensils that are not clean, unless these areas are otherwise separated and protected from cross-contamination. Child care centers originally licensed before April 15, 1998 shall comply with this Paragraph upon change of ownership, the closing of the child care center and the issuance of a new license, or the remodeling of an existing kitchen in a child care center.

(b) Except for fixed equipment and utensils too large to be cleaned in sink compartments, equipment and utensils that are cleaned manually instead of in a dishwasher shall be washed, rinsed, and sanitized as follows, in the order of the steps presented herein:

- (1) equipment and utensils shall be scraped, flushed with water, or soaked with water to remove food particles;
- (2) sinks shall be cleaned and sanitized before proceeding to Subparagraph (3) of this Paragraph;
- (3) equipment and utensils shall be washed in the first compartment of the sink with a hot detergent solution that is changed once visibly soiled;
- (4) equipment and utensils shall be rinsed free of detergent solution with clean water in the second compartment of the sink; and
- (5) the food-contact surfaces of equipment and utensils shall be sanitized in the third compartment of the sink in the following manner:
 - (A) immersion for at least one minute in clean, hot water at a temperature of at least 170 degrees Fahrenheit;
 - (B) immersion for at least two minutes in a solution containing 50 to 200 parts per million (ppm) of chlorine at a temperature of at least 75 degrees Fahrenheit;
 - (C) immersion for at least two minutes in a solution containing at least 12.5 ppm of iodine and having a pH not higher than 5.0 and at a temperature of at least 75 degrees Fahrenheit;
 - (D) immersion for at least two minutes in a solution containing 200 to 400 ppm of quaternary ammonium products and having a temperature of at least 75 degrees Fahrenheit, provided that the quaternary ammonium product label indicates that it is effective in water that has a hardness value at least equal to that of the water being used; or
 - (E) other sanitizing products, procedures, or equipment that are nontoxic to children, used according to the manufacturer's instructions, are safe for use on food-contact surfaces, do not require a final rinse step, and have a testing method.

(c) When utensils and equipment are washed mechanically using a dishwasher, food-contact surfaces of equipment and utensils shall be sanitized according to the dishwasher manufacturer's instructions. When a domestic dishwashing machine with a sanitizing cycle is used according to manufacturer's instructions, additional sanitizing is not required. When commercial dishwashing equipment is used, the dishwasher shall be equipped with a temperature indicating device that is accurate to two degrees Fahrenheit.

(d) For fixed equipment and utensils and equipment that are too large to sanitize in a dishwashing machine or dishwashing sink, a spray-on or wipe-on sanitizer of sufficient chemical strength as indicated in Subparagraph (b)(5) of this Rule shall be used.

(e) Multi-service articles, including highchair feeding trays, shall be washed, rinsed and sanitized in the child care center kitchen after each use.

(f) Kitchen surfaces that are not food-contact surfaces shall be kept clean.

(g) A testing method or equipment shall be used in accordance with the product manufacturer's instructions to test the strengths of sanitizing solutions to ensure the prescribed concentrations are met.

- (h) After sanitizing, all equipment and utensils shall be air dried.
- (i) An approved disinfectant shall be provided for cleaning purposes. Throughout this Section, when an approved disinfectant is used in a child care center, the manufacturer's Safety Data Sheets for the disinfectant product shall be kept on file at the child care center and the instructions for use of the disinfectant product shall be followed. When a chlorine solution is prepared by a child care center employee for use as an approved disinfectant, then the solution shall be prepared for use within 24 hours and a testing method shall be used to ensure compliance with the prescribed chlorine concentration. To achieve the maximum germ reduction with a chlorine disinfecting solution, the surface being disinfected shall be made wet with the chlorine disinfecting solution and allowed to air dry or be dried only after the surface has been in contact with the chlorine disinfecting solution for a minimum of two minutes.
- (j) A sanitizing solution shall be provided for cleaning purposes. Throughout this Section, when a sanitizing solution is used in a child care center, the manufacturer's Safety Data Sheet shall be kept on file at the child care center and the instructions for use of the sanitizing solution shall be followed. When a chlorine solution is used in a child care center it shall be prepared for use within 24 hours and a testing method or kit shall be used to ensure compliance with the prescribed chlorine concentration. To achieve the maximum germ reduction with a chlorine solution, the cleaned surfaces shall be left wet with the chlorine solution and allowed to air dry or be dried only after a minimum contact time of at least two minutes.

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15A NCAC 18A .2813 MECHANICAL CLEANING AND SANITIZING

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Temporary Amendment Eff. April 15, 1998;
Amended Eff. April 1, 1991;
Repealed Eff. January 1, 2006.

15A NCAC 18A .2814 FOOD SERVICE EQUIPMENT AND UTENSIL STORAGE

- (a) In child care centers, food-contact surfaces, equipment, utensils, and single service articles shall be protected from contamination.
- (b) Cleaned and sanitized utensils and equipment shall be stored above the floor in a clean, dry location and shall be kept clean while stored. The food-contact surfaces of fixed equipment shall be kept clean while stored or otherwise not in use. Equipment and utensils shall not be stored under exposed sewer lines.

History Note: Authority G.S. 110-91;
Eff. July 1, 1991;
Amended Eff. January 1, 2006; February 1, 1995;
Readopted Eff. July 1, 2023.

15A NCAC 18A .2815 WATER SUPPLY

- (a) A child care center's water supply shall meet the requirements of 15A NCAC 18C or 15A NCAC 18A .1700, as applicable. The operator of a child care center using a groundwater supply that serves 25 or more people shall provide the local health department serving the county in which the child care center is located with documentation from the Department of Environmental Quality, Division of Water Resources, Public Water Supply Section that the well meets the requirements of 15A NCAC 18C. In child care centers that use a non-community water supply, a water sample shall be collected by the Department once a year and submitted to the North Carolina State Laboratory of Public Health or other laboratory certified by the North Carolina State Laboratory of Public Health under 10A NCAC 42C .0102 to perform bacteriological examinations. The Department may collect additional samples for tests of water quality, as indicated by possible additional sources of contamination.

(b) Water under pressure shall be provided to meet the child care center's needs of cooking, cleaning, drinking, toilets, and outside uses.

(c) A child care center's water supply plumbing shall not include cross-connections as set out in 15A NCAC 18C .0102(c)(8). If the potential for back siphonage or backflow conditions exist, an atmospheric vacuum breaker or backflow prevention device shall be installed.

(d) Water heating equipment shall be provided to meet the hot water requirements set forth in this Rule. The capacity and recovery rates of water heating equipment shall be based on number and size of sinks, capacity of dishwashing machines, capacity of laundering machines, diaper changing facilities, and other food service and cleaning needs for child care centers not located in a residence. Child care centers licensed for fewer than 13 children and located in a residence shall be allowed to use an existing water heater, or the equivalent replacement, if the water temperature requirements set forth in this Rule are met. Hot and cold water under pressure shall be provided in all rooms where food is prepared, rooms in which utensils or equipment are washed, and other areas where water is required for cleaning and sanitizing, including diaper changing areas.

(e) Hot water used for cleaning and sanitizing utensils and laundry shall be provided at a minimum temperature of 120 degrees Fahrenheit at the point of use. Water in areas accessible to children shall be tempered between 80 degrees Fahrenheit and 110 degrees Fahrenheit. Hot water that exceeds 120 degrees Fahrenheit is a burn hazard and shall not be provided in areas accessible to children. For handwash lavatories used exclusively by school-age children, the requirement to provide water tempered between 80 degrees Fahrenheit and 110 degrees Fahrenheit shall not apply. In the event of the loss of hot water at the child care center, the operator shall immediately notify the local health department that serves the county in which the child care center is located.

(f) Drinking fountains, if provided, shall be separate from handwash lavatories and kept clean. The water pressure of a drinking fountain shall be regulated so that an individual's mouth does not come in contact with the nozzle and so that water does not splash on the floor. Other devices used to dispense drinking water shall be kept clean.

(g) Outdoor drinking fountains shall be constructed to protect the spout from contamination by hazards and shall be kept clean.

*History Note: Authority G.S. 110-91;
Eff. July 1, 1991;
Amended Eff. February 1, 1995;
Temporary Amendment Eff. April 15, 1998;
Amended Eff. April 1, 1999;
Temporary Amendment Eff. December 1, 1999;
Amended Eff. July 1, 2006; January 1, 2006; April 1, 2001;
Readopted Eff. July 1, 2023.*

15A NCAC 18A .2816 LEAD POISONING HAZARDS IN CHILD CARE CENTERS

(a) In child care centers, areas accessible to children shall be free of identified lead poisoning hazards as defined under G.S. 130A-131.7(7).

(b) The following actions shall be taken to ensure that drinking water in child care centers is free of identified lead poisoning hazards as defined under G.S. 130A-131.7(7)(g).

- (1) Child care operators, as defined under G.S. 110-86(7), shall test, once every three years, all water outlets used for drinking or food preparation. Samples shall also be collected and tested within 30 calendar days of completion of any renovations or repairs that may impact the facility's drinking water infrastructure, such as repair or replacement of all or part of drinking water service lines or faucets, at impacted outlets. The operator shall provide documentation of testing results for review by the Department during each unannounced routine sanitation inspection under Rule .2834(b) of this Section.
- (2) For child care centers that submit an application for licensure in accordance with 10A NCAC 09 .0302 after the effective date of this Rule, initial samples shall be collected by the child care operator and tested in accordance with Subparagraph (b)(4) of this Rule during the license application process.
- (3) For all other centers, initial samples shall be collected by the child care operator and tested in accordance with Subparagraph (b)(4) of this Rule within one year of the effective date of this Rule.
- (4) The child care operator shall collect samples and submit them for testing in accordance with guidance specified by the United States Environmental Protection Agency in its publication, 3Ts for Reducing Lead in Drinking Water in Schools and Child Care Facilities, which is incorporated by reference with subsequent changes or amendments and available free of charge at <https://www.epa.gov/ground-water-and-drinking-water/3ts-reducing-lead-drinking-water>. Notwithstanding the guidance, samples may be collected with a

- stagnation period of up to 72 hours. Samples shall be analyzed by a laboratory certified by the North Carolina State Laboratory of Public Health to analyze for lead in drinking water.
- (5) When a water sample is analyzed for lead content by a laboratory under this Rule, the laboratory shall notify the Department of the test results by electronic submission in accordance with G.S. 130A-131.8.
 - (6) When a child care center receives test results from a laboratory indicating that a water sample collected by the child care operator contains a lead concentration at or above the lead poisoning hazard level defined in G.S. 130A-131.7(7)(g), the child care operator shall:
 - (A) restrict access to any water outlet(s) used for drinking or food preparation that have lead concentrations at or above the lead poisoning hazard level; and
 - (B) ensure that all children and staff have access to water free of cost that does not contain lead concentrations at or above the lead poisoning hazard level for drinking and food preparation.
 - (7) When notified of a water lead level at or above the lead poisoning hazard level, the Department shall conduct sampling at the water outlet identified to have a water lead level at or above the lead poisoning hazard level within 10 business days of notification.
 - (8) If a water sample collected by the Department reveals a water lead level at or above the lead poisoning hazard level, the child care operator shall continue to follow Subparagraph (b)(6) of this Rule until the Department determines the water outlet(s) are not producing water lead levels at or above the lead poisoning hazard level and notifies the child care operator and the Division of Child Development and Early Education in writing of this determination.
 - (9) Failure to comply with Paragraph (a) of this Rule or any Subparagraph of this Paragraph, shall be deemed a violation of this Rule subject to demerits under Rule .2834(c)(20) of this Section.
 - (10) Within five business days of receiving the test results of the Department's water analysis that shows a water lead level at or above the lead poisoning hazard level, the child care center operator shall provide written notification of the test results to the parents or legal guardians of the children attending the child care center and the staff of the child care center, in accordance with the United States Environmental Protection Agency guidance specified in Subparagraph (b)(4) of this Rule.
 - (11) Within five business days of receiving the test results of the Department's water analysis that shows a water lead level at or above the lead poisoning hazard level, the child care center operator shall make the test results available to the public, free of charge. The child care center operator may post test results to the child care center's website to satisfy the requirement to make the test results available to the public.

History Note: Authority G.S. 110-91; 130A-131.5; 130A-131.7(7); 130A-131.8;
Eff. July 1, 1991;
Amended Eff. October 1, 2019; January 1, 2006; February 1, 1995;
Readopted Eff. July 1, 2023.

15A NCAC 18A .2817 TOILETS

- (a) In child care centers, toilet tissue paper shall be provided in each toilet room and stored in a clean, dry place. The toilet room shall include or be adjacent to a handwash lavatory. Storage in toilet rooms shall be limited to toileting and diapering supplies. All toilet fixtures shall be kept clean and in good repair. Toilet fixtures shall be child-sized, adult-sized toilets that are adapted to accommodate children, or potty chairs.
- (b) Toilet fixtures shall be cleaned and disinfected daily and when visibly soiled.
- (c) If potty chairs are used, they shall be located and stored in a toilet room equipped with a spray-rinse toilet or utility sink. Potty chairs shall be emptied, rinsed, cleaned and disinfected after each use.
- (d) When cloth diapers are used and emptied, the diaper changing area shall be located next to a toilet room.

History Note: Authority G.S. 110-91;
Eff. July 1, 1991;
Amended Eff. July 1, 2006; January 1, 2006; April 1, 1999; February 1, 1995;
Readopted Eff. July 1, 2023.

15A NCAC 18A .2818 LAVATORIES

- (a) In child care centers, lavatories shall be kept clean and in good repair and shall not be used for storage. Lavatories shall be mounted at an appropriate height to accommodate children or otherwise made accessible to children. Water from a handwash

lavatory shall not be used for consumption. Lavatories with flush-rimmed sinks or with an attached operable drinking fountain shall not be used for handwashing.

(b) Lavatories shall be equipped with hot and cold water or tempered water provided through mixing faucets or pre-mixing devices which provide water in the temperature range specified in Rule .2815(e) of this Section.

(c) Lavatories shall be cleaned and disinfected with each change of use, when visibly soiled, and at least daily. Change of use occurs when a handwash lavatory is used outside of its original intent. Change of use includes, but is not limited to, a classroom handwash lavatory used for rinsing toothbrushes, a food preparation handwash lavatory used for toy cleaning, or a classroom handwash lavatory used for diaper changing handwashing.

(d) Liquid soap and disposable towels or other hand-drying devices shall be provided at every handwash lavatory area.

(e) Handwash signs shall be posted at every handwash lavatory area. The signs shall instruct children and child care center employees to wash their hands in accordance with Rule .2803 of this Section.

History Note: Authority G.S. 110-91;

Eff. July 1, 1991;

Amended Eff. July 1, 2006; January 1, 2006; February 1, 1995;

Readopted Eff. July 1, 2023.

15A NCAC 18A .2819 DIAPERING AND DIAPER CHANGING FACILITIES

(a) In child care centers, children in diapers shall be changed at stations designated for diapering or toileting. Each diaper changing station shall include a handwash lavatory. For child care centers licensed for fewer than 13 children and located in a residence, and for diaper changing areas designated for school age children, a handwash lavatory shall be in or next to the diaper changing area.

(b) Diapering surfaces shall be made of smooth, intact, nonabsorbent material and shall be kept clean and in good repair. Nothing shall be placed on the diapering surface except for those items required for diapering and the child whose diaper will be changed. If diapering is performed on the floor in a toilet room, then a smooth, intact, nonabsorbent barrier that is clean and in good repair shall be placed on the floor to minimize cross-contamination.

(c) Diapering surfaces shall be disinfected using an approved disinfectant. Approved disinfectants and detergent solution shall be kept in separate and labeled bottles at each diaper changing station. Approved disinfectants that are chlorine disinfecting solutions shall be stored in hand pump spray bottles. No cloths or sponges shall be used on diapering surfaces.

(d) Child care center employees shall change a child's diaper as follows:

- (1) gathering supplies before placing child on diapering surface;
- (2) donning disposable gloves (if needed);
- (3) using disposable towelette or moistened paper towel to clean child, wiping front to back;
- (4) disposing of gloves if used, soiled towelettes and diaper in a plastic-lined, covered receptacle;
- (5) wiping the child care center employee's hands and the child's hands each with a separate disposable towelette or moistened paper towel;
- (6) sliding a clean diaper under the child, applying diapering products if needed, using facial or toilet tissue, and discarding the tissue in a plastic-lined, covered receptacle;
- (7) fastening the diaper and placing clothing on child;
- (8) washing child's hands in accordance with Rule .2803 of this Section, or, if child is unable to support the child's head, cleaning the child's hands with a disposable towelette or moistened paper towel, then drying the child's hands and returning the child to a supervised area;
- (9) spraying entire diapering surface with detergent solution and wipe clean, using disposable paper towels;
- (10) spraying entire diapering surface with an approved disinfectant and allowing to remain on the surface for two minutes or as specified by the manufacturer, or air dry; and
- (11) washing hands in accordance with Rule .2803 of this Section even if disposable gloves are used by the child care center employee.

(e) Vinyl or latex disposable gloves shall be used by child care center employees during the diaper changing process if the employee's hands have cuts, sores, or chapped skin.

(f) Child care center employees may dispose of feces from diapers in the toilet, but shall not rinse soiled cloth diapers, training pants, or clothes. Soiled cloth diapers, training pants, or clothes shall be sent to a diaper service or placed in a sealed plastic bag or other sealed container, stored out of reach of children, and sent home with the child on the same day to be laundered.

(g) Receptacles containing soiled disposable diapers shall be emptied in a garbage area located outside the child care center building daily.

(h) Signs that instruct child care center employees on proper methods of diaper changing and handwashing as set forth in the rules of this Section shall be posted in each diaper changing area.

History Note: Authority G.S. 110-91;
Eff. July 1, 1991;
Amended Eff. February 1, 1995;
Temporary Amendment Eff. April 15, 1998;
Amended Eff. July 1, 2006; January 1, 2006; April 1, 1999;
Readopted Eff. July 1, 2023.

15A NCAC 18A .2820 STORAGE

(a) In child care centers, adequate space shall be provided for the storage of equipment, furniture, toys, clothes, linens, backpacks, book bags, diaper bags, beds, cots, mats, and supplies. Storage areas shall be kept clean. Laundry that is not clean shall be handled and stored separately from clean laundry using separate containers that are made clean in between uses and kept in good repair.

(b) Toxic substances, which include corrosive agents, pesticides, bleaches, detergents, cleansers, polishes, any product which is under pressure in an aerosol dispenser, and any substance which may be hazardous to a child if ingested, inhaled, or handled shall be kept in the original container or in another labeled container, used according to the manufacturer's instructions, and stored in a locked storage room or cabinet when not in use. Locked storage rooms and cabinets shall include those which are unlocked with a combination lock, electronic or magnetic device, keypad, key, or equivalent locking device. Keys and electronic or magnetic unlocking devices shall be kept out of the reach of a child and shall not be stored in the lock. Toxic substances shall be stored below or separate from medications and food. Any other product that is labeled "keep out of reach of children" and does not have any other warnings on the label shall be kept inaccessible to children when not in use, but is not required to be kept in locked storage. For the purpose of Paragraphs (b), (c), and (d) of this Rule, a product shall be considered inaccessible to children when stored on a shelf or in an unlocked cabinet that is mounted a minimum vertical distance of five feet above the finished floor.

(c) Non-aerosol sanitizing solutions, approved disinfectants, detergent solutions, hand antiseptics, and hand lotions shall be kept inaccessible to children when not in use, but are not required to be in locked storage. These solutions shall be labeled as sanitizing, disinfecting, or detergent solutions. Hand soap other than that which is in bulk containers is not required to be kept inaccessible to children or in locked storage. Bulk soaps shall be kept inaccessible to children.

(d) Medications including prescription and non-prescription items shall be stored in a locked cabinet or other locked container and shall not be stored above food. Designated emergency medications shall be kept inaccessible to children, but are not required to be in locked storage. Non-prescription diaper creams and sunscreen shall be kept inaccessible to children when not in use, but are not required to be in locked storage.

(e) A locked kitchen is not considered to be a locked storage room or cabinet for the purposes of this Rule; however, for child care centers that are located within a school and that use the school cafeteria's kitchen to meet the kitchen requirements of the rules of this Section, it shall not be a violation of this Rule to store products described in Paragraphs (a)-(d) of this Rule unlocked in the cafeteria's kitchen, provided that the kitchen is kept locked and children are not permitted in the kitchen for any purpose.

(f) Individual cubicles, lockers, or coat hooks shall be provided for storage of coats, hats, bags, or other items and accessories. Coat hooks not in individual cubicles or lockers, shall be spaced at least 12 horizontal inches apart. A child's coats, hats, bags, and other items or accessories belonging to a child that are stored using cubicles, lockers, or coat hooks shall not come into contact with stored items belonging to other children. Combs shall be labeled with the name of the child to whom the comb belongs and stored separately from combs or other items that belong to a different child. Toothbrushes shall be labeled with the name of the child to whom the toothbrush belongs, allowed to air dry after use, protected from contamination, and stored in a designated area. When a container of toothpaste is used for multiple children, the toothpaste shall be dispensed onto an intermediate surface such as waxed paper and shall not be dispensed directly onto each child's toothbrush.

(g) Purses and other personal effects belonging to child care center employees shall be kept inaccessible to children and shall be stored in accordance with this Rule, as applicable.

History Note: Authority G.S. 110-91;
Eff. July 1, 1991;
Amended Eff. July 1, 2006; January 1, 2006; April 1, 1999; February 1, 1995;
Readopted Eff. July 1, 2023.

15A NCAC 18A .2821 BEDS, COTS, MATS, AND LINENS

- (a) In child care centers, beds, cribs, cots, mats, and play pens shall be kept clean and in good repair, stored to prevent contamination, and cleaned and sanitized between users.
- (b) Cribs and play pens used for sleeping shall be kept clean and equipped with a firm, tight-fitting mattress made of waterproof, washable material at least two inches thick.
- (c) Beds, cots, and mats shall be assigned and labeled for use by an individual child and equipped with individual linens.
- (d) Mats shall be of a waterproof, washable material at least two inches thick and shall be stored so that the side of the mats that makes contact with the floor does not touch the side of a mat that any child sleeps on. The sleeping surface of one child's mat shall not come in contact with the sleeping surface of another child's mat during storage.
- (e) When in use, cribs, cots, mats and play pens shall be placed at least 18 inches apart or separated by partitions that prevent physical contact between children.
- (f) Linens shall be kept clean, in good repair, and stored with the mat or cot that the linens are assigned to or stored apart from the mattress or cot in a manner that keeps the linens used for each child separate from the linens belonging to other children. Linens shall be laundered between users, when soiled, and otherwise once per week. Linens used in rooms where the children in care are less than 12 months old shall be changed and laundered when soiled and otherwise at least daily. Linens shall be large enough to cover the bed, cot, or mat's sleeping surface.
- (g) Wash cloths, bibs, and burping cloths shall be laundered after each use. Each time a wash cloth, bib, or burping cloth is used, it shall be used for only one child.

History Note: Authority G.S. 110-91;
Eff. July 1, 1991;
Amended Eff. July 1, 2006; January 1, 2006; February 1, 1995;
Readopted Eff. July 1, 2023.

15A NCAC 18A .2822 TOYS, EQUIPMENT AND FURNITURE

- (a) Toys, equipment, and furniture provided by a child care center shall be kept clean and in good repair. In rooms designated for children who are not toilet trained, toys and other mouth-contact surfaces that are used by children shall be cleaned and then sanitized after each use and when visibly dirty. Toys and other mouth-contact surfaces shall be cleaned and sanitized as follows:
 - (1) the items shall be scrubbed in warm, soapy water, using a brush to reach into any crevices;
 - (2) the items shall be rinsed in clean water;
 - (3) the items shall be submerged in a sanitizing solution for at least two minutes or in accordance with the instructions on the label of the sanitizing solution; and
 - (4) the items shall be air dried.
- (b) Toys and other mouth-contact surfaces that are not designed to be submerged in liquid shall be washed and rinsed in place, sprayed with a sanitizing solution, and allowed to air dry. Hard plastic toys may be washed and rinsed in a dishwasher and cloth toys may be laundered and mechanically dried without requiring sanitizing.
- (c) Toys, furniture, cribs, or other items accessible to children shall be free of peeling, flaking, or chalking paint.
- (d) Water play centers shall be filled with potable water immediately before children begin a water play session. Water shall be emptied after each play session and at a minimum each morning and afternoon, or more often if no longer clean. The water play centers, including toys, shall be cleaned and sanitized at least daily or more often if no longer clean. Water play is prohibited during the outbreak and investigation of a communicable disease or condition at the child care center. Wading pools are not considered water play centers and are regulated under the rules in Section .2500 of this Subchapter.

History Note: Authority G.S. 110-91;
Eff. July 1, 1991;
Amended Eff. February 1, 1995; July 23, 1992;
Temporary Amendment Eff. April 15, 1998;
Amended Eff. July 1, 2006; January 1, 2006; April 1, 1999;
Readopted Eff. July 1, 2023.

15A NCAC 18A .2823 PERSONNEL

- (a) In child care centers, employees shall wear clean clothing while at work. Employees shall keep their fingernails clean.
- (b) Tobacco use in any form is prohibited in any part of a child care center.

(c) Volunteer personnel shall adhere to the same requirements as child care center employees, as specified in the rules of this Section.

History Note: Authority G.S. 110-91;
Eff. July 1, 1991;
Amended Eff. February 1, 1995;
Temporary Amendment Eff. April 15, 1998;
Amended Eff. January 1, 2006; April 1, 1999;
Readopted Eff. July 1, 2023.

15A NCAC 18A .2824 FLOORS

(a) In child care centers, floors and floor coverings in food preparation, food storage, utensil washing, toilet rooms, and laundry areas shall be constructed of nonabsorbent material and shall be kept clean and in good repair.

(b) Floors and floor coverings in sleeping and play areas shall be kept clean and in good repair.

(c) Carpeting used as a floor covering shall be of closely woven construction and shall be kept clean and in good repair. Carpeted floors shall be vacuumed daily when children are not present in the room, except to clean up spills. Instead of waiting for children to leave the room, a High Efficiency Particulate Air (HEPA) filter vacuum cleaner may be used. If used for this purpose, a HEPA vacuum cleaner shall include a HEPA filter individually tested and rated as 99.97% efficient at 0.3 micron dust particle size and sealed to prevent leakage around connecting points. Vacuum bags shall be changed and vacuums shall be emptied when children are not present in the room. The vacuum cleaner shall be in good repair. Wall to wall carpets shall be cleaned using extraction methods at least once each six months. Cleaning materials including surfactants, solvents, and water used for extraction shall be removed from the carpet before the space is reoccupied. When water extraction is used, the carpet shall be completely dry within 12 hours of cleaning.

(d) Floors in areas accessible to children, shall be kept free of peeling, flaking, chalking, or otherwise deteriorating paint.

History Note: Authority G.S. 110-91;
Eff. July 1, 1991;
Amended Eff. January 1, 2006; April 1, 1999; February 1, 1995; July 23, 1992;
Readopted Eff. July 1, 2023.

15A NCAC 18A .2825 WALLS AND CEILINGS

(a) In child care centers, the walls and ceilings, including doors and windows, of all rooms and areas shall be kept clean, free of visible fungal growth, and in good repair. All walls and ceilings shall be free of peeling, flaking, chalking, or otherwise deteriorating paint.

(b) Walls and ceilings in rooms in which food is stored, handled, or prepared, utensil-washing rooms, and toilet rooms shall be nonabsorbent. Acoustic and other absorbent ceiling material may be used where ventilation in the room precludes the possibility of grease and moisture absorption by the acoustic or other material. For child care centers licensed for fewer than 13 children and located in a residence, ceilings of residential construction are acceptable if kept clean and in good repair.

History Note: Authority G.S. 110-91;
Eff. July 1, 1991;
Amended Eff. April 1, 1999; July 23, 1992;
Temporary Amendment Eff. December 1, 1999;
Amended Eff. January 1, 2006; April 1, 2001.
Readopted Eff. July 1, 2023.

15A NCAC 18A .2826 LIGHTING AND THERMAL ENVIRONMENT

(a) In child care centers, all rooms and enclosed areas shall be lighted by natural or artificial light. Lighting shall be capable of illumination to at least 50 foot-candles at work surfaces. Lighting shall be capable of illumination to at least 10 foot-candles of light, at 30 inches above the floor, in all other areas, including storage rooms. Light fixtures in all areas shall be kept clean and in good repair. Shielded or shatterproof bulbs shall be used in food preparation, storage, and serving areas and in all rooms used by children.

(b) All rooms used by children shall be heated, cooled, and ventilated to maintain an ambient temperature between 65 degrees Fahrenheit and 85 degrees Fahrenheit. Ventilation may be in the form of openable windows with screens or by means of

mechanical ventilation to the outside of the building. Windows and window treatments shall be kept clean and in good repair. All ventilation equipment, including air supply diffusers, return grilles, and fans shall be kept clean and in good repair.

(c) Nothing in the rules of this Section shall require that outdoor storage buildings be wired with electricity or provided with heating and air conditioning.

*History Note: Authority G.S. 110-91;
Eff. July 1, 1991;
Amended Eff. January 1, 2006; February 1, 1995;
Readopted Eff. July 1, 2023.*

15A NCAC 18A .2827 COMMUNICABLE DISEASES AND CONDITIONS

(a) In child care centers, a child who becomes ill to the extent that the child can no longer participate in routine group activities shall be separated from the other children until the child leaves the child care center and in accordance with 10A NCAC 09 .0804.

(b) Each child care center shall include a designated area for a child who becomes ill to the extent that she or he can no longer participate in the routine group activities. When in use, such area shall be equipped with a bed, cot, or mat and a vomitus receptacle and shall be cleaned and disinfected after each use. Thermometers and all materials used in the designated area, including toys, shall be cleaned and sanitized after each use. Linens shall be changed after each use.

(c) If the designated area required under Paragraph (b) of this Rule is not a separate room, then it shall be separated from space used by other children by a partition or screen. The designated area shall be located so that health and sanitation measures can be carried out without interrupting activities of other children and staff.

(d) The child care center shall have written procedures that employees shall follow when responding to vomiting or diarrheal events that involve the discharge of vomitus or fecal matter onto surfaces in the center. The procedures shall address the specific actions employees must take to minimize the spread of contamination and the exposure of employees, children, food, and surfaces to vomitus or fecal matter. The written procedures shall include the following information:

- (1) Child care center employees who are part of the designated clean up response team;
- (2) A supply list for vomit and diarrhea cleanup kit items that shall be kept on-site at the child care center, including:
 - (A) disposable personal protective equipment (gloves, apron, mask, shoe covers, and hair restraint);
 - (B) two disposable plastic bags;
 - (C) paper towels;
 - (D) a scoop or scraper;
 - (E) a mop and bucket; and
 - (F) an approved disinfectant;
- (3) The location of the supplies described in Subparagraph (d)(2) of this Rule;
- (4) A procedure for preventing access to the contaminated area;
- (5) The steps used to clean and disinfect the contaminated area, which shall include the following:
 - (A) for hard surfaces, remove the vomit or diarrhea, wash the contaminated surface, and use an approved disinfectant.
 - (B) for carpet or upholstery, remove the vomit or diarrhea without use of vacuum, wash all surfaces, and steam clean or use an approved disinfectant.
- (6) The steps for after clean up, which shall including the following:
 - (A) throw away all items that came into contact with the vomit or diarrhea;
 - (B) remove all personal protective equipment (PPE);
 - (C) discard all cleaning items and PPE in a secured trash area;
 - (D) disinfect non disposable cleaning items such as scoops, scrapers, mop heads, mop handles, and buckets and discard of disposable cleaning items; and
 - (E) wash hands in accordance with the procedures in Rule .2803(e) of this Section.
- (7) Identify steps for properly storing contaminated articles of clothing and cloth diapers that came into contact with the vomit or diarrhea in accordance with the procedures in Rule .2819(f) of this Section.

(e) Employees with a communicable disease or a communicable condition shall be excluded from work or subject to restrictions to prevent transmission in accordance with the Rules in Section 10A NCAC 41A .0200. Any employee with boils, sores, burns, infected wounds, or other draining lesions on exposed skin shall bandage the affected area to avoid exposing others to drainage. If such bandaging obstructs handwashing as set out in Rule .2803 of this Section, if the exposure to drainage cannot be prevented, or if otherwise required under the rules in Section 10A NCAC 41A .0200, then the employee

shall be excluded from food preparation and work activities that involve contact with other employees or children while risk of transmission of the communicable disease or condition exists.

History Note: Authority G.S. 110-91;
Eff. July 1, 1991;
Amended Eff. February 1, 1995;
Temporary Amendment Eff. April 15, 1998;
Amended Eff. January 1, 2006; April 1, 1999;
Readopted Eff. July 1, 2023.

15A NCAC 18A .2828 HANDWASHING

History Note: Authority G.S. 110-91;
Eff. July 1, 1991;
Amended Eff. April 1, 1999; February 1, 1995;
Repealed Eff. January 1, 2006. (See Rule .2803).

15A NCAC 18A .2829 WASTEWATER

In child care centers, all wastewater originating from the child care center shall be disposed of using a publicly-operated sewage treatment system or an individual sewage disposal system that meets the requirements of the rules at Section .1900 of this Subchapter. Septic systems shall be of adequate size to accommodate the wastewater needs of the anticipated number of children and staff for all shifts.

History Note: Authority G.S. 110-91;
Eff. July 1, 1991;
Amended Eff. January 1, 2006; April 1, 1999; February 1, 1995;
Readopted Eff. July 1, 2023.

15A NCAC 18A .2830 SOLID WASTES

(a) In child care centers, food scraps and other putrescible materials shall be placed in a plastic-lined, cleanable, covered container and removed to an exterior garbage area daily. Scrap paper, cardboard boxes, and other recyclable items shall be stored in containers or designated recycling areas.

(b) Solid waste containers, mops, and other cleaning equipment shall be kept clean when not in use. Facilities shall be provided at the child care center for the washing and storage of solid waste containers and mops, except that such facilities shall not be required for child care centers licensed for fewer than 13 children and located in a residence. Washing facilities required under this Paragraph shall include a faucet with a threaded nozzle that delivers water of at least 80 degrees Fahrenheit. The faucet shall be located in either a designated utility sink or above a curbed impervious pad that is sloped to drain into a system that meets the requirements of Rule .2829 of this Section. Washing facilities used for solid waste containers that were installed at the child care center prior to July 1, 1991 shall be permitted to be used if the facilities are in good repair.

(c) Dumpsters and other containerized systems shall be kept clean and covered.

(d) Solid wastes shall be disposed of to prevent conditions that attract and harbor pests and other public health nuisances.

History Note: Authority G.S. 110-91;
Eff. July 1, 1991;
Amended Eff. February 1, 1995;
Temporary Amendment Eff. April 15, 1998;
Amended Eff. January 1, 2006; April 1, 1999;
Readopted Eff. July 1, 2023.

15A NCAC 18A .2831 ANIMAL AND VERMIN CONTROL

(a) Animals that are not contained in a cage or restrained on a leash, except those used in supervised activities or pet therapy programs, shall not be allowed in a child care center, including the outdoor learning environment. When animals are on the child care center premises, copies of each animal's vaccination records shall be available for review upon request during a sanitation inspection of the child care center. Any animals kept at the child care center as pets shall be examined by a

veterinarian to determine that they are free from pests and pathogens that could adversely affect human health. Turtles, iguanas, frogs, salamanders, and other reptiles or amphibians shall not be kept as pets on the child care center premises. Animals shall not be allowed in or kept at the entrances to food preparation areas. Animal cages shall be kept clean and animal waste materials shall be bagged, sealed, and immediately disposed of in the child care center's exterior garbage area in a covered container. Animals belonging to child care center owners, employees, volunteers, visitors, and children shall not be allowed in child care centers or on the premises unless the requirements set forth in this Paragraph are met.

(b) Pests shall be excluded from the child care center. Traps set for pests shall only be placed in areas that are inaccessible to children.

(c) All openings to the area outside of the child care center shall be protected against the entrance of flying pests. In food preparation areas, only fly traps, pyrethrin-based insecticides, or a fly swatter shall be used for extermination of flying pests. Products shall be used only in accordance with directions and cautions appearing on their labels. Insecticides shall not come in contact with raw or cooked food, utensils, or equipment used in food preparation and serving, or with any other food-contact surface.

(d) Only those pesticides which have been registered in accordance with 40 C.F.R. 152 and G.S. 143-442 shall be used to control pests at a child care center. Pesticides shall be used in accordance with the directions on the label and shall be stored in a locked storage room or cabinet separate from foods and medications. Pesticides shall not be applied or used when children are present in the area.

(e) Decks, fences, playground equipment, and other products constructed or installed after September 1, 2006 shall not be made from chromated copper arsenate (CCA) pressure-treated wood unless the use of CCA-treated wood is for an approved use listed on the CCA product label.

(f) In areas accessible to children, CCA-treated wood decks, playground and recreational equipment, and structures installed or constructed shall be sealed using an oil-based, semi-transparent sealant; oil-based clear stain; or a water-based clear stain applied at least once every two years.

(g) At the time of the initial sealant or stain application and whenever more than two years has passed since the previous sealant application, soil under CCA-treated wood shall be:

- (1) removed and replaced with similar material;
- (2) covered with at least four inches of soil, gravel, sand, sod, or other vegetation; or
- (3) otherwise made inaccessible to children.

(h) Any composting areas shall be covered and maintained to prevent attracting pests. Worm bins shall be kept covered.

(i) Grass, fruit and vegetable gardens, vines on fences, and other vegetation shall be maintained to prevent the harboring and breeding of pests.

(j) Pets kept outdoors at a child care center shall be in a designated area that is maintained and separate from the outdoor area used by the children.

*History Note: Authority G.S. 110-91;
Eff. July 1, 1991;
Temporary Amendment Eff. April 15, 1998;
Amended Eff. August 2, 2007; January 1, 2006; April 1, 1999;
Readopted Eff. July 1, 2023.*

15A NCAC 18A .2832 OUTDOOR LEARNING ENVIRONMENT AND PREMISES

(a) Child care center premises, including the outdoor learning environment, shall be kept clean, drained to minimize standing water, free of litter and hazards, and maintained in a manner which does not create conditions that attract or harbor pests. Debris, glass, dilapidated structures, and broken play equipment shall be removed from areas accessible to children. Wells, grease traps, cisterns, and utility equipment shall be made inaccessible to children.

(b) Sand toys, water tables, and other unfiltered items that can collect standing water in the outdoor learning environment shall be emptied and stored to prevent the collection of standing water.

(c) For outdoor toys and play equipment, including all structures accessible to children, the following shall apply:

- (1) Equipment and toys shall be kept clean, in good repair, and free of peeling, flaking, or chalking paint, rust, and corrosion; and
- (2) A sandbox used in outdoor play shall be constructed to allow for drainage of water and shall be covered when not in use and kept clean.

(d) Children's outdoor activities shall be restricted as set forth in this Paragraph based on a daily air quality forecast made by the North Carolina Department of Environmental Quality, Division of Air Quality for the county where a center is located and published on the Division of Air Quality's Air Quality Portal at: <https://airquality.climate.ncsu.edu/air-guide/aq-datasets/>. On

days with a code orange (unhealthy for sensitive groups) forecast, children shall not be outside participating in physical activity between noon and 8:00 p.m. for more than one hour. On days with a code red (unhealthy) forecast, children shall not be outside participating in physical activity between noon and 8:00 p.m. for more than 15 minutes. On days with a code purple (very unhealthy) forecast, children shall not be outside participating in physical activity between noon and 8:00 p.m. Provisions shall be made to allow children with diagnosed asthma or with coughing or wheezing symptoms to participate in physical activity indoors on days with a code orange, red or purple air quality forecast.

(e) When food service is provided in the outdoor learning environment, food shall be protected, stored, prepared, and served in accordance with Rules .2806, .2807 and .2808 of this Section. Employees and children shall wash their hands in accordance with Rule .2803 of this Section prior to food service in the outdoor learning environment and food service tables shall be cleaned or covered prior to use.

(f) When diapering and toileting facilities are provided in the outdoor learning environment, they shall be maintained in accordance with Rules .2817 and .2819 of this Section and employees and children shall wash their hands in accordance with Rule .2803 of this Section.

(g) Storage provided in the outdoor learning environment for children's toys shall be kept clean and in good repair. Storage areas that are accessible to children shall be kept free of equipment that is not intended by the manufacturer to be used by children and shall meet the requirements of Rule .2820 of this Section. Storage areas shall meet requirements for lighting in accordance with Rule .2826 of this Section. Spare batteries shall be kept on-site at the child care center for battery operated light fixtures used to light storage areas in accordance with this Paragraph.

(h) Outdoor water play centers shall be maintained in accordance with Rule .2822 of this Section.

(i) Central vacuums that exhaust to the outdoors and away from where children use the outdoor learning environment may be used in lieu of HEPA vacuum cleaners to meet the daily vacuuming requirements in Rule .2824(c) of this Section.

*History Note: Authority G.S. 110-91;
Eff. July 1, 1991;
Amended Eff. July 1, 2006; January 1, 2006; April 1, 1999; July 23, 1992;
Readopted Eff. July 1, 2023.*

15A NCAC 18A .2833 SWIMMING AND WADING POOLS

(a) At child care centers, swimming and wading pools shall be designed, constructed, operated, and maintained in accordance with the rules in Section .2500 of this Subchapter.

(b) Portable wading pools, natural bodies of water, and unfiltered water that is not potable shall not be utilized for children's recreation activities.

*History Note: Authority G.S. 110-91;
Eff. July 1, 1991;
Amended Eff. February 1, 1995; January 1, 1992;
Temporary Amendment Eff. April 15, 1998;
Amended Eff. January 1, 2006; April 1, 1999;
Readopted Eff. July 1, 2023.*

15A NCAC 18A .2834 COMPLIANCE, INSPECTIONS AND REPORTS

(a) Upon receipt of a request from a child care center operator or the licensing agency, a sanitation inspection shall be conducted of that child care center by the local health department that serves the county in which the child care center is located within 30 calendar days of receipt of the request.

(b) Unannounced inspections of a child care center shall be made by the Department at least once each six-month period. An original and two copies of the form used to document the inspection shall be completed by the Department. The original shall be submitted by the Department to the licensing agency and the child care center operator and the Department shall each retain a copy.

(c) The Department shall inspect each child care program that has been designated as a child care center by the licensing agency. Demerits taken during the sanitation inspection shall be assigned for violations of the rules of this Section as follows:

- (1) violation of Rules .2803(a)-(d) or .2836(15) of this Section related to handwashing when required shall be assessed five demerits;
- (2) violation of Rule .2803(e) of this Section related to proper handwashing procedures shall be assessed five demerits;

- (3) violation of Rule .2804 of this Section related to food that is not from an approved source or that is from approved sources that is a hazard or is adulterated shall be assessed six demerits;
- (4) violation of Rules .2804, .2806, or .2807 of this Section related to potentially hazardous food that does not meet temperature storage and holding requirements and requirements regarding the refrigeration of bottles and lunches at 45 degrees Fahrenheit or below shall be assessed six demerits;
- (5) violation of Rules .2804, .2806, .2807, .2808, or .2836 of this Section related to food being properly stored, thawed, prepared, cooked, cooled, handled, served, transported, packaged, and identified, and only permitting supervised children in the kitchen shall be assessed five demerits;
- (6) violation of Rule .2808(c) of this Section related to food not re-served shall be assessed three demerits;
- (7) violation of Rule .2806 or .2807 of this Section related to the use of food thermometers and food thermometer accuracy shall be assessed two demerits;
- (8) violation of Rules .2809 or .2810 of this Section related to food service equipment and utensils and specifications for refrigeration, sinks, lavatories, and dishwashing equipment shall be assessed six demerits;
- (9) violation of Rules .2806, .2809, or .2810 of this Section related to food service equipment and utensils meeting approved material, and construction specifications for equipment and utensils, other than equipment described in Subparagraph (c)(8) of this Rule, shall be assessed four demerits;
- (10) violation of Rules .2809 or .2812 of this Section related to food-contact surfaces being properly washed, rinsed, sanitized, and air dried and single-service articles not being re-used shall be assessed five demerits;
- (11) violation of Rule .2812 of this Section related to a sanitizing solution being provided and a test kit being available shall be assessed two demerits;
- (12) violation of Rule .2809, .2810, or .2812 of this Section related to keeping equipment and non-food-contact surfaces clean and in good repair shall be assessed four demerits;
- (13) violation of Rule .2814 of this Section related to proper storage and handling of clean equipment, utensils, and single-service articles shall be assessed three demerits;
- (14) violation of Rule .2815 of this Section related to water supply and drinking water facilities and documentation that water supplies and facilities satisfy the applicable regulatory requirements shall be assessed six demerits;
- (15) violation of Rule .2815 of this Section related to hot water supplied and maintained in the kitchen shall be assessed six demerits;
- (16) violation of Rule .2815 of this Section related to hot water supplied and tempered water maintained as required in all other areas shall be assessed four demerits;
- (17) violation of Rule .2815(e) of this Section related to hot water in excess of 120 degrees Fahrenheit not allowed in areas accessible to children shall be assessed six demerits;
- (18) violation of Rule .2815(c) of this Section related to backflow prevention and cross connections shall be assessed three demerits;
- (19) violation of Rules .2815(c) or .2836 of this Section related to drinking fountain construction and location, water pressure regulation, and drinking fountains being kept clean shall be assessed two demerits;
- (20) violation of Rule .2816 of this Section related to identified lead poisoning hazards shall be assessed six demerits;
- (21) violation of Rules .2817, .2818, or .2836 of this Section related to toilet and lavatory facilities being properly sized, located, accessible, and in good repair, and sinks, toilets, and potty chairs being cleaned and disinfected shall be assessed four demerits;
- (22) violation of Rules .2817 or .2818 of this Section related to the provision of soap, disposable towels, hand drying devices, and toilet tissue paper shall be assessed three demerits;
- (23) violation of Rules .2817 or .2818 of this Section related to storage in toilet rooms, lavatories being kept free of storage, and handwash signs being posted shall be assessed two demerits;
- (24) violation of Rules .2817, .2819, or .2836 of this Section related to the set-up of diaper changing facilities shall be assessed six demerits;
- (25) violation of Rule .2819 of this Section related to diapering surfaces being cleaned and disinfected after each use shall be assessed six demerits;
- (26) violation of Rule .2812 or .2819 of this Section related to an approved disinfectant being provided and a test kit being available when required shall be assessed two demerits;
- (27) violation of Rules .2818, .2819, or .2820 of this Section related to diaper changing facilities being kept free of storage and in good repair, detergent solutions and approved disinfectants being labeled, required

diapering methods being used, and diaper changing and handwash signs being posted shall be assessed four demerits;

- (28) violation of Rule .2820(d) and (g) of this Section related to medications being properly stored shall be assessed six demerits;
- (29) violation of Rule .2820(b) and (e) of this Section related to hazardous products being properly stored and locked shall be assessed six demerits;
- (30) violation of Rule .2820(c) of this Section related to non-hazardous products being properly stored shall be assessed three demerits;
- (31) violation of Rule .2820 of this Section related to facilities being provided for proper storage, and storage being kept clean shall be assessed two demerits;
- (32) violation of Rules .2821 or .2836 of this Section related to individual linen being provided and adequate beds, cots, or mats being provided, kept in good repair, properly stored, labeled, and spaced during use shall be assessed three demerits;
- (33) violation of Rule .2821 of this Section related to linen, wash cloths, bibs, and burping cloths being laundered and kept in good repair shall be assessed three demerits;
- (34) violation of Rules .2822 or .2836 of this Section related to toys, equipment, and furniture being kept clean and in good repair and the cleaning, sanitization, and maintenance of water play centers shall be assessed four demerits;
- (35) violation of Rules .2822 or .2836 of this Section related to mouth-contact surfaces in rooms designated for children who are not toilet trained being cleaned and sanitized in rooms where children who are not toilet trained are cared for shall be assessed four demerits;
- (36) violation of Rules .2807 or .2823 of this Section related child care center employees wearing gloves, clean clothes, and hair restraints where required, and tobacco use shall be assessed two demerits;
- (37) violation of Rules .2824, .2825, or .2836 of this Section related to floors, walls and ceilings being kept clean and in good repair and the vacuuming and extraction cleaning of carpets shall be assessed four demerits;
- (38) violation of Rule .2826 of this Section related to the lighting and thermal environment and room temperature being kept between 65 degrees Fahrenheit and 85 degrees Fahrenheit shall be assessed three demerits;
- (39) violation of Rule .2826 of this Section related to lighting and thermal equipment being kept clean and in good repair and being maintained as required shall be assessed two demerits;
- (40) violation of Rule .2827(e) of this Section related to persons with a communicable disease or a condition shall be assessed six demerits;
- (41) violation of Rules .2827 or .2836 of this Section related to persons caring for mildly sick children or ill children being excluded from situations in which transmission of communicable disease can be expected to occur and proper written procedures being followed for vomiting or diarrheal events shall be assessed four demerits;
- (42) violation of Rule .2827 of this Section related to the designated area for sick children maintained as required and written procedures for responding to vomiting or diarrheal events shall be assessed two demerits;
- (43) violation of Rule .2829 of this Section related to sewage disposal shall be assessed six demerits;
- (44) violation of Rules .2830 or .2836 of this Section related to solid waste being properly handled, solid waste containers and cleaning equipment kept clean, and the provision of adequate solid waste can washing facilities shall be assessed two demerits;
- (45) violation of Rule .2831 of this Section related to pesticides being properly used and new installation of CCA pressure-treated wood shall be assessed six demerits;
- (46) violation of Rule .2831 of this Section related to CCA pressure-treated wood being sealed and soil being covered or made inaccessible as required shall be assessed two demerits;
- (47) violation of Rule .2831 of this Section related to animals in food preparation areas and restrictions on unrestrained or prohibited animals shall be assessed three demerits;
- (48) violation of Rules .2831 or .2832 of this Section related to pest control and the child care center premises being free of conditions that harbor or attract pests shall be assessed three demerits;
- (49) violation of Rule .2832 of this Section related to outdoor premises being kept clean and free of standing water and wells, grease traps, cisterns, and other utility equipment being kept inaccessible to children, outdoor equipment and toys being kept clean and in good repair, sandboxes being properly constructed and

kept clean, and adherence to air quality forecast outdoor activity restrictions shall be assessed two demerits; and

- (50) violation of Rule .2833 of this Section related to swimming and wading pools being designed, constructed, operated, and maintained in accordance with the rules at Section .2500 of this Subchapter shall be assessed six demerits.

(d) The Department shall indicate on the sanitation inspection form whether the child care center is classified as "superior," "approved," "provisional," or "disapproved" based on the sanitation inspection and the resulting score based on demerits taken in accordance with Paragraph (e) of this Rule. A sanitation classification placard that lists the child care center's score and classification shall be posted in the child care center in a location designated by the Department and where the placard can be seen by the public upon entry to the child care center. A summary classification of "disapproved" shall be issued by the Department and forwarded to the licensing agency when the Department's right-of-entry to inspect the child care center is denied or when an inspection is discontinued at the request of the operator or child care center administrator, unless the decision to discontinue the inspection is mutually made by the child care center operator or administrator and the Department. A summary classification of "disapproved" shall also be issued by the Department and forwarded to the licensing agency when a water sample that is collected pursuant to Rule .2815 of this Section is confirmed positive for fecal coliform, total coliform, or other chemical constituents in accordance with Rule .1725 of this Subchapter.

(e) A child care center's level of compliance with the Rules of this Section is indicated by the number of demerits listed on the sanitation inspection form and the following shall apply for a child care center's classification:

- (1) When an inspection is requested and conducted for the purpose of issuing a license to a new operator, a completed sanitation inspection shall be forwarded by the Department to the licensing agency only when the child care center is granted a "superior" classification.
- (2) If the child care center is not yet in operation and children are not in attendance when the initial sanitation inspection is conducted, a sanitation inspection form shall be completed by the Department and forwarded to the licensing agency but the placard listing the child care center's sanitation classification shall not be posted in the child care center. Another sanitation inspection shall be conducted by the Department when children are in attendance at the child care center and within 30 days of the child care center opening. The placard listing the sanitation classification earned by the child care center during the most recent inspection shall be posted following this second sanitation inspection and in accordance with Paragraph (d) of this Rule. When a temporary license is issued by the licensing agency to a child care center as a result of a change of ownership in a child care center and the child care center continues to operate, the operator shall request an inspection from the Department within 14 days of the issuance of the temporary license. After the sanitation inspection is completed, a placard listing the child care center's sanitation classification shall be posted.
- (3) A child care center shall be classified as "superior" if the demerit score does not exceed 15 and no 6-point demerit item is violated.
- (4) A child care center shall be classified as "approved" if the demerit score is more than 15 and does not exceed 30, and no 6-point demerit item is violated.
- (5) A child care center shall be classified as "provisional" if any 6-point demerit item is violated or if the total demerit score is more than 30 but does not exceed 45. The provisional classification period shall not exceed seven days unless construction or renovation is necessary to correct any violation, in which case the Department may specify a longer provisional classification period. At the end of the provisional classification period, a follow-up inspection shall be conducted by the Department and a new demerit score and classification shall be issued.
- (6) A child care center shall be classified as "disapproved" if the demerit score is more than 45, or if conditions and violations which resulted in a "provisional" classification have not been corrected in the time period specified by the Department in accordance with Subparagraph (e)(5) of this Rule.
- (7) If the child care center receives a "disapproved" classification, the Department shall immediately notify the licensing agency of the classification.
- (8) The placard listing the child care center's sanitation classification shall not be removed from the location designated by the Department under Paragraph (d) of this Rule except by or upon the instruction of the Department.

(f) The Department may conduct an additional inspection of any child care center that is issued a "provisional," "disapproved," or summary "disapproved" classification or upon receipt of a complaint about the sanitation of a child care facility that is made to the Department to ensure compliance with the Rules in this Section.

(g) The Department shall document demerits for violations of the rules of this Section on an inspection form and a written explanation and corrective action for each violation shall be documented on a comment addendum to the form. The inspection form shall contain the following minimum elements:

- (1) The date and purpose of the inspection;
- (2) The child care center's name, address, license number, operating status, and maximum capacity;
- (3) The name of the operator of the child care center;
- (4) Documentation of violations observed during the inspection, demerits, and classification;
- (5) Documentation of the type of water supply and wastewater system serving the child care center and whether water samples were taken during the inspection; and
- (6) The name of the inspector's employer, if completed by an authorized agent, and the inspector's signature.

(h) Demerits may be assessed only once for a single occurrence or condition existing within or outside the child care center. Demerits shall be assessed based on actual violations of the Rules of this Section observed during the inspection.

History Note: Authority G.S. 110-88; 110-91;
Eff. July 1, 1991;
Amended Eff. February 1, 1995;
Temporary Amendment Eff. April 15, 1998;
Amended Eff. July 1, 2006; January 1, 2006; April 1, 1999;
Readopted Eff. July 1, 2023.

15A NCAC 18A .2835 APPEALS PROCEDURE

Appeals concerning the enforcement of the Child Care Sanitation Rules in this Section as adopted by the Commission for Public Health shall be governed by G.S. 110-94 and G.S. 150B.

History Note: Authority G.S. 110-91;
Eff. July 1, 1991;
Amended Eff. January 1, 2006;
Readopted Eff. July 1, 2023.

15A NCAC 18A .2836 MILDLY SICK CHILDREN

Child care centers that are licensed by the licensing agency to offer care to mildly sick children pursuant to 10A NCAC 09 .2404 shall comply with all rules in this Section except as follows:

- (1) Prior to operating a program for mildly sick children, the child care center operator shall undergo a sanitation inspection of the child care center by the Department.
- (2) Drinking fountains shall not be used by mildly sick children.
- (3) Toilet fixtures, potty chairs, utility sinks, tubs, and showers shall be cleaned and disinfected after each use.
- (4) Lavatories shall be of a hands-free design or equipped with single-lever faucets.
- (5) Cloth diapers shall not be used.
- (6) Individually labeled moist towelette containers shall be provided for each child in diapers.
- (7) Caregivers shall wear clean disposable gloves when changing each diaper.
- (8) Moist towelettes shall not be used in lieu of handwashing for children who cannot support their heads.
- (9) A 36-inch separation shall be maintained or partitions shall be placed between beds, cots and mats to minimize contact among children.
- (10) Furniture shall be nonabsorbent.
- (11) Thermometers and mouthable toys shall be cleaned and sanitized between uses by different children. Soft, cloth material toys may be brought from home if labeled with the name of the child to whom the toy belongs and used only by that child. If soft toys are provided by the child care center, they shall be sanitized between uses by different children.
- (12) Employees caring for mildly sick children shall not prepare food in a kitchen used to prepare food for one or more children who are not mildly sick or serve food to children who are not mildly sick.
- (13) Family style and other self-serve food service is prohibited.
- (14) Carpeted floors are prohibited. Throw rugs may be used if laundered when contaminated and at least weekly. Floors contaminated by body fluids shall be cleaned and disinfected immediately.
- (15) Caregivers shall wash hands in accordance with the procedures in Rule .2803(c) before leaving the area designated for mildly sick children.

- (16) All waste shall be disposed of in a plastic-lined, covered receptacle.

*History Note: Authority G.S. 110-91;
Eff. January 1, 2006;
Readopted Eff. July 1, 2023.*

SECTION .2900 - RESTAURANT AND LODGING FEE COLLECTION AND INVENTORY PROGRAM

15A NCAC 18A .2901 DISBURSEMENT OF FUNDS

(a) For the purposes of this Rule, the following definitions shall apply:

- (1) "Department" means the North Carolina Department of Health and Human Services.
- (2) "Disaster" means when a declaration has been made by the President of the United States under 44 C.F.R. Part 206, Subpart B, which is hereby incorporated by reference, including any subsequent editions or amendments, or by the Governor of North Carolina under G.S. 166A-19.3(3).
- (3) "Emergency" means when a state of emergency declaration has been issued under G.S. 166A-19.3(19).
- (4) "Event" means a National Special Security Event designated by the President of the United States under 18 U.S.C. 3056(e)(1), which is hereby incorporated by reference, including any subsequent editions or amendments.
- (5) "Rate of compliance" means the number of inspections for food and lodging establishments conducted by the local health department during the previous state fiscal year divided by the number of inspections mandated to be conducted by the local health department per state fiscal year pursuant to G.S. 130A-249 and 10A NCAC 46 .0213, not to exceed a value of 1.

(b) Fees collected pursuant to G.S. 130A-248(d), minus state expenses budgeted for the collection and inventory program, shall be distributed to local health departments for the support of local public health programs and activities as follows:

- (1) seven hundred and fifty dollars (\$750.00) to each county; and
- (2) the balance of funds that remain after the distribution described in Subparagraph (b)(1) of this Rule shall be distributed to each county in accordance with the formula provided in Subparagraph (b)(2)(A) of this Rule. After the distribution of funds pursuant to Part (b)(2)(A) of this Rule, the balance of any funds that remain shall be distributed in accordance with the formula provided in Part (b)(2)(B) of this Rule to the counties that have one hundred percent compliance with the inspection requirements for food and lodging establishments as set out in G.S. 130A-249 and 10A NCAC 46 .0213 in the immediately preceding state fiscal year:
 - (A) [the remaining balance of funds after distribution in Subparagraph (b)(1) of this Rule] multiplied by (the number of facilities in the county divided by the number of facilities in the state) multiplied by (the county's rate of compliance) equals the allocation to the county; and
 - (B) [total amount of remaining funds after distribution in Part (b)(2)(A)] multiplied by (the number of facilities in the county divided by the number of facilities in all counties with 100 percent compliance with mandatory inspection requirements for food and lodging establishments as set forth in G.S. 130A-249 and 10A NCAC 46 .0213 during the previous fiscal year) equals the additional allocation to the county.

(c) Notwithstanding the definition of rate of compliance in Paragraph (a) of this Rule, the total amount of funds distributed to a local health department shall be calculated in accordance with Paragraph (b) of this Rule, but using the local health department's rate of compliance from the last state fiscal year that was completed immediately prior to a disaster, emergency, or event, when:

- (1) one or more counties served by the local health department is named in a disaster or emergency declaration or in an event designation;
- (2) the local health director or the local health director's designee submits a written attestation to the State Environmental Health Director that includes the following:
 - (A) an explanation of how disruption caused by the disaster, emergency, or event is such that inspections that are required pursuant to G.S. 130A-249 and 10A NCAC 46 .0213 for food and lodging establishments cannot be carried out as planned because of the local health department's involvement in the response to the disaster, emergency, or event; and
 - (B) a statement that the loss of funds as a result of the local health department's decreased rate of compliance is expected to result in a financial hardship to the local health department's environmental health program; and

- (3) the Department determines that sufficient funds are available to make a disbursement to the local health department in accordance with this Paragraph.
- (d) Attestations written pursuant to Paragraph (c) of this Rule shall be submitted to the State Environmental Health Director by mail at 5605 Six Forks Road, 1632 Mail Service Center, Raleigh, NC 27699-1632.

History Note: Authority G.S. 130A-9; 130A-248; 130A-249;
Eff. May 1, 1991;
Readopted Eff. July 1, 2022.

SECTION .3000 - BED AND BREAKFAST INNS

15A NCAC 18A .3001	DEFINITIONS
15A NCAC 18A .3002	PERMITS
15A NCAC 18A .3003	INSPECTIONS: VISITS: POSTING OF GRADE CARDS
15A NCAC 18A .3004	INSPECTION FORMS
15A NCAC 18A .3005	GRADING
15A NCAC 18A .3006	FOOD SOURCES AND PROTECTION
15A NCAC 18A .3007	FOOD SERVICE PERSONS
15A NCAC 18A .3008	FOOD SERVICE UTENSILS AND EQUIPMENT AND THEIR CLEANING
15A NCAC 18A .3009	LAVATORIES AND BATHROOMS
15A NCAC 18A .3010	WATER SUPPLY
15A NCAC 18A .3011	DRINKING WATER FACILITIES
15A NCAC 18A .3012	BEDS: LINEN
15A NCAC 18A .3013	VERMIN CONTROL: PREMISES
15A NCAC 18A .3014	STORAGE: MISCELLANEOUS
15A NCAC 18A .3015	FLOORS: WALLS: CEILINGS: LIGHTING: VENTILATION
15A NCAC 18A .3016	DISPOSAL OF GARBAGE AND TRASH

History Note: Authority G.S. 130A-248;
Eff. July 1, 1992;
Amended Eff. November 1, 2002; October 1, 1993; July 1, 1993;
Repealed Eff. October 1, 2017.

SECTION .3100 - CHILDHOOD LEAD POISONING PREVENTION PROGRAM

15A NCAC 18A .3101 DEFINITIONS

The following definitions shall apply throughout this Section:

- (1) "Child-occupied facility" means as defined at G.S. 130A-131.7(2).
- (2) "Department" means the North Carolina Department of Health and Human Services.
- (3) "High contact areas for children" means areas including sandboxes, gardens, play areas, pet sleeping areas, and areas within three feet of a residential housing unit or child-occupied facility.
- (4) "Residential housing unit" means as defined at G.S. 130A-131.7(16).
- (5) "Safe work practices" are methods used to avoid creating lead-based paint hazards during on-site work that disturbs paint that may contain lead as set forth in the United States Environmental Protection Agency publication "Steps to Lead Safe Renovation, Repair, and Painting," which is hereby incorporated by reference, including any subsequent amendments and editions, and available free of charge at: https://www.epa.gov/sites/production/files/2013-11/documents/steps_0.pdf.
- (6) "Specialized cleaning" is the use of cleaning protocols that have been shown to be effective in removing lead-contaminated dust as set forth in the United States Department of Housing and Urban Development publication "Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing," which is hereby incorporated by reference, including any subsequent amendments and editions, and available free of charge at: https://www.hud.gov/sites/documents/SECOND_EDITION_2012.PDF.
- (7) "Visual inspection" means an on-site assessment by the Department or its agent authorized pursuant to 15A NCAC 01O .0101(4) to determine compliance with the approved remediation plan as set forth in G.S. 130A-131.9C.

History Note: Authority G.S. 130A-131.5;
Eff. October 1, 1990;
Transferred and Recodified from 15A NCAC 19I .0101 Eff. August 28, 1991;
Transferred and Recodified from 15A NCAC 21E .0401 Eff. February 18, 1992;
Amended Eff. August 1, 1996; January 1, 1995; July 1, 1992;
Temporary Amendment Eff. November 21, 1997;
Amended Eff. April 1, 1999;
Readopted Eff. April 1, 2021.

15A NCAC 18A .3102 PERSISTENT ELEVATED BLOOD LEAD LEVEL

History Note: Authority G.S. 130A-131.5; 130A-131.7; 130A-131.8; 130A-131.9A-G;
Eff. October 1, 1990;
Transferred and Recodified from 15A NCAC 19I .0102 Eff. August 28, 1991;
Transferred and Recodified from 15A NCAC 21E .0402 Eff. February 18, 1992;
Amended Eff. August 1, 1996; January 1, 1995;
Temporary Amendment Eff. November 21, 1997;
Amended Eff. April 1, 1999.
Expired Eff. August 1, 2019 pursuant to G.S. 150B-21.3A.

15A NCAC 18A .3103 EXAMINATION AND TESTING

- (a) When the Department learns of a lead poisoning hazard in a residential housing unit or a child-occupied facility, the Department shall notify the parents of all children less than six years old who reside in, regularly visit, or attend the unit or facility. The notice shall advise the parents of the adverse health effects of lead exposure and recommend that they have their child examined and tested.
- (b) Examination and testing shall be required for all children in a residential housing unit or a child-occupied facility in which a lead poisoning hazard has been identified if any child tested who has resided in, regularly visited, or attended the unit or facility has an elevated blood lead level.
- (c) Notification of the need for testing shall be repeated every six months until all lead-based paint hazards have been abated and all other lead poisoning hazards have been remediated.
- (d) Children less than six months old are not required to be tested when lead poisoning hazards are identified in a residential housing unit or a child-occupied facility. The Department may require that these children be examined and tested within 30 days after reaching six months of age if they continue to reside in, regularly visit, or attend a unit or facility containing lead poisoning hazards.

History Note: Authority G.S. 130A-131.5; 130A-131.7; 130A-131.8; 130A-131.9;
Eff. October 1, 1990;
Transferred and Recodified from 15A NCAC 19I .0103 Eff. August 28, 1991;
Transferred and Recodified from 15A NCAC 21E .0403 Eff. February 18, 1992;
Amended Eff. August 1, 1996;
Temporary Amendment Eff. November 21, 1997;
Amended Eff. April 1, 1999;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3104 INVESTIGATION TO IDENTIFY LEAD POISONING HAZARDS

- (a) The Department shall conduct an investigation when it reasonably suspects that a lead poisoning hazard to children exists. Reasonable suspicion of a lead poisoning hazard to children may be based on the presence of the following characteristics:
- (1) a residential housing unit or a child-occupied facility built before 1950, a unit or facility built before 1978 that contains readily accessible deteriorated paint, or a unit or facility built before 1978 that is undergoing or has undergone renovations or remodeling within the last six months, unless the unit is lead-safe housing or is in compliance with the maintenance standard;
 - (2) a child less than six years old residing in, regularly visiting, or attending the unit or facility; and
 - (3) a referral by a local, state, or federal public health, environmental protection, or human services official, or building inspector.

(b) Notwithstanding the existence of a certificate of compliance with the maintenance standard, the Department shall investigate a residential housing unit occupied or regularly visited by a child less than six years old who has a persistent elevated blood lead level or confirmed lead poisoning.

(c) The Department may upon request conduct an investigation to identify lead poisoning hazards at a proposed or substitute residential housing unit of a child less than six years old with a persistent elevated blood lead level or confirmed lead poisoning who is seeking alternative housing.

History Note: Authority G.S. 130A-131.5; 130A-131.7; 130A-131.8; 130A-131.9A;
Eff. October 1, 1990;
Transferred and Recodified from 15A NCAC 19I .0104 Eff. August 28, 1991;
Transferred and Recodified from 15A NCAC 21E .0404 Eff. February 18, 1992;
Amended Eff. August 1, 1996;
Temporary Amendment Eff. November 21, 1997;
Amended Eff. April 1, 1999;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3105 LEAD POISONING HAZARD AND CLEARANCE STANDARD FOR SOIL

(a) Bare soil at a residential housing unit or a child-occupied facility is a lead poisoning hazard when:

- (1) it contains greater than 400 parts per million lead in high contact areas for children; or
- (2) except as specified in Subparagraph (a)(1) of this Rule, it contains 1200 parts per million lead or greater in other locations at a residential housing unit or a child-occupied facility.

(b) Unless other remediation is determined by the Department to be necessary to protect the public health based on site-specific evidence including soil lead bioavailability, soil lead speciation, soil particle size, land use and condition, or epidemiologic data, all remediation plans pursuant to G.S. 130A-131.9C shall require that bare soil lead concentrations greater than 400 parts per million at a residential housing unit or a child-occupied facility in high contact areas for children or bare soil areas containing 1200 parts per million lead or greater in other locations at a residential housing unit or a child-occupied facility be:

- (1) covered with four to six inches of gravel or mulch that shall be maintained and replaced as often as necessary to ensure there is four to six inches of cover;
- (2) covered with sod or other vegetative cover that shall be maintained and replaced as often as necessary to ensure there is sod or other vegetative cover;
- (3) physically restricted by a permanent barrier;
- (4) removed; or
- (5) paved over with concrete or asphalt.

History Note: Authority G.S. 130A-131.5; 130A-131.7;
Eff. October 1, 1990;
Transferred and Recodified from 15A NCAC 19I .0105 Eff. August 28, 1991;
Transferred and Recodified from 15A NCAC 21E .0405 Eff. February 18, 1992;
Amended Eff. August 1, 1996; January 1, 1995;
Temporary Amendment Eff. November 21, 1997;
Amended Eff. April 1, 1999;
Readopted Eff. April 1, 2021.

15A NCAC 18A .3106 ABATEMENT AND REMEDIATION

(a) Notwithstanding the existence of a certificate of compliance, the Department may require abatement of lead-based paint hazards and remediation of other lead poisoning hazards identified at a residential housing unit that is occupied or regularly visited by a child less than six years old who has confirmed lead poisoning when:

- (1) a visual inspection reveals that the owner or managing agent has failed to continue to comply with the maintenance standard; or
- (2) the blood lead level of a child with confirmed lead poisoning increases on two consecutive blood tests within a six-month period.

(b) When compliance with the maintenance standard is used to meet remediation requirements, maintenance standard activities must be conducted in accordance with an approved remediation plan in accordance with G.S. 130A-131.9C. The

remediation plan must address all lead poisoning hazards identified on interior and exterior surfaces including floors, walls, ceilings, windows, porches, decks, garages, railings, steps, and bare soil.

(c) Abandonment of a residential housing unit or a child-occupied facility is an acceptable method of remediation. A remediation plan of abandonment shall contain a statement that the owner or managing agent agrees to submit a modified remediation plan to the Department at least 14 days before the abandoned unit or facility is reoccupied if the property will be used as a residential housing unit or a child-occupied facility. The lead-based paint hazards must be abated and other lead poisoning hazards must be remediated in accordance with an approved remediation plan. Nothing in this Rule shall be construed as authorizing an owner or managing agent to evict an occupant of a residential housing unit in violation of G.S. 42.

(d) Demolition of a residential housing unit or a child-occupied facility is an acceptable method of remediation. The remediation plan shall indicate containment measures for lead-contaminated dust and soil, and storage and disposal methods for lead-contaminated construction debris. The owner or managing agent must notify the Department and the occupants of any adjacent unit or facility of the dates of demolition at least three days prior to commencement of demolition.

History Note: Authority G.S. 130A-131.5; 130A-131.7; 130A-131.8; 130A-131.9A; 130A-131.9B; 130A-131.9C; 130A-131.9D; 130A-131.9E
Eff. January 1, 1995;
Amended Eff. September 1, 1996;
Temporary Amendment Eff. November 21, 1997;
Amended Eff. April 1, 1999;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3107 MAINTENANCE STANDARD

The following shall apply to property owners and managing agents of pre-1978 residential housing units implementing the maintenance standard set forth in Rule .3106(b) of this Section:

- (1) Property owners and managing agents shall use safe work practices to repair and repaint deteriorated paint on interior surfaces of a residential housing unit and to correct the cause of deterioration, including structural conditions causing water infiltration, interior moisture, and poor paint adhesion. For pre-1950 single family and duplex residential housing units, property owners and managing agents shall repair and repaint both interior and exterior surfaces, including all walls, ceilings, windows, porches, decks, garages, railings, and steps, and shall correct the causes of deterioration. In addition, for pre-1950 single family and duplex residential housing units, property owners and managing agents shall establish and maintain a sod or other vegetative cover in areas of bare soil within three feet of the residential housing unit.
- (2) Property owners and managing agents shall conduct specialized cleaning on interior horizontal surfaces to remove dust that may contain lead.
- (3) Property owners and managing agents shall correct conditions in which painted surfaces are rubbing, binding, or being damaged to protect the integrity of the paint and to prevent the generation of lead dust.
- (4) Subject to the occupant's approval, property owners and managing agents shall steam shampoo carpets or use other specialized cleaning methods to remove dust that may contain lead.
- (5) Property owners and managing agents shall provide interior horizontal surfaces that are smooth, non-absorbent, and easy to clean by recoating deteriorated hardwood floors with a durable coating, replacing or recovering worn-out linoleum floors, making interior windowsills smooth and cleanable, capping window troughs with vinyl or aluminum coil stock, and providing drainage from storm window frames.
- (6) Property owners and managing agents shall provide occupants with the Environmental Protection Agency-developed pamphlets "Protect Your Family from Lead in Your Home," which is hereby incorporated by reference, including any subsequent amendments and editions, and available free of charge at: <https://www.epa.gov/lead/protect-your-family-lead-your-home-english> and "Renovate Right: Important Lead Hazard Information for Families, Child Care Providers, and Schools," which is hereby incorporated by reference, including any subsequent amendments and editions, and available free of charge at: <https://www.epa.gov/lead/renovate-right-important-lead-hazard-information-families-child-care-providers-and-schools-0>, summaries of any reports prepared pursuant to G.S. 130A-131.9A on lead-based paint hazards at the property, and copies of previous certificates of compliance issued.

History Note: Authority G.S. 130A-131.5;
Temporary Adoption Eff. November 21, 1997;
Eff. April 1, 1999;

Readopted Eff. April 1, 2021.

15A NCAC 18A .3108 APPLICATION AND ISSUANCE OF CERTIFICATE OF COMPLIANCE

(a) Written application for a certificate of compliance shall be made by an owner or managing agent on a form developed by the Department and shall include a copy of the tax record or other documentation indicating the date of construction of the residential housing unit.

(b) To obtain a certificate of compliance with the maintenance standard, an owner or managing agent shall comply with the provisions of G.S. 130A-131.7 and these Rules.

(c) Proof of compliance shall include:

- (1) a sworn statement by the owner or managing agent that either he has complied with all provisions of the maintenance standard or a sworn statement that no child less than six years old has resided in or regularly visited the unit for the past year;
- (2) a signed statement by the occupants, if any, acknowledging that information was provided as required under G.S. 130A-131.7 and these Rules;
- (3) a written summary of the visual inspection conducted by a certified lead inspector or a certified lead risk assessor; and
- (4) measurements of at least two composite dust samples, one each from floors and either interior window sills or window troughs, indicating the absence of dust that constitutes a lead poisoning hazard. Each composite sample must contain no more than four subsamples including a bedroom, a playroom, a den, and a kitchen. All samples must be analyzed by a laboratory recognized by the Department and the U.S. Environmental Protection Agency pursuant to section 405(b) of the Toxic Substances Control Act as being capable of performing analyses for lead in paint, dust, and soil.

(d) For multi-family residential housing units consisting of five or more units in a single property, visual inspections and laboratory measurements are only required for a statistical sampling of the units as specified for risk assessments of similar dwellings by the U.S. Department of Housing and Urban Development in Chapter 5 of the Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing and any updates and revisions. Any such sampling protocol shall focus on the units most likely to contain lead-based paint hazards and units where children less than six years old reside or regularly visit.

(e) For annual renewal of the certificate of compliance, periodic surveillance may be conducted by an owner or a managing agent who has a good compliance record, with no outstanding violations of these Rules, in lieu of a visual inspection so long as the written summary of a visual inspection conducted by a certified lead inspector or a certified lead risk assessor is provided at least once every three years. Periodic surveillance shall include a written report and composite dust sampling measurements as described in 15A NCAC 18A .3108(c)(4).

(f) The Department shall issue a certificate of compliance within 30 days after receipt of proof of compliance unless the residential housing unit has been designated for on-site monitoring by the Department. If the residential housing unit has been selected for on-site monitoring, the certificate of compliance shall be issued within 30 days after the Department has verified compliance with G.S. 130A-131.7 and these Rules by a visual inspection. The visual inspection shall occur within 30 days after receipt of the application for a certificate of compliance.

(g) The certificate of compliance shall be signed, dated, and issued by the Department. The certificate shall state the date of issue, the date of expiration, and the address of the residential housing unit.

(h) The certificate of compliance shall expire one year from the date of its issuance.

(i) The owner or managing agent shall notify the Department and the occupants of a residential housing unit three days prior to commencing maintenance, renovation, or remodeling activities that occur after a certificate of compliance is issued but before the certificate expires. Such activities shall be performed using safe work practices.

(j) The Department shall notify the occupants at the time a certificate of compliance is issued or reissued. Such notification shall include an educational pamphlet describing the maintenance standard and the effects of compliance on the owner and the lead poisoning hazard information package described in these Rules.

*History Note: Authority G.S. 130A-131.5; 130A-131.7; 130A-131.8; 130A-131.9A-G;
Temporary Adoption Eff. November 21, 1997;
Eff. April 1, 1999;*

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3109 REVOCATION AND DENIAL OF CERTIFICATE OF COMPLIANCE

(a) The Department may deny or revoke a certificate of compliance when:

- (1) the Department finds failure or refusal to comply or maintain compliance with G.S. 130A-131.7 or these Rules;
 - (2) the Department finds that the information submitted by the owner or managing agent is incomplete or falsified; or
 - (3) the Department is denied entry by the owner or managing agent to conduct a visual inspection.
- (b) The Department shall give notice of denial or revocation to the owner or managing agent within 30 days after receipt of the application for a certificate of compliance, or within 30 days after the Department was denied entry by the owner or managing agent to conduct a visual inspection, or within 30 days after the Department finds that the owner or managing agent failed to comply or maintain compliance with the provisions of G.S. 130A-131.7 or these Rules.
- (c) The notice of denial or revocation of a certificate of compliance shall be in writing and shall set forth the grounds for the denial or revocation.
- (d) The notice of denial or revocation shall indicate that the owner or managing agent has the right to appeal the denial or revocation in accordance with G.S. 130A-24(a1).
- (e) The notice of denial or revocation shall be delivered personally or mailed by registered or certified mail return receipt requested.

*History Note: Authority G.S. 130A-131.5; 130A-131.7; 130A-131.8; 130A-131.9A-G;
Temporary Adoption Eff. November 21, 1997;
Eff. April 1, 1999;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.*

15A NCAC 18A .3110 MONITORING

- (a) The Department shall monitor the validity of information submitted by owners who seek certificates of compliance with the maintenance standard.
- (b) Monitoring activities shall include a review of application materials submitted and may include on-site compliance monitoring to verify the accuracy and adequacy of the information provided.
- (c) The Department shall design and implement a plan to conduct visual inspections of up to 50% of the residential housing units for which applications are submitted for certificates of compliance with the maintenance standard.
- (d) For residential housing units subject to abatement and remediation requirements in which children less than six years of age have resided in or regularly visited within the past year, the Department shall conduct visual inspections and residual lead dust monitoring to verify continued compliance with the maintenance standard annually and at any other time the Department deems necessary to carry out the provisions of G.S. 130A-131.7 or these Rules.

*History Note: Authority G.S. 130A-131.5; 130A-131.7; 130A-131.8; 130A-131.9A-G;
Temporary Adoption Eff. November 21, 1997;
Eff. April 1, 1999;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.*

15A NCAC 18A .3111 RESIDENT RESPONSIBILITIES

When a child less than six years old has an elevated blood lead level of 10 micrograms per deciliter or greater, the Department shall provide to the owner or managing agent and the parents or legal guardians of the child a lead poisoning hazard information package. The information provided shall comply with the provisions of G.S. 130A-131.9G.

*History Note: Authority G.S. 130A-131.5; 130A-131.7; 130A-131.8; 130A-131.9G;
Temporary Adoption Eff. November 21, 1997;
Eff. April 1, 1999;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.*

SECTION .3200 - TATTOOING

15A NCAC 18A .3201 DEFINITIONS

The following definitions shall apply throughout this Section:

- (1) "Blood and Body Fluid Precautions" means a method of infection control in which all human blood and body fluids are treated as if known to be infectious for human immunodeficiency virus (HIV), hepatitis B virus (HBV), and other infections that can be transmitted by contact with blood.

- (2) "Department" means the Department of Environment and Natural Resources. The term also means the authorized agent of the department.
- (3) "Sharps" means any objects that can penetrate the skin including, but not limited to, needles, razor blades, scalpels, and broken capillary tubes.
- (4) "Sterilize" means the approved microbicidal treatment by a process which provides enough accumulative heat or concentration of chemicals for a length of time sufficient to eliminate the microbial count, including pathogens.
- (5) "Tattooing" means tattooing as defined in G.S. 130A-283.
- (6) "Tattoo Artist" means any person who engages in tattooing.
- (7) "Tattoo Establishment" means any location where tattooing is engaged in or where the business of tattooing is conducted or any part thereof. For purposes of this Section, "Tattoo Parlor" falls within this definition.
- (8) "Tattooing Room" means a room in the tattoo establishment where tattooing is performed.

*History Note: Authority G.S. 130A-29;
 Temporary Adoption Eff. January 1, 1995, for a period of 180 days or until the permanent rule becomes effective, whichever is sooner;
 Eff. April 1, 1995;
 Amended Eff. November 1, 2002;
 Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.*

15A NCAC 18A .3202 PERMITTING

- (a) Every person engaged in the practice of tattooing shall register with their local health department on or before January 1, 1995, by providing their name, the address of the location at which they engage in tattooing, and their hours of operation.
- (b) No person shall engage in tattooing on or after June 1, 1995, without first obtaining a tattooing permit issued by the department. Persons permitted to engage in tattooing in counties with local rules shall obtain a tattooing permit from the department on or after June 1, 1995. Nothing herein shall preclude counties with local rules from permitting tattoo artists prior to June 1, 1995, at which time all tattoo artists shall be permitted by the department.
- (c) No tattooing permit shall be issued to a person until an inspection by the department verifies compliance with this Section.
- (d) Tattooing permits shall be issued in the name of the individual tattoo artist, shall list the address of the tattoo establishment where the artist will practice, and shall not be transferable to another person or place of practice.
- (e) A valid tattooing permit shall be posted in the premises of the tattoo establishment in a conspicuous place where it may be easily observed by the public upon entering the establishment.
- (f) Application for a tattooing permit shall be submitted to the local health department. The application shall include at least the following information:
 - (1) Name of tattoo artist;
 - (2) Mailing address of tattoo artist;
 - (3) Name of tattoo establishment;
 - (4) Street address of tattoo establishment;
 - (5) Anticipated date of commencing operation; and
 - (6) Signature of tattoo artist.
- (g) Any additional information requested by the department to verify compliance with this Section shall be submitted with the permit application. An initial application for issuance of a tattooing permit shall be submitted no less than 30 days before anticipated commencement of tattooing by the artist within the jurisdiction of the local health department issuing the permit. Application for renewal of an existing tattooing permit shall be submitted to the local health department at least 30 days prior to the expiration date of the existing permit.
- (h) Any permit application fee established by the local board of health shall be paid upon submission of the application.

*History Note: Authority G.S. 130A-29;
 Temporary Adoption Eff. January 1, 1995, for a period of 180 days or until the permanent rule becomes effective, whichever is sooner;
 Eff. April 1, 1995;
 Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.*

15A NCAC 18A .3203 WATER SUPPLY

- (a) The water supply serving a tattoo establishment shall be an approved potable water supply. Public water supplies that meet the requirements of 15A NCAC 18C shall be approved.
- (b) When a public water supply is not available and a private water supply is used, the water supply for a tattoo establishment shall be located, constructed, maintained, and operated in accordance with the Rules Governing the Protection of Private Water Supplies, 15A NCAC 18A .1700.

History Note: Authority G.S. 130A-29;
Temporary Adoption Eff. January 1, 1995, for a period of 180 days or until the permanent rule becomes effective, whichever is sooner;
Eff. April 1, 1995;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3204 SEWAGE DISPOSAL

Sewage shall be disposed of in accordance with 15A NCAC 18A .1900 or 15A NCAC 2H .0200.

History Note: Authority G.S. 130A-29;
Temporary Adoption Eff. January 1, 1995, for a period of 180 days or until the permanent rule becomes effective, whichever is sooner;
Eff. April 1, 1995;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3205 SOLID WASTE MANAGEMENT AND DISPOSAL

Solid waste management and disposal for tattoo establishments shall be in accordance with 15A NCAC 13B.

History Note: Authority G.S. 130A-29;
Eff. April 1, 1995;
Temporary Adoption Eff. January 1, 1995, for a period of 180 days or until the permanent rule becomes effective, whichever is sooner;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3206 RECORDS, HEALTH REQUIREMENTS FOR PATRONS

- (a) Retrievable records for each patron shall be kept by the tattoo artist. The patron shall be required to record or verify their name, address, phone number, date of birth, and provide their signature.
- (b) Records shall be kept for a minimum of two years and shall be made available to the department on demand.
- (c) No person with visible jaundice (yellowing of the eyes or skin) shall be tattooed.
- (d) No tattooing shall be done on skin surface that has a rash, pimples, boils, infections, or manifests any evidence of being reddened or inflamed.

History Note: Authority G.S. 130A-29;
Temporary Adoption Eff. January 1, 1995, for a period of 180 days or until the permanent rule becomes effective, whichever is sooner;
Eff. April 1, 1995;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3207 CONSTRUCTION

- (a) Each tattoo establishment shall have at least one tattooing room. This room shall be separate and apart from all other areas in the establishment, and access to this room shall be restricted. Patrons shall be tattooed only in the tattooing room, and there shall be a separate work station for each patron within the tattooing room. Furniture and furnishings within the tattooing room shall be constructed to be easily cleanable, maintained in good repair, and kept clean.
- (b) At least one lavatory with mixing faucets supplied with hot and cold running water under pressure shall be provided for every five artists for hand washing and utensil washing. Lavatories shall be accessible to the tattooing room such that tattoo artists can wash their hands and return to the tattoo room without having to touch anything with their hands. Access to these lavatories shall be restricted to the tattoo artists. Each lavatory shall be easily cleanable, in good repair, and kept free of storage.

- (c) Poisons, including germicidal solutions, used in the tattoo establishment shall be stored in covered containers with labels identifying the contents.
- (d) The tattooing room shall be maintained clean and in good repair. The floor of the tattooing room shall be of impervious material and shall be maintained in clean condition at all times.

*History Note: Authority G.S. 130A-29;
Temporary Adoption Eff. January 1, 1995, for a period of 180 days or until the permanent rule becomes effective, whichever is sooner;
Eff. April 1, 1995;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.*

15A NCAC 18A .3208 OPERATION AND MAINTENANCE

(a) Antiseptic soap and a germicidal solution shall be available to each tattoo artist. Individual hand scrub brushes and fingernail files or orange sticks for each tattoo artist shall also be available. Before tattooing the first patron of the day, each tattoo artist shall scrub his hands and forearms with an antiseptic soap and warm water for five minutes using a clean individual hand brush and an individual file or orange stick for his fingernails; and he shall repeat this process for two to three minutes before tattooing each subsequent patron that day. An individual disposable towel shall be used for drying the tattoo artist's hands and arms after rinsing. Each tattoo artist shall wear clean disposable latex surgical gloves and a clean or disposable gown or coat or a clean or disposable lap cloth while engaged in tattooing. Gloves must be changed between patrons and disposed of after each use. There shall be no use of tobacco or other smoking materials in the tattooing room, and there shall be no eating of food or drinking of beverages in the tattooing room by the tattoo artist.

(b) Tattooing instruments and other equipment shall be cared for as follows:

- (1) All clean and ready-to-use instruments, dyes, carbons, and stencils shall be kept in a closed container, case, or storage cabinet while not in use. The storage cabinet shall be maintained in a sanitary manner at all times. Sterile instruments shall be kept in sterile packages or containers;
- (2) Only disposable needles shall be used in the tattooing process, and a new needle or set of needles shall be used on each patron;
- (3) Autoclaving shall be used for sterilization of the needle bar tube and needle bar of the tattoo machine before use on each patron. The needle bar tube of the tattooing machine shall be cleaned after each use and before being sterilized for use with the next patron;
- (4) The needles and instruments required to be sterile shall be handled with aseptic technique during the tattooing procedure so they are not contaminated before use; and
- (5) The effectiveness of the autoclave in killing bacterial endospores shall be tested once each month by using an endospore-impregnated strip. Results of this test shall be recorded for review annually by the department.

(c) All sharps, including the needles after removal from the needle bar, shall be stored and disposed of in containers that are rigid, puncture-resistant, and leak-proof when in an upright position.

(d) Blood and body fluid precautions shall be practiced by the tattoo artist when the potential for contact with blood and body fluids exists in any procedure.

*History Note: Authority G.S. 130A-29;
Temporary Adoption Eff. January 1, 1995, for a period of 180 days or until the permanent rule becomes effective, whichever is sooner;
Eff. April 1, 1995;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.*

15A NCAC 18A .3209 TATTOOING PROCEDURES

(a) Sterilized or new disposable razors shall be used for each patron when it is necessary to shave the area to be tattooed.

(b) The site of the tattoo shall be cleaned with a germicidal solution, which shall be applied in a circular, centrifugal manner before the design is placed on the skin. If the area to be tattooed is shaved, this cleaning shall be performed after shaving the area. Any other sterile, individual towels or gauze that are used in preparing the site to be tattooed shall be properly disposed of after use on each patron.

(c) The use of styptic pencils, alum blocks, or other solid styptics to control bleeding is prohibited unless a separate, disposable styptic is used for each patron.

- (d) If a stencil is used, only clean disposable stencils for transferring the design to the skin shall be used, and no stencil may be used on more than one patron.
- (e) Single-service individual containers of dye or ink shall be used for each patron and the container shall be discarded immediately after completing work on a patron. Any dye or ink in which the needles were dipped shall be treated likewise so as not to be used on another person.
- (f) After completing the tattoo, the tattooed area shall be cleaned with a clean facial tissue or paper towel, and an antibacterial ointment may be applied. The area shall then be covered with a sterile dressing.

History Note: Authority G.S. 130A-29;
Temporary Adoption Eff. January 1, 1995, for a period of 180 days or until the permanent rule becomes effective, whichever is sooner;
Eff. April 1, 1995;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3210 INSECT, RODENT AND VECTOR CONTROL

The premises shall be kept clean and free of vermin at all times. There shall be no fly or mosquito breeding places or rodent harborage on the premises. Non-human animals shall not be allowed in the tattooing room. Litter under the control of the tattoo artist or operator shall not be permitted to accumulate on the premises.

History Note: Authority G.S. 130A-29;
Temporary Adoption Eff. January 1, 1995, for a period of 180 days or until the permanent rule becomes effective, whichever is sooner;
Eff. April 1, 1995;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3211 PROCEDURE WHEN INFECTION SUSPECTED

All infections resulting from the practice of tattooing which become known to the tattoo artist shall be reported to the local health department by the tattoo artist within 48 hours.

History Note: Authority G.S. 130A-29;
Temporary Adoption Eff. January 1, 1995, for a period of 180 days or until the permanent rule becomes effective, whichever is sooner;
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Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3212 PERMIT REVOCATION

The Department may suspend or revoke permits in accordance with G.S. 130A-23.

History Note: Authority G.S. 130A-23; 130A-29;
Temporary Adoption Eff. January 1, 1995, for a period of 180 days or until the permanent rule becomes effective, whichever is sooner;
Eff. April 1, 1995;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

SECTION .3300 – ADULT DAY SERVICE FACILITIES

15A NCAC 18A .3301 DEFINITIONS

The following definitions shall apply throughout this Section:

- (1) "Adequate" means determined by the Department to be of sufficient size, volume, or technical specifications, to effectively accommodate and support the planned, current, or projected workloads for a specified operational area.
- (2) "Adult Day Service Facility" means an establishment which provides an organized program of services including a meal, for adults during the day in a community group setting and for which a license or certificate for payment is required from the Department of Health and Human Services. It includes adult

day care services, adult day health services, psychosocial rehabilitation programs and other day programs which do not provide overnight accommodations.

- (3) "Approved" means procedures and domestic or commercial equipment determined by the Department to be in compliance with this Section. Commercial Kitchen equipment shall be approved in accordance with "ANSI/NSF Standard 2 Food Equipment", "NSF Standard 3 Commercial Spray-Type Dishwashing Machines", or "ANSI/NSF Standard 7 Commercial Refrigerators and Storage Freezers" which are incorporated by reference including any subsequent amendments or additions. This material is available for inspection at the Department of Environment and Natural Resources, Division of Environmental Health, 2728 Capital Boulevard, Raleigh, NC. Copies may be obtained from NSF International, 3475 Plymouth Road, PO Box 130140, Ann Arbor, Michigan 48113-0140 or on the World Wide Web at www.nsf.org at a cost of sixty dollars (\$60.00) for ANSI/NSF Standard 2 and ninety-five dollars (\$95.00) for NSF Standard 3 or ANSI/NSF Standard 7.
- (4) "Communicable Condition" means the state of being infected with a communicable agent but without symptoms.
- (5) "Communicable Disease" means any disease that can be transmitted from one person to another directly, by contact with excrement, other body fluids, or discharges from the body; or indirectly, via substances or inanimate objects, such as contaminated food, drinking glasses, toys or water; or via vectors, such as flies, mosquitoes, ticks, or other insects.
- (6) "Department" or "DENR" means the North Carolina Department of Environment and Natural Resources. The term also means the authorized representative of the Department.
- (7) "Eating and Cooking Utensils" means and includes any kitchenware, tableware, glassware, cutlery, utensils, containers, or other equipment with which food or drink comes in contact during storage, preparation, or serving.
- (8) "Environmental Health Specialist" means a person authorized to represent the Department.
- (9) "Food" means any raw, cooked, or processed edible substance, ice, beverage, or ingredient used or intended for use or for sale in whole or in part for human consumption.
- (10) "Frying" means to cook over direct heat in hot oil or fat.
- (11) "Hermetically Sealed" means a container designed and intended to be secure against the entry of microorganisms and to maintain the commercial sterility of its contents after processing.
- (12) "Hygroscopic Food" means food which readily takes up and retains moisture, such as bean sprouts.
- (13) "Impervious" means that which will not allow entrance or passage, such as an airtight plastic container that will not allow the entrance of moisture or vermin.
- (14) "Multi-Service Articles" means tableware, including flatware and holloware which are designed, fabricated, and intended by the manufacturer to be washed, rinsed, sanitized, and re-used.
- (15) "Multi-Use Articles" means bulk food containers and utensils designed, fabricated, and intended by the manufacturer to be washed, rinsed, sanitized, and re-used. The term includes items such as food storage containers, beverage pitchers, serving spoons and bowls, tongs, and spatulas. The term does not include multi-service articles as defined in this Section.
- (16) "Potable Water" means water from an approved source which is suitable for drinking.
- (17) "Potentially Hazardous Food" means any food or ingredient, natural or synthetic, in a form capable of supporting the growth of infectious or toxigenic microorganisms, including *Clostridium botulinum*. This term includes raw or heat treated food of animal origin, raw seed sprouts, and treated foods of plant origin. The term does not include foods which have a pH level of 4.6 or below or a water activity value of 0.85 or less.
- (18) "Putrescible Materials" means materials likely to rot or putrefy, such as fruit, vegetables, meats, dairy products, or similar items.
- (19) "Sanitary Sewage System" means a complete system of sewage collection, treatment, and disposal and includes septic tank systems, connection to a public or community sewage system, sewage reuse or recycle systems, mechanical or biological treatment systems, or other such systems.
- (20) "Sanitize" means the approved bactericidal treatment by a process which meets the temperature and chemical concentration levels in 15A NCAC 18A .3312.
- (21) "Sewage" means the liquid and solid human body waste and liquid waste generated by water-using fixtures and appliances, including those associated with foodhandling. The term does not include industrial process wastewater or sewage that is combined with industrial process wastewater.

- (22) "Single-Service Articles" means tableware, including flatware and hollowware, carry-out utensils and other items such as bags, containers, stirrers, straws, toothpicks, and wrappers which are designed, fabricated and intended by the manufacturer for one-time use.
- (23) "Single-Use Articles" means bulk food containers and utensils intended by manufacturer to be used once and discarded. The term includes items such as formed buckets, bread wrappers, pickle barrels, and No. 10 cans. The term does not include single-service articles as defined in this Section.

History Note: Authority G. S. 130A-285;
Eff. August 1, 2002;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3302 APPROVAL OF CONSTRUCTION AND RENOVATION PLANS

- (a) Plans drawn to scale and specifications for new adult day service facilities shall be submitted to the local health department for review and approval prior to initiating construction. Plans drawn to scale and specifications for changes to building dimensions, kitchen specifications, or other modifications to existing adult day service facilities shall also be submitted to the local health department for review and approval prior to construction. The initial inspection for new construction or the first inspection following modifications to existing adult day service facilities shall not be made by the local health department unless these plans have been approved. For new or proposed adult day service facilities, a site visit to evaluate and assist in meeting the requirements of this Section may be requested by the adult day service operator prior to submission of plans and shall be conducted by the local health department within 30 days of the request.
- (b) Review of the plans by the local health department or the Environmental Health Services Section shall be based on the requirements of this Section.
- (c) Construction and modifications shall comply with the approved plans.

History Note: Authority G.S. 130A-285;
Eff. August 1, 2002;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3303 INSPECTIONS AND REPORTS

- (a) Unannounced inspections of adult day service facilities shall be made by an Environmental Health Specialist at least once each year. An original and one copy of the Inspection of Adult Day Service Facility form shall be completed by the Environmental Health Specialist. The adult day service facility operator and the Environmental Health Specialist shall each retain a copy.
- (b) If the Environmental Health Specialist determines that conditions found at the adult day service facility at the time of any inspection are dangerous to the health of the participants, the Environmental Health Specialist shall notify the licensing or certifying agency within 24 hours by verbal contact. A copy of the inspection report documenting the dangerous conditions shall be sent to the licensing or certifying agency within two working days following the inspection. Notification of dangerous conditions found at an adult day care or adult day health service facility shall be made to the NC Department of Health and Human Services, Division of Aging. Notifications involving dangerous conditions found at a psychosocial rehabilitation center facility shall be made to the NC Department of Health and Human Services, Division of Health Service Regulation.
- (c) An Environmental Health Specialist may conduct an inspection of any adult day care facility as frequently as necessary in order to ensure compliance with applicable sanitation standards.

History Note: Authority G.S. 130A-285;
Eff. August 1, 2002;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3304 FOOD SUPPLIES

- (a) Food shall be in good condition, free from spoilage, filth, or other contamination and shall be safe for human consumption. Potentially hazardous foods shall only be obtained from sources that are permitted or inspected by a health department or the North Carolina Department of Agriculture. The use of food packaged in hermetically sealed containers that was not prepared in a commercial food processing establishment is prohibited.
- (b) Milk products that are used shall be Grade "A" pasteurized fluid milk and fluid milk products or evaporated milk. The term "milk products" means those products as defined in 15A NCAC 18A .1200. Copies of 15A NCAC 18A .1200 may be obtained from the Division of Environmental Health, 1630 Mail Service Center, Raleigh, NC 27699-1630. Unless prescribed

by a physician, dry milk and dry milk products may be used only for cooking purposes, including cooked pudding desserts and flavored hot beverages.

(c) Fresh and frozen shucked shellfish (oysters, clams, or mussels) shall be packed in nonreturnable packages identified with the name and address of the original shell stock processor, shucker - packer, or repacker, and the interstate certification number issued according to law. Shell stock and shucked shellfish shall be kept in the container in which they were received until they are used. Each container of unshucked shell stock (oysters, clams, or mussels) shall be identified by an attached tag that states the name and address of the original shell stock processor, the kind and quantity of shell stock, and an interstate certification number issued by the State or foreign shellfish control agency. After each container of shellstock has been emptied, the management shall remove the stub of the tag and retain it for a period of at least 90 days.

(d) Raw eggs or products containing raw eggs shall not be consumed, including raw cookie dough, cake batter, brownie mix, milkshakes, ice cream and other food products. A pasteurized egg product may be used as a substitute for raw eggs.

(e) Beverages and food sent from home shall be fully prepared, dated, and identified for the appropriate participant at the participant's home. All formula and other bottled beverages shall be returned to the participant's home or discarded at the end of each day. Drinking utensils provided by the adult day service facility shall be sanitized in accordance with this Section. Formula and other beverages which require refrigeration, and pureed food after opening shall be refrigerated at 45°F (7°C) or below. Commercially prepared pureed foods shall be served from a single-serving dish rather than the food container. Upon opening, containers of pureed food shall be covered, dated with the date of opening, and refrigerated.

(f) Adult day service facilities receiving prepared, ready-to-eat meals from outside sources shall use only catered meals obtained from a food handling establishment permitted or inspected by a health department. During transportation, food shall meet the requirements of these Rules relating to food protection and storage.

(g) All bag lunches containing potentially hazardous foods shall be refrigerated in accordance with this Section.

History Note: Authority G.S. 130A-235;

Eff. August 1, 2002;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3305 FOOD PROTECTION

(a) Food shall be protected at all times from potential contamination, including dust, insects, rodents, unclean equipment and utensils, unnecessary handling, coughs and sneezes, flooding, drainage, and overhead leakage or overhead drippage from condensation. The temperature of potentially hazardous food shall be 45°F (7°C) or below, or 140°F (60°C) or above at all times, including field trips, and as otherwise provided in these Rules.

(b) In the event of a fire, flood, power outage, or similar event that might result in the contamination of food, or that might prevent potentially hazardous food from being held at required temperatures, the person in charge shall immediately contact the local health department.

History Note: Authority G.S. 130A-285;

Eff. August 1, 2002;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3306 FOOD STORAGE

(a) Opened food products shall be stored in approved, clean, tightly covered, storage containers. Containers shall be impervious and nonabsorbent.

(b) Foods not stored in the product container or package in which it was obtained, shall be stored in a tightly covered, approved food storage container identifying the food by common name.

(c) Food shall be stored above the floor in a manner that protects the food from splash and other contamination and that permits easy cleaning of the storage area.

(d) Food and containers of food shall not be stored under exposed or unprotected sewer lines or water lines, except for automatic fire protection sprinkler heads that may be required by law. Food shall not be stored in toilet or laundry rooms, or other areas where there is a potential for contamination.

(e) All food shall be stored in a manner to protect it from dust, insects, drip, splash and other contamination.

(f) Packaged food such as milk or other fluid containers may be stored in undrained ice as long as any individual units are not submerged in water. Wrapped sandwiches shall not be stored in direct contact with ice.

(g) Refrigerated storage:

- (1) Refrigeration equipment shall be provided in such number and of such capacity to assure the maintenance of potentially hazardous food at required temperatures during storage. Each refrigerator shall be provided

- with a numerically scaled indicating thermometer, accurate to $\pm 3^{\circ}\text{F}$, ($\pm 1.5^{\circ}\text{C}$) located to measure the air temperature in the warmest part of the refrigerator and located to be easily readable. Recording thermometers, accurate to $\pm 3^{\circ}\text{F}$ ($\pm 1.5^{\circ}\text{C}$), may be used in lieu of indicating thermometers.
- (2) Potentially hazardous food requiring refrigeration after preparation shall be cooled to an internal temperature of 45°F (7°C), or below. Cooling of potentially hazardous foods shall be initiated upon completion of preparation or a period of hot storage. Methods such as shallow pans, agitation, quick chilling or water circulation external to the food containers shall be used to cool large quantities of potentially hazardous food. Potentially hazardous food to be transported cold shall be prechilled and held at a temperature of 45°F (7°C) or below.
 - (3) Ice used for cooling stored food and food containers shall not be used for human consumption.
- (h) Hot storage:
- (1) Hot food storage equipment shall be provided in such number and of such capacity to assure the maintenance of food at the required temperature during storage. Each hot food unit shall be provided with a numerically scaled indicating thermometer, accurate to $\pm 3^{\circ}\text{F}$ ($\pm 1.5^{\circ}\text{C}$), located to measure the air temperature in the coolest part of the unit and located to be easily readable. Recording thermometers, accurate to $\pm 3^{\circ}\text{F}$ ($\pm 1.5^{\circ}\text{C}$), may be used in lieu of indicating thermometers. Where it is impractical to install thermometers on equipment such as steam tables, steam kettles, heat lamps, cal-rod units, or insulated food transport carriers, a metal stem-type numerically scaled indicating product thermometer shall be available and used to check internal food temperature;
 - (2) The internal temperature of potentially hazardous foods requiring hot storage shall be 140°F (60°C) or above except during necessary periods of preparation and service. Potentially hazardous food to be transported hot shall be held at a temperature of 140° (60°C) or above.

*History Note: Authority G.S. 130A-285;
Eff. August 1, 2002;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.*

15A NCAC 18A .3307 FOOD PREPARATION

- (a) Food shall be prepared with the least possible manual contact, with utensils, and on surfaces that have been cleaned, rinsed, and sanitized prior to use in order to prevent cross-contamination.
- (b) Whenever there is a change in processing from raw to ready-to-eat foods, the new operation shall begin with food-contact surfaces and utensils which are clean and sanitized.
- (c) Raw fruits and raw vegetables shall be thoroughly washed with potable water before being cooked or served.
- (d) Potentially hazardous foods requiring cooking shall be cooked to heat all parts of the food to a temperature of at least 140°F (60°C), except that:
 - (1) Poultry, poultry stuffings, stuffed meats and stuffings containing meat shall be cooked to heat all parts of the food to at least 165°F (74°C) with no interruption of the cooking process;
 - (2) Pork and any food containing pork shall be cooked to heat all parts of the food to at least 155°F (68°C) for 15 seconds with no interruption in the cooking process;
 - (3) Ground beef and foods containing ground beef shall be cooked to an internal temperature of at least 155°F (68°C) with no interruption in the cooking process;
 - (4) Rare roast beef shall be cooked to an internal temperature of at least 130°F (54°C) with no interruption in the cooking process.
- (e) Raw animal products cooked in a microwave oven shall be rotated during cooking to compensate for uneven heat distribution.
- (f) Potentially hazardous foods that have been cooked and then refrigerated, if served above 45°F (7°C), shall be reheated rapidly to an internal temperature of 165°F (74°C) or higher before being served or before being placed in a hot food storage unit except that, food in intact manufacturer's heat-and-serve packages may initially be reheated to 140°F (60°C). Steam tables, warmers, and similar hot food holding units are prohibited for the rapid reheating of potentially hazardous foods unless the equipment was specifically designed to rapidly reheat foods to 165°F .
- (g) A food temperature measuring device, accurate to $\pm 2^{\circ}\text{F}$ ($\pm 1^{\circ}\text{C}$), shall be provided and used to assure the attainment and maintenance of proper internal cooking, holding, or refrigeration temperatures of all potentially hazardous foods.
- (h) Potentially hazardous foods shall be thawed:
 - (1) In refrigerated units at a temperature not to exceed 45°F (7°C);

- (2) Under potable running water of a temperature of 70°F (21°C) or below, with sufficient water velocity to agitate and float off loose food particles into the overflow;
- (3) In a microwave oven only when the food will be immediately transferred to conventional cooking equipment as part of a continuous cooking process or when the entire, uninterrupted cooking process takes place in the microwave oven; or
- (4) As part of the conventional cooking process.

History Note: Authority G.S. 130A-235;

Eff. August 1, 2002;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3308 FOOD SERVICE

(a) Milk and milk products for drinking purposes shall be served from a commercially filled container of not more than one gallon capacity or drawn from a commercially filled container stored in a mechanically refrigerated bulk milk dispenser directly into the drinking utensil.

(b) Ice shall be made, handled, transported, stored and dispensed in such a manner as to be protected against contamination. Ice shall be dispensed with scoops, tongs, or other ice-dispensing utensils or through automatic ice-dispensing equipment. Ice-dispensing utensils shall be stored on a clean surface or in the ice with the dispensing utensil's handle extended out of the ice. Between uses, ice transfer receptacles shall be stored to protect them from dust, drip, splash and other contamination. Ice storage bins shall be drained through an air gap.

(c) Employees preparing or serving food shall wash their hands in accordance with 15A NCAC 18A .3328 and shall either use antibacterial soap, dips, or hand sanitizers immediately prior to food preparation or service or use clean, disposable gloves during food preparation or service. This requirement is in addition to all handwashing requirements in Rule .3328 of this Section.

(d) Once served, portions of leftover food shall not be served again unless the package is intact and the food is not potentially hazardous.

(e) Between uses during service, dispensing utensils shall be stored in the food with the dispensing utensil handle extended out of the food or stored clean and dry.

(f) Nothing in the Rules of this Section shall be construed as prohibiting family style food service at adult day service facilities so long as supervision of the participants is maintained throughout each meal except that family style food service may be prohibited during the outbreak and investigation of communicable diseases.

History Note: Authority G.S. 130A-285;

Eff. August 1, 2002;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3309 FOOD SERVICE EQUIPMENT AND UTENSILS

(a) Material and Construction:

- (1) Materials used in the construction of utensils and equipment shall, under normal use conditions, be durable; corrosion-resistant; nonabsorbent; non-toxic; of sufficient weight and thickness to permit cleaning and sanitizing by normal warewashing methods; finished to have a smooth, easily cleanable surface; and resistant to pitting, chipping, cracking, scratching, scoring, distortion, and decomposition;
- (2) Solder shall be comprised of approved, non-toxic; corrosion-resistant materials.
- (3) Wood and wicker shall not be used as food-contact surfaces, except hard maple or an equivalent nonabsorbent wood may be used for cutting boards, cutting blocks or bakers' tables.
- (4) Galvanized metal shall not be used for utensils which have general utility or for utensils or food-contact equipment which contacts beverages or moist or hygroscopic food.
- (5) Linens shall not be used as food-contact surfaces, except that clean linen may be used in contact with bread and rolls.
- (6) Single-use and single-service articles shall be fabricated from approved, clean materials.
- (7) Single-use articles such as formed buckets, bread wrappers, aluminum pie plates and No. 10 cans shall be used only once except that containers made of plastic, glass or other food grade material having smooth sides and of a construction so as to be easily cleaned may be reused.
- (8) Equipment, utensils, and single-service articles that impart odors, color or taste, or contribute to the contamination of food shall not be used.

(b) Design and Fabrication:

- (1) Equipment and utensils shall be designed and fabricated to be durable and sufficiently strong to resist denting and buckling under normal-use conditions.
- (2) Product thermometers and thermometer probes shall be of metal stem-type construction.
- (3) Multi-use food-contact surfaces shall be smooth; free of breaks, open seams, cracks, chips, pits and similar imperfections; free of sharp internal angles, corners and crevices; finished to have smooth welds and joints; and accessible for cleaning and inspection without being disassembled, by disassembling without the use of tools or by easy disassembling with the use of only simple tools such as mallets, screw drivers or wrenches which are kept near the equipment.
- (4) Water filters or any other water conditioning devices shall be designed to be disassembled to provide for periodic cleaning or replacement of the active element.
- (5) Nonfood-contact surfaces shall be nonabsorbent, cleanable, and free of ledges, projections, and crevices that obstruct cleaning.
- (6) Interior surfaces of nonfood-contact equipment shall be designed and fabricated to allow easy cleaning and to facilitate maintenance operations.
- (7) Filters and other grease extracting equipment shall be readily accessible for filter replacement and cleaning.

History Note: Authority G.S. 130A-285;

Eff. August 1, 2002;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3310 SPECIFICATIONS FOR KITCHENS

(a) For adult day service facilities licensed for or serving food to fewer than 30 participants:

- (1) Domestic kitchen equipment may be used. Domestic kitchen equipment shall include at least a two-compartment sink, drainboards or countertop space of adequate size, refrigeration equipment and adequate cooking equipment. Adult day service facilities using multi-service articles shall also provide a dishwasher. In lieu of a dishwasher and two-compartment sink, a three-compartment sink with drainboards or counter top space of adequate size on each end may be used;
- (2) When domestic refrigeration equipment is used the following provisions shall apply:
 - (A) Potentially hazardous foods shall not be prepared prior to the day that such foods are to be served;
 - (B) Potentially hazardous foods that have been heated shall not be reheated or placed in refrigeration to be used in whole or in part on another day; and
 - (C) Salads containing potentially hazardous food shall not be prepared on-site.
- (3) A separate lavatory for handwashing is required in food preparation areas. If the dishwashing area is separate from the food preparation area, an additional lavatory shall be required in the dishwashing area. These handwashing lavatories shall be used only by food service personnel; and
- (4) A commercial hood shall be installed when foods are fried on-site. The hood shall be installed in accordance with the North Carolina Building Code and approved by the local building code enforcement agent.

(b) For adult day service facilities licensed for or serving food to 30 or more participants:

- (1) Approved food service equipment shall be used. When domestic refrigeration equipment is used the following provisions shall apply:
 - (A) Potentially hazardous foods shall not be prepared prior to the day that such foods are to be served;
 - (B) Potentially hazardous foods that have been heated shall not be reheated or placed in refrigeration to be used in whole or in part on another day;
 - (C) Salads containing potentially hazardous food shall not be prepared on-site; and
 - (D) All meats, poultry, and fish shall be purchased in pre-portioned, ready-to-cook form.
- (2) Food service equipment shall include:
 - (A) Where meals are prepared and multi-service articles are used, at least a three-compartment sink with drainboards or counter top space of adequate size on each end, refrigeration equipment, and cooking equipment;
 - (B) Where meals are prepared and only single-service articles are used, at least a two-compartment sink with drainboards or counter top space of adequate size on each end, refrigeration equipment, and cooking equipment; or

- (C) Where no meals are prepared and only single-service articles are used, refrigeration equipment, and at least a domestic two-compartment sink with drainboards or counter top space of adequate size on each end.
- (3) A separate food preparation sink with drainboards shall be provided for the washing and processing of foods except where plan review shows that volume and preparation frequency do not require separate facilities.
- (4) A separate lavatory for handwashing is required in food preparation and food service areas. If the dishwashing area is separate from the food preparation area, an additional lavatory shall be required in the dishwashing area. These handwashing lavatories shall be used only by food service personnel.
- (5) A commercial hood shall be installed when foods are fried on-site. The hood shall be installed in accordance with the North Carolina Building Code and approved by the local building code enforcement agent.

History Note: Authority G.S. 130A-285;

Eff. August 1, 2002;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3311 CLEANING AND SANITIZING OF EQUIPMENT AND UTENSILS

- (a) Multi-use tableware shall be washed, rinsed, and sanitized after each use.
- (b) Food-contact surfaces of equipment and utensils shall be washed, rinsed, and sanitized:
 - (1) Each time there is a change from raw to ready-to-eat foods;
 - (2) Each time there is a change in processing between types of raw animal products such as beef, fish, lamb, pork, and poultry;
 - (3) After any contamination may have occurred;
 - (4) Whenever necessitated by food temperature, room temperature, type of food, and food particle accumulation; and
 - (5) After final use each working day.
- (c) Nonfood-contact surfaces of equipment shall be cleaned as often as is necessary to keep the equipment free of accumulation of dust, dirt, food particles, and other debris.

History Note: Authority G.S. 130A-235;

Eff. August 1, 2002;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3312 MANUAL CLEANING AND SANITIZING

- (a) Adult day service facilities licensed for or serving food to 30 or more participants shall provide and use a three-compartment sink with drainboards or counter top space of adequate size on each end if multi-service eating and drinking utensils are manually cleaned and sanitized.
- (b) Adult day service facilities licensed for or serving food to fewer than 30 participants that use a domestic dishwasher and two-compartment sink for sanitizing multi-service articles shall sanitize as required in Paragraph (e)(4) of this Rule. Sink compartments shall be large enough to submerge the largest items to be washed and each compartment shall be supplied with hot and cold running water.
- (c) If required under Rule .3310 of this Section, drainboards or counter top space of adequate size shall be provided for handling of soiled utensils prior to washing and cleaned utensils following sanitizing. Drainboards or counter top space shall be no less than 24" long. For adult day service facilities licensed for or serving food to fewer than 13 participants and located in a residence, a domestic dishwasher may be used to provide the equivalent of 24" of drainboard space, and other designated areas not contiguous with the sink may be used to meet drainboard or counter top space requirements.
- (d) Equipment and utensils shall be preflushed or prescraped and, when necessary, presoaked to remove gross food particles and soil.
- (e) Except for fixed equipment and utensils too large to be cleaned in sink compartments, manual washing, rinsing, and sanitizing shall be conducted in the following sequence:
 - (1) Sinks shall be cleaned and sanitized prior to use;
 - (2) Equipment and utensils shall be thoroughly washed in the first compartment with a hot detergent solution that is changed when visibly soiled;

- (3) Equipment and utensils shall be rinsed free of detergent and abrasives with clean water in the second compartment; and
- (4) The food-contact surfaces of equipment and utensils shall be sanitized in the third compartment by:
 - (A) Immersion for at least one minute in clean, hot water at a temperature of at least 170°F (77°C);
 - (B) Immersion for at least two minutes in a clean solution containing at least 50 parts per million (ppm) of available chlorine at a temperature of at least 75°F (24°C);
 - (C) Immersion for at least two minutes in a clean solution containing at least 12.5 ppm of available iodine and having a pH not higher than 5.0 and at a temperature of at least 75°F (24°C); or
 - (D) Immersion for at least two minutes in a clean solution containing at least 200 ppm of quaternary ammonium products and having a temperature of at least 75°F (24°C), provided that the product is labeled to show that it is effective in water having a hardness value at least equal to that of the water being used.
- (f) For utensils and equipment which are either too large or impractical to sanitize in a dishwashing machine or dishwashing sink, a spray-on or wipe-on sanitizer shall be used. When spray-on or wipe-on sanitizers are used, the chemical strengths shall be those required for sanitizing multi-use eating and drinking utensils. Spray-on or wipe-on sanitizers shall be prepared daily and kept on hand for bactericidal treatment.
- (g) When hot water is used for sanitizing, the following facilities shall be provided and used:
 - (1) An approved heating device or fixture installed in, on, or under the sanitizing compartment of the sink capable of maintaining the water at a temperature of at least 170°F (77°C); and
 - (2) A numerically scaled indicating thermometer, accurate to $\pm 3^{\circ}\text{F}$ ($\pm 1.5^{\circ}\text{C}$), convenient to the sink for frequent checks of water temperature; and
 - (3) Dish baskets of such size and design to permit complete immersion of the tableware, kitchenware, and equipment in the hot water.
- (h) An approved testing method or equipment, used in accordance with the product manufacturer's instructions, shall be available, convenient, and regularly used to test chemical sanitizers to insure minimum prescribed strengths.
- (i) After sanitization, all equipment and utensils shall be air-dried.

History Note: Authority G.S. 130A-235;
 Eff. August 1, 2002;
 Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3313 MECHANICAL CLEANING AND SANITIZING

- (a) Machine or water line mounted numerically scaled indicating thermometers, accurate to $\pm 3^{\circ}\text{F}$ ($\pm 1.5^{\circ}\text{C}$), shall be provided for commercial dishwashing equipment to indicate the temperature of the water in each tank of the machine and the temperature of the final rinse water as it enters the manifold.
- (b) Drainboards or counter top space of adequate size for the proper handling of soiled utensils prior to washing and cleaned utensils following sanitization shall be provided.
- (c) Equipment and utensils shall be flushed or scraped and, when necessary, soaked to remove large food particles and soil prior to being washed in a dishwashing machine unless a prewash cycle is a part of the dishwashing machine operation. Equipment and utensils shall be placed in racks, trays, or baskets, or on conveyors, in a way that food-contact surfaces are exposed to the unobstructed application of detergent wash and clean rinse waters and that permits free draining.
- (d) Machines using chemicals for sanitization may be used provided that a testing method or equipment is available, convenient, and used to test chemical sanitizers to insure minimum prescribed strengths.
- (e) All dishwashing machines shall be thoroughly cleaned at least once a day or more often when necessary to maintain them in operating condition.
- (f) After sanitization, all equipment and utensils shall be air dried.

History Note: Authority G.S. 130A-235;
 Eff. August 1, 2002;
 Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3314 FOOD SERVICE EQUIPMENT AND UTENSIL STORAGE

- (a) Cleaned and sanitized equipment and utensils shall be handled in a way that protects the food-contact surfaces from contamination. Spoons, knives, and forks shall be touched only by their handles. Cups, glasses, bowls, plates, and similar items shall be handled without contact with inside surfaces or surfaces that contact the user's mouth.

- (b) Cleaned and sanitized utensils and equipment shall be stored above the floor in a clean, dry location in a way that protects them from dust, insects, drip, splash and other contamination and facilitates floor cleaning. The food-contact surfaces of fixed equipment shall also be protected from contamination. Equipment and utensils shall not be placed under exposed sewer lines or water lines, except for automatic fire protection sprinkler heads that may be required by law.
- (c) Single-service articles shall be purchased only in clean containers, shall be stored in a clean, dry container until used, and shall be handled in accordance with the rules of this Section.

History Note: Authority G.S. 130A-235;
Eff. August 1, 2002;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3315 WATER SUPPLY

- (a) Running water under pressure shall be provided in sufficient quantities to meet the needs of cooking, cleaning, drinking, toilets, and outside uses without producing water pressure lower than that required by the North Carolina Plumbing Code.
- (b) The water supply shall meet the requirements of 15A NCAC 18C or 15A NCAC 18A .1700 Protection of Water Supplies. Samples of water shall be collected by the Environmental Health Specialist and submitted to a state certified laboratory for bacteriological analysis annually. Other tests of water quality, as indicated by possible sources of contamination, may be collected by the Environmental Health Specialist.
- (c) No cross-connections with an unapproved water supply shall exist. If potential back-flow conditions exist, an approved back-flow prevention device shall be provided.
- (d) Water heating equipment that is sufficient to meet the maximum expected requirements of the adult day service facility shall be provided. Capacity and recovery rates of hot water heating equipment shall be based on number and size of sinks, capacity of dishwashing machines, capacity of laundering machines, clothing changing facilities, and other food service and cleaning needs. Hot and cold water under pressure shall be easily accessible to all rooms where food is processed or handled, rooms in which utensils or equipment are washed, and other areas where water is required for cleaning and sanitizing, including lavatories and diaper changing areas.
- (e) Hot water heating equipment shall provide hot water as follows:
- (1) at a minimum temperature of 140°F at the point of use when hot water is used for sanitizing; and
 - (2) at a temperature of no less than 90°F and no more than 120°F at hand sinks and in other areas accessible to participants, and in kitchens not used to prepare meals.

History Note: Authority G.S. 130A-235;
Eff. August 1, 2002;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3316 DRINKING WATER FACILITIES

- (a) Drinking fountains of an approved type or individual drinking utensils shall constitute approved drinking water facilities.
- (b) Drinking fountains, if provided, shall be of sanitary angle-jet design and kept clean. The pressure shall be regulated so that the individual's mouth does not come in contact with the nozzle and so that water does not splash on the floor.
- (c) All multi-use utensils used for drinking purposes shall be easily cleanable, cleaned and sanitized after each use. Single-service articles used for drinking water shall be stored and handled so as not to become contaminated by insects, splash, dust, and other contamination.

History Note: Authority G.S. 130A-285;
Eff. August 1, 2002;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3317 TOILETS

- (a) All toilet fixtures and toilet rooms shall be located to comply with the requirements of this Section. Storage in toilet rooms shall be limited to toileting and clothing changing supplies except that cleaning supplies can be stored in toilet rooms in a locked cabinet. All toilet fixtures shall be easily cleanable, and in good repair.
- (b) Toilet fixtures shall be cleaned and sanitized when soiled and at least on a daily basis. A solution of 100 ppm chlorine solution or other equivalent methods approved by the Department shall be used for sanitizing.
- (c) If bedside commodes, bedpans or urinals are used, they shall be located in a room equipped with a spray rinse toilet or utility sink. Bedside commodes, bedpans and urinals shall be emptied and rinsed or discarded when used, and cleaned and

sanitized before use by any other participant, with 100 ppm chlorine solution or equivalent method approved by the Department.

History Note: Authority G.S. 130A-235;

Eff. August 1, 2002;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3318 LAVATORIES AND BATHING FACILITIES

- (a) Lavatories shall be sized and located to comply with the appropriate handwashing requirements of this Section, easily cleanable, in good repair, and kept free of storage.
- (b) All lavatories and bathing facilities shall be equipped with hot and cold running water through mixing faucets except that automatic mixing faucets or pre-mixing devices which provide water at the temperature specified in Rule .3315(e) of this Section may be provided.
- (c) Lavatories shall be cleaned and sanitized as needed and at least on a daily basis. A solution of 100 ppm chlorine or other approved methods shall be used for sanitizing.
- (d) Soap and disposable towels or heated air hand drying device shall be provided at every handwash lavatory area.
- (e) Handwash signs shall be posted at each employee handwashing lavatory.
- (f) If bathing facilities or hydrotherapy equipment are provided, they shall be kept clean. Bathing equipment which has contact with participant's skin shall be cleaned with a detergent and an EPA listed Germicidal disinfectant between participant uses. Manufacturer's instructions shall be followed for cleaning equipment with pumps. A supply of cleaning and disinfectant agents shall be accessible to bathing areas. Chemical test kits shall be used to test the concentration of disinfectants mixed on site.

History Note: Authority G.S. 130A-235;

Eff. August 1, 2002;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3319 CLOTHING AND CLOTHING CHANGING

- (a) Clothing changes shall be done in restrooms or other areas designated for that purpose.
- (b) Clothing Changing surfaces shall be smooth, nonabsorbent, easily cleanable and shall be approved by the Department.
- (c) Clothing Changing surfaces shall be kept free of storage and shall be cleaned with a mild solution of water and detergent and sanitized after each changing. A solution of 100 ppm chlorine or equivalent methods approved by the Department shall be used for sanitizing. A testing method or kit shall be available and used daily to measure sanitizer concentration and insure compliance with the minimum prescribed strength. These solutions shall be used from hand pump spray bottles which are labeled to identify the contents.
- (d) Each clothing changing area shall include a handwash lavatory.
- (e) The use of disposable gloves by caregivers during the clothing changing process is required if the worker has cuts or sores on hands or chapped hands. Gloves shall be discarded after use.
- (f) Caregivers may dispose of feces in the toilet, and soiled clothing shall be placed in a tightly closed plastic bag or other equivalent container approved by the Department and sent daily to the participant's home or a laundry area to be laundered. Clothing shall not be rinsed except where a utility sink is provided for that purpose.
- (g) Only pre-moistened towelettes or paper towels shall be used for cleaning participants during the changing process. Soiled paper or towelettes shall be discarded after use in a covered plastic-lined receptacle.
- (h) Soiled disposable diapers shall be placed in a cleanable, plastic-lined, covered container and removed to an exterior garbage area at least daily.
- (i) Whether or not disposable gloves are used, caregivers shall wash their hands after each individual clothing change in accordance with Rule .3328 of this Section.
- (j) Participant's hands shall be washed in the lavatory after each individual clothing change in accordance with Rule .3328 of this Section.

History Note: Authority G.S. 130A-235;

Eff. August 1, 2002;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3320 STORAGE

- (a) Rooms or spaces shall be provided for the storage of equipment, furniture, clothes, beds, cots, mats, and supplies and shall be kept clean. Shelving or other storage, constructed in a manner to facilitate cleaning, shall be provided for orderly storage of supplies and equipment.
- (b) All corrosive agents, insecticides, rodenticides, herbicides, bleaches, detergents, polishes, items containing petroleum products, any product which is under pressure in an aerosol dispensing can, and any substance which may be hazardous if ingested, inhaled, or handled shall be stored in a locked storage room or cabinet, locked with a combination lock or key except at psychosocial rehabilitation programs where participants need access to the chemicals. Keys shall be kept out of the reach of participants and shall not be stored in the lock.
- (c) A properly mixed sanitizing solution and a mild detergent solution approved by the Department shall not be required to be stored in a locked storage room or locked cabinet. These solutions shall be clearly labeled.
- (d) Medications not under the control of a participant shall be stored in a separate locked cabinet or other locked container. Medications which require refrigeration shall be stored in a locked box or locked container in a refrigerator.
- (e) Closets, lockers, or coat hooks shall be provided for storage of coats, hats, or similar items. Personal items such as toothbrushes, dentures or combs shall be stored in containers labeled with the participant's name.

History Note: Authority G.S. 130A-235;

Eff. August 1, 2002;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3321 BEDS AND LINENS

- (a) All beds, chairs, cots, and mats shall be clean, in good repair and stored to protect them from splash, drip and other contamination.
- (b) Individual beds used for sleeping shall be covered with waterproof, washable material and shall be equipped with individual linen.
- (c) All bed linen shall be kept clean and in good repair and shall be changed between participant uses.
- (d) Blankets, throws or other covers shall be kept clean.
- (e) Linen shall be stored with the individual mat or cot until laundered or stored individually for each participant in a designated area if taken off the mats or cots. Linen shall be laundered a minimum of one time per week, or more often if soiled. Linen used for more than one participant shall be laundered between users. Linen used in clothing changing areas shall be changed and laundered when soiled or at least on a daily basis. Linens shall be large enough to cover the sleeping surface.

History Note: Authority G.S. 130A-235;

Eff. August 1, 2002;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3322 FURNITURE, EQUIPMENT AND ACTIVITY SUPPLIES

Furniture, equipment and activity supplies provided by the adult day service facility shall be of easily cleanable construction, and shall be kept clean and in good repair.

History Note: Authority G.S. 130A-285;

Eff. August 1, 2002;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3323 PERSONNEL

- (a) Employees shall wear clean outer clothing and shall be clean as to their person and methods of foodhandling and participant care. Employees shall keep their fingernails clean and trimmed.
- (b) Hair nets, caps, or similar hair restraints shall be worn by employees engaged in the preparation or service of food. Hair spray, barrettes, or visors are not considered an effective hair restraint.
- (c) Tobacco use in any form is prohibited in the food preparation area. Smoking shall be prohibited in building areas occupied by non-smokers.
- (d) Persons with a communicable disease or a communicable condition shall be excluded from situations in which transmission can be reasonably expected to occur, in accordance with Communicable Disease Control Measures under 15A NCAC 19A .0200. Any person with boils, sores, burns, infected wounds or other potentially draining lesions on the face, neck, hands, lower arms or other exposed skin shall bandage affected area to eliminate exposure to drainage. If exposure to

drainage cannot be eliminated or proper handwashing cannot be maintained, then the employee shall be excluded from the adult day service facility while the condition exists.

(e) Volunteer personnel shall adhere to the same requirements in these Rules as employees.

History Note: Authority G.S. 130A-235;

Eff. August 1, 2002;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3324 FLOORS

(a) Floors and floor coverings of all food preparation, food storage, utensil-washing areas, toilet rooms, maintenance rooms, utility rooms, and laundry areas shall be constructed of nonabsorbent, easily cleanable, durable material such as sealed concrete, terrazzo, ceramic tile, durable grades of linoleum or plastic, or tight wood impregnated with plastic.

(b) Carpeting used as a floor covering shall be of closely woven construction, installed to prevent hazards or obstacles to cleaning, and easily cleanable. Carpeting is prohibited in food preparation areas, equipment and utensil-washing areas, food storage areas, laundry areas, and toilet rooms.

(c) All floors shall be kept clean and maintained in good repair. Carpeting shall be kept clean and dry.

History Note: Authority G.S. 130A-235;

Eff. August 1, 2002;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3325 WALLS AND CEILINGS

(a) The walls and ceilings, including doors and windows, of all rooms and areas shall be kept clean, in good repair, and free of microbial growth. All walls shall be non-absorbent and easily cleanable.

(b) Ceilings in rooms in which food is stored, handled or prepared, utensil-washing rooms, and toilet rooms shall be non-absorbent and easily cleanable. Acoustic ceiling material may be used where ventilation precludes the possibility of grease and moisture absorption.

History Note: Authority G.S. 130A-235;

Eff. August 1, 2002;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3326 LIGHTING AND THERMAL ENVIRONMENT

(a) All rooms and enclosed areas shall be well lighted by natural or artificial means. Lighting shall be capable of illumination to at least 50 foot-candles at food preparation work surfaces. At least 10 foot-candles of light, at 30 inches above the floor, shall be provided in all other areas, including storage rooms. Light fixtures in all areas shall be kept clean and in good repair. Completely shielded bulbs or shatterproof bulbs shall be used in food preparation, storage, and serving areas.

(b) All rooms used by participants shall be heated, cooled, and ventilated to maintain a temperature between 65°F (19°C) and 85°F (30°C). Ventilation may be in the form of operable windows which are screened or by means of mechanical ventilation to the outside. Windows and window treatments shall be kept clean and in good repair. All ventilation equipment, including heating and cooling vents, fans, and all special ventilation equipment which is required for kitchens and toilet rooms, shall be kept clean and in good repair.

History Note: Authority G.S. 130A-285;

Eff. August 1, 2002;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3327 COMMUNICABLE DISEASES AND CONDITIONS

(a) Any person who becomes ill at the adult day service facility and is suspected of having a communicable disease or communicable condition shall be separated from the other participants until leaving the facility.

(b) Each adult day service facility shall include a designated area for a person who becomes ill. When in use, such area shall be equipped with a bed, cot or mat and a vomitus receptacle. All materials shall be sanitized after each use. Linens and disposables shall be changed after each use.

(c) If the area is not a separate room, it shall be separated from space used by other participants by a partition, screen or other means approved by the Environmental Health Specialist to minimize exposure of other participants to a person who is ill. This

designated area shall be proximate to a toilet and lavatory, and where health and sanitation measures can be carried out without interrupting activities of other participants and staff. Ill people shall not be allowed in areas where food is prepared or handled.

(d) Facilities providing adult day health services shall have a treatment room which is separate from areas used for storage and handling of food. The treatment room shall have a hand sink or have a doorway which connects it to a room containing a sink.

History Note: Authority G.S. 130A-235;

Eff. August 1, 2002;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3328 HANDWASHING

(a) Employees shall be instructed that handwashing is the single most important line of defense in preventing the transmission of disease-causing organisms. Employees shall wash hands upon reporting for work; before and after handling food; before feeding participants; before handling clean utensils or equipment; after toileting or handling of body fluids (e.g., saliva, nasal secretions, vomitus, feces, urine, blood, secretions from sores, pustulant discharge); after clothing changing; after handling soiled items such as garbage, mops, cloths, and clothing; and after removing disposable gloves.

(b) Participants shall wash hands upon arrival at the facility; after each clothing change or visit to the toilet; before eating meals or snacks; and after handling animals or animal cages.

(c) Proper handwashing procedures shall include:

- (1) Using soap and tempered running water;
- (2) Rubbing hands vigorously with soap and tempered water for 15 seconds;
- (3) Washing all surfaces of the hands, to include the backs of hands, palms, wrists, under fingernails, and between fingers;
- (4) Rinsing well for 10 seconds;
- (5) Drying hands with a paper towel or mechanical dryer; and
- (6) Turning off faucet with paper towel.

History Note: Authority G.S. 130A-285;

Eff. August 1, 2002;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3329 WASTEWATER

All wastewater shall be disposed of in a publicly-owned wastewater treatment system or by an approved properly operating on-site wastewater system.

History Note: Authority G.S. 130A-235;

Eff. August 1, 2002;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3330 SOLID WASTES

(a) Solid wastes containing food scraps or other putrescible materials shall, prior to disposal, be kept in durable, rust-resistant, nonabsorbent, water-tight, rodent-proof, and easily cleanable containers such as standard garbage cans which shall be covered with tight lids when filled or stored or not in continuous use. Refuse including scrap paper, cardboard boxes and similar items shall be stored in containers, rooms or designated areas approved by the Department.

(b) Facilities shall be provided for the washing and storage of all garbage cans and mops for adult day service facilities, except for facilities certified or licensed for fewer than 13 participants. Cleaning facilities shall include combination faucet, hot and cold running water, threaded nozzle, and curbed impervious pad sloped to drain into an approved sanitary sewage system.

(c) Where containerized systems are used for garbage storage, facilities shall be provided for the cleaning of such systems. A contract for off-site cleaning shall constitute compliance with this Section.

(d) Solid wastes shall be disposed of so as to prevent insect breeding and public health nuisances.

History Note: Authority G.S. 130A-235;

Eff. August 1, 2002;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3331 ANIMAL AND VERMIN CONTROL: PREMISES

- (a) Unrestrained animals, except those used in approved pet therapy programs and service animals accompanying persons with disabilities, shall not be allowed in the adult day service facility, including the outdoor area. Animals shall not be allowed in the food preparation areas. Animal cages, bedding, litter boxes and other pet-related items shall be kept clean.
- (b) Effective measures shall be taken to keep insects, rodents, and other vermin out of the facility and to prevent their breeding or presence on the premises.
- (c) All openings to the outer air shall be protected against the entrance of flying insects. For extermination of flying insects, only approved pyrethrin-based insecticides or a fly swatter shall be used in the food preparation areas. Products shall be used only in accordance with directions and cautions appearing on the manufacturers' labels. Insecticides shall not come in contact with raw or cooked food, utensils, or equipment used in food preparation and serving, or with any other food-contact surface.
- (d) Only those pesticides which have been registered with the U.S. Environmental Protection Agency and the North Carolina Department of Agriculture and Consumer Services shall be used. Pesticides shall be used in accordance with the directions on the manufacturers' label and shall be stored in a locked storage room or cabinet separate from foods and medications.

History Note: Authority G.S. 130A-235;

Eff. August 1, 2002;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3332 OUTDOOR AREAS

- (a) The premises, including the outdoor area, shall be kept clean, drained and free of litter and hazardous materials. Grass and other vegetation shall be maintained in a manner which does not encourage the harborage of vermin.
- (b) All debris, glass, dilapidated structures, and broken equipment shall be removed. The outdoor areas shall be free from unprotected wells, grease traps, cisterns, and utility equipment.

History Note: Authority G.S. 130A-235;

Eff. August 1, 2002;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3333 SWIMMING AND WADING POOLS

- (a) Swimming pools, wading pools and spas shall be designed, constructed, operated and maintained in accordance with the Rules Governing Swimming Pools, 15A NCAC 18A .2500. Copies of these Rules may be obtained from DENR, Division of Environmental Health, Environmental Health Services Section, 1630 Mail Service Center, Raleigh, NC 27699-1630.
- (b) Unfiltered and nondisinfected containments of water shall not be utilized for water recreation activities.

History Note: Authority G.S. 130A-235;

Eff. August 1, 2002;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3334 COMPLIANCE

- (a) The Environmental Health Specialist shall indicate on the Sanitation Inspection of Adult Day Service Facility Form whether the adult day service facility is superior, approved, provisional, or disapproved based on compliance with the rules of this Section. The classification shall be posted in the facility in a conspicuous place designated by the Environmental Health Specialist.
- (b) The degree of compliance is indicated by the total demerit-point score which is shown on the Sanitation Inspection of Adult Day Service Facility Form that the Environmental Health Specialist completes.
 - (1) For the purpose of issuing a license or certificate to a new operator, a Sanitation Inspection of Adult Day Service Facility Form, shall be forwarded to the licensing or certifying agency only when the facility can be granted a superior classification;
 - (2) An adult day service facility shall be classified as superior if the total demerit score is not more than 15 and no 6-demerit-point item is violated;
 - (3) An adult day service facility shall be classified as approved if the total demerit score is more than 15 and not more than 30, and no 6-demerit-point item is violated;

- (4) An adult day service facility shall be classified as provisional if any 6-demerit-point item is violated, or if the total demerit-point score is more than 30 but not more than 45. This provisional period shall not exceed seven days unless construction or renovation is necessary to correct any violation, in which case the Environmental Health Specialist may allow a longer provisional period;
- (5) An adult day service facility shall be classified as disapproved if the demerit score is 46 or more, or if conditions which resulted in a provisional classification have not been corrected in the time period specified by the Environmental Health Specialist;
- (6) If the provisional status period exceeds seven days, or the adult day service facility is disapproved, the licensing or certifying agency shall be notified immediately by forwarding a copy of the inspection report to the Licensing or certifying agency. The Environmental Health Specialist shall notify the licensing or certifying agency in accordance with Rule .3303 of this Section;
- (7) The classification card shall not be removed except by or upon the instruction of the Environmental Health Specialist for the purpose of changing classification cards or establishing another conspicuous location.

(c) The Sanitation Inspection of Adult Day Service Facility Form shall be used to document demerits assessed for violation of the rules of this Section as follows:

- (1) Violation of Rules .3304(a),(b),(c), or (f), or Rule .3303(g)(3) of this Section related to food from approved sources, free of spoilage and adulteration shall be assessed 6 demerits.
- (2) Violation of Rules .3304(e),(f); .3305(a); .3306(g)(2);(h)(2), or .3307(d),(f) of this Section related to potentially hazardous food temperatures shall be assessed 5 demerits.
- (3) Violation of Rules .3304(d),(g),(e); .3306(b); .3307(a),(b),(c),(d),(e),(f),(h), or .3308(a) of this Section regarding food properly handled, packaged and identified shall be assessed four demerits.
- (4) Violation of Rules .3304(e), or .3308(d) of this Section related to not re-serving food shall be assessed four demerits.
- (5) Violation of Rules .3305(a); .3306(c),(d),(e),(f); or .3308(b),(e),(f) of this Section regarding protection of and access to food shall be assessed five demerits.
- (6) Violation of Rules .3306(g)(1),(h)(1); .3307(g), or .3310(a)(2) of this Section regarding refrigerators and hot holding units with thermometers and product thermometers shall be assessed three demerits.
- (7) Violation of Rules .3306; .3307(f); .3310(a),(b); .3312(a),(b),(c),(g), or .3313 of this Section related to food service equipment and utensils meeting specifications for refrigeration, sinks, and dishwashing equipment according to type of service shall be assessed 6 demerits.
- (8) Violation of Rules .3310(a), or (b)(4) of this Section regarding requirements for food service handwash lavatories shall be assessed five demerits.
- (9) Violation of Rules .3309(a) or (b) of this Section regarding other food service equipment and utensils materials of construction and repair shall be assessed four demerits.
- (10) Violation of Rules .3304(e); .3306(a), or (b); .3311(a), or (b); .3312(d),(e),(f), or (i); .3313(c), or (f), or .3316(c) of this Section regarding washing, rinsing and sanitizing food-contact surfaces, equipment and utensils shall be assessed six demerits.
- (11) Violation of Rule .3309(a)(8) of this Section regarding reuse of single-service articles shall be assessed six demerits.
- (12) Violation of Rule .3309(a)(7) of this Section regarding reuse of single-use articles shall be assessed two demerits.
- (13) Violation of Rules .3309(b)(5), or (b)(6), or .3311(c) of this Section regarding cleaning of non-food contact surfaces shall be assessed four demerits.
- (14) Violation of Rules .3314, or .3316(c) of this Section regarding protection of equipment and utensils from contamination shall be assessed four demerits.
- (15) Violation of Rules .3312(f), or (h), or .3313(d) of this Section regarding provision of sanitizing solution and testing equipment used to test sanitizer strength shall be assessed three demerits.
- (16) Violation of Rules .3315(a), or (b) of this Section regarding approval of water supplies shall be assessed six demerits.
- (17) Violation of Rules .3315(d), or (e) of this Section regarding supply and maintenance of hot water shall be assessed six demerits.
- (18) Violation of Rule .3315(c) of this Section regarding cross connections and backflow prevention devices shall be assessed four demerits.
- (19) Violation of Rule .3316 of this Section regarding drinking fountains and drinking utensils shall be assessed four demerits.

- (20) Violation of Rules .3310(a)(3), or (b)(2)(C)(4); .3317(a); .3318(a); or .3319(d) of this Section regarding provision and location of toilets and lavatories shall be assessed five demerits.
- (21) Violation of Rules .3317(b) or .3318(c) of this Section regarding location, sizing, cleaning and sanitizing toilet, lavatory, clothing changing and bathing facilities and availability of cleaning and sanitizing supplies shall be assessed four demerits.
- (22) Violation of Rule .3317(c) of this Section regarding location, cleaning and disinfection of potty chairs, bedpans and urinals shall be assessed four demerits.
- (23) Violation of Rule .3318(d) of this Section regarding lavatories being free of storage and provided with soap and disposable towels or heated-air hand drying devices shall be assessed four demerits.
- (24) Violations of Rules .3319(a),(b), or (d) of this Section regarding clothing changing facilities shall be assessed four demerits.
- (25) Violation of Rules .3318(f) or .3319(c) of this Section regarding cleaning and sanitizing clothing changing facilities and provision of cleaning and sanitizing solutions shall be assessed four demerits.
- (26) Violation of Rules .3319(e),(f),(g),(h),(i), or (j) of this Section regarding clothing changing methods shall be assessed five demerits.
- (27) Violation of Rules .3319(c) or .3320(c) of this Section regarding labeling sanitizers and providing test kits for sanitizers shall be assessed three demerits.
- (28) Violation of Rule .3319(c) of this Section regarding clothing changing surfaces being clean and free of storage shall be assessed two demerits.
- (29) Violation of Rule .3318(e) of this Section regarding posting of handwashing signs shall be assessed two demerits.
- (30) Violation of Rule .3317(a) of this Section regarding storage of medications and other hazardous products shall be assessed six demerits.
- (31) Violation of Rule .3320 of this Section regarding provision and cleaning of storage facilities shall be assessed three demerits.
- (32) Violation of Rule .3321(a) of this Section regarding cleaning, repair and storage of beds, chairs, cots and mats shall be assessed five demerits.
- (33) Violation of Rule .3321(b) of this Section regarding provision of mattress covers and linen shall be assessed five demerits.
- (34) Violation of Rules .3321(c),(d), or (e) of this Section regarding cleaning, repair, handling and storage of linen, blankets, throws and covers shall be assessed four demerits.
- (35) Violation of Rule .3322 of this Section regarding furniture, equipment and activity supplies shall be assessed four demerits.
- (36) Violation of Rules .3323(a) or (b) of this Section regarding hygienic practices, clean clothing and hair restraints for personnel shall be assessed three demerits.
- (37) Violation of Rule .3323(c) of this Section regarding tobacco use shall be assessed five demerits.
- (38) Violation of Rule .3323(d) of this Section regarding exclusion of persons with communicable diseases or conditions shall be assessed six demerits.
- (39) Violations of Rule .3323(d) of this Section regarding bandaging wounds or lesions shall be assessed six demerits.
- (40) Violation of Rules .3324 or .3325 of this Section regarding floors, walls and ceilings shall be assessed four demerits.
- (41) Violation of Rule .3326 of this Section regarding maintenance of lighting and thermal environment shall be assessed four demerits.
- (42) Violation of Rule .3326 of this Section regarding cleaning and repair of lighting, heating, ventilation and cooling equipment shall be assessed two demerits.
- (43) Violation of Rule .3327 of this Section related to providing a designated area for sick participants shall be assessed five demerits.
- (44) Violation of Rule .3327 of this Section related to treatment rooms for adult day health facilities shall be assessed five demerits.
- (45) Violation of Rules .3308(c); .3319(i), or (j); or .3328 of this Section related to handwashing shall be assessed five demerits.
- (46) Violation of Rule .3329 of this Section regarding wastewater disposal shall be assessed six demerits.
- (47) Violation of Rule .3330 of this Section regarding solid waste handling, storage and disposal shall be assessed two demerits.

- (48) Violation of Rule .3330(c) of this Section regarding facilities for cleaning solid waste containers shall be assessed two demerits.
- (49) Violation of Rules .3331(c), or (d) of this Section regarding use of pesticides shall be assessed six demerits.
- (50) Violation of Rule .3331(b), or (c) of this Section regarding control of rodents, insects and other vermin shall be assessed four demerits.
- (51) Violation of Rule .3331(a) of this Section regarding presence of animals shall be assessed four demerits.
- (52) Violation of Rules .3331(b), or .3332 of this Section regarding keeping premises clean, drained, and free of hazards, vermin harborages or breeding areas shall be assessed four demerits.
- (53) Violation of Rule .3333 of this Section regarding swimming pools, wading pools and spas shall be assessed six demerits.
- (54) The sum of all demerits assessed on the Sanitation Inspection of Adult Day Service Facility Form shall be the total demerit score for the facility.

(d) In filling out the inspection form, demerits may be assessed only once for a single occurrence or condition existing within or outside the adult day service facility. Demerits shall be assessed based on actual violations of the Rules of this Section observed during the inspection.

History Note: Authority G.S. 130A-235;

Eff. August 1, 2002;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3335 APPEALS PROCEDURE

Appeals concerning the interpretation and enforcement of the rules in this Section shall be made in accordance with G.S. 150B.

History Note: Authority G.S. 130A-235;

Eff. August 1, 2002;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

SECTION .3400 - COASTAL RECREATIONAL WATERS MONITORING, EVALUATION, AND NOTIFICATION

15A NCAC 18A .3401 DEFINITIONS (EFFECTIVE APRIL 1, 2021)

The following definitions shall apply to this Section:

- (1) "Division" means the Division of Marine Fisheries or its authorized agent.
- (2) "Enterococcus" means a gram positive coccoid-shaped bacteria that is found in the intestinal tracts of warm-blooded animals that include *Enterococcus faecalis*, *Enterococcus faecium*, *Enterococcus avium*, and *Enterococcus gallinarum*.
- (3) "Geometric mean" means the mean of "n" positive numbers obtained by taking the " n^{th} " root of the product of the numbers with at least five samples collected within a 30-day period.
- (4) "Pending swimming advisory" means a notification to the public that recommends no primary contact with the water in a designated swimming area when bacteriological limits are exceeded, but does not close a swimming area to the public. A pending swimming advisory shall include a public notification via social media release to notify the public of the risks of swimming in the area. A pending swimming advisory shall be followed by a resample that will determine if a swimming advisory will be issued.
- (5) "Point source discharge" means the discharge of liquids through a pipe, drain, ditch, or other conveyance into a swimming area.
- (6) "Primary contact" means an activity in water in which a person's head is partially or completely submerged.
- (7) "Resample" means a water sample that is collected by the Division of Marine Fisheries or its authorized agent after the results of the initial water sample collected are processed by the Division and the results are analyzed by the Division.
- (8) "Storm water discharge" means any natural or manmade conveyance of rainwater or the resultant runoff into coastal recreational waters.
- (9) "Swimming advisory" means a notification to the public that recommends no primary contact with the water in a designated swimming area when bacteriological limits are exceeded, but does not close a swimming area to the public. A swimming advisory shall include a sign posted at the site of the advisory

and a public notification via social media and news release to notify the public of the risks of swimming in the area.

- (10) "Swimming area" means a coastal recreation area that is used for primary contact located within waters classified by the Division of Water Resources as SC, SA, or SB as set forth in 15A NCAC 02B .0220 through .0222, and is hereby incorporated by reference including subsequent amendments.
- (11) "Swimming season" means from April 1 through October 31 of each year.
- (12) "Tier I swimming area" means a swimming area used daily during the swimming season, including all oceanfront beaches that are monitored by the Division.
- (13) "Tier II swimming area" means a swimming area that is not used daily during the swimming season.

History Note: Authority G.S. 113-134; 113-221.3; 143B-289.52;
Eff. February 1, 2004;
Readopted Eff. April 1, 2021.

15A NCAC 18A .3401 DEFINITIONS (EFFECTIVE UNTIL MARCH 31, 2021)

The following definitions shall apply throughout Section 18A .3400 of this Subchapter:

- (1) "Enterococcus" means a gram positive coccoid-shaped bacteria that is found in the intestinal tracts of warm-blooded animals that include *Enterococcus faecalis*, *Enterococcus faecium*, *Enterococcus avium*, and *Enterococcus gallinarum*.
- (2) "Geometric mean" means the mean of "n" positive numbers obtained by taking the "n"th root of the product of the numbers with at least five samples collected within a 30 day period.
- (3) "Point source discharge" means the discharge of liquids through a pipe, drain, ditch or other conveyance into a swimming area.
- (4) "Primary contact" means an activity in water in which a person's head is partially or completely submerged.
- (5) "Storm water discharge" means any natural or manmade conveyance of rainwater or the resultant runoff into recreational waters.
- (6) "Swimming advisory" means a notification to the public that recommends no primary contact with the water in a specific area for public health reasons but does not close a swimming area to the public. A swimming advisory shall include a sign posted at the site of the advisory and a press release to notify the public of the risks of swimming in the area.
- (7) "Swimming alert" means a notification to the public by media contact including a press release to warn the public of risks of swimming in an area that exceeds bacteriological swimming area levels.
- (8) "Swimming area" means a coastal recreation area that is used for primary contact located within waters classified by the Division of Water Quality as SA, SB, or SC.
- (9) "Swimming season" means from April 1 through October 31 of each year.
- (10) "Tier I swimming area" means a swimming area used daily during the swimming season, including any public access swimming area and any other swimming area where people use the water for primary contact, including all oceanfront beaches.
- (11) "Tier II swimming area" means a swimming area used an average of three days a week during the swimming season.
- (12) "Tier III swimming area" means a swimming area used an average of four days a month during the swimming season.
- (13) "Winter season" means from November 1 through March 31 of each year.

History Note: Authority G.S. 130A-233.1;
Eff. February 1, 2004.

15A NCAC 18A .3402 BACTERIOLOGICAL LIMITS FOR SWIMMING AREAS (EFFECTIVE APRIL 1, 2021)

- (a) The enterococcus level in a Tier I swimming area shall not equal or exceed either:
 - (1) a geometric mean of 35 enterococci per 100 milliliters of water; or
 - (2) a single sample of 104 enterococci per 100 milliliters of water.
- (b) The enterococcus level in a Tier II swimming area shall not equal or exceed a single sample of 104 enterococci per 100 milliliters of water.

History Note: Authority G.S. 113-134; 113-221.3; 143B-289.52;

Eff. February 1, 2004;
Readopted Eff. April 1, 2021.

15A NCAC 18A .3402 BACTERIOLOGICAL LIMITS FOR SWIMMING AREAS (EFFECTIVE UNTIL MARCH 31, 2021)

- (a) The enterococcus level in a Tier I swimming area shall not exceed either:
- (1) A geometric mean of 35 enterococci per 100 milliliter of water, that includes a minimum of at least five samples collected within 30 days; or
 - (2) A single sample of 104 enterococci per 100 milliliter of water.
- (b) The enterococcus level in a Tier II swimming area shall not exceed a single sample of 276 enterococci per 100 milliliter of water.
- (c) The enterococcus level in a Tier III swimming area shall not exceed two consecutive samples of 500 enterococci per 100 milliliter of water.

History Note: Authority G.S. 130A-233.1;
Eff. February 1, 2004.

15A NCAC 18A .3403 PUBLIC NOTICE OF INCREASED HEALTH RISKS IN SWIMMING AREAS (EFFECTIVE APRIL 1, 2021)

- (a) Tier I Swimming areas:
- (1) A pending swimming advisory shall be issued by the Division of Marine Fisheries if a water sample from a swimming area is equal to or exceeds the bacteriological limit set forth in Rule .3402(a)(2) of this Section during the swimming season.
 - (2) A swimming advisory shall be issued by the Division if either of the following standards are exceeded during the swimming season:
 - (A) Both the initial water sample and resample collected from a swimming area are equal to or exceed the bacteriological limit set forth in Rule .3402(a)(2) of this Section; or
 - (B) The most recent five water samples collected within a 30-day period from a swimming area are equal to or exceed the bacteriological limit set forth in Rule .3402(a)(1) of this Section.
- (b) Tier II swimming areas:
- (1) A pending swimming advisory shall be issued by the Division if a water sample from a swimming area is equal to or exceeds the bacteriological limit set forth in Rule .3402(a)(2) of this Section during the swimming season.
 - (2) A swimming advisory shall be issued by the Division if both the initial water sample and resample collected from a swimming area are equal to or exceed the bacteriological limit set forth in Rule .3402(a)(2) of this Section during the swimming season.
- (c) Signs posted pursuant to this Section shall be placed or erected in open view where the public may see the sign prior to entering the water.
- (d) Signs shall state the following:
- ATTENTION: SWIMMING IN THIS AREA IS NOT RECOMMENDED. BACTERIA TESTING INDICATES LEVELS OF CONTAMINATION THAT MAY BE HAZARDOUS TO YOUR HEALTH. THIS ADVISORY AFFECTS WATERS WITHIN 200' OF THIS SIGN. OFFICE OF THE STATE HEALTH DIRECTOR.

History Note: Authority G.S. 113-134; 113-221.3; 143B-289.52;
Eff. February 1, 2004;
Readopted Eff. April 1, 2021.

15A NCAC 18A .3403 PUBLIC NOTICE OF INCREASED HEALTH RISKS IN SWIMMING AREAS (EFFECTIVE UNTIL MARCH 31, 2021)

- (a) Tier I Swimming areas:
- (1) A swimming advisory shall be issued by the Division when samples of water from a swimming area exceeds a geometric mean of 35 enterococci per 100 milliliter during the swimming season.
 - (2) A swimming alert shall be issued by the Division when a single sample of water from a swimming area exceeds 104 enterococci per 100 milliliter and does not exceed 500 enterococci per 100 milliliter during the swimming season.

- (3) A swimming advisory shall be issued by the Division when a sample of water from a swimming area exceeds a single sample of 500 enterococci per 100 milliliter during the swimming season.
- (4) A swimming advisory shall be issued by the Division when at least two of three concurrent water samples collected at a swimming area exceeds 104 enterococci per 100 milliliter during the swimming season.
- (b) Tier II swimming areas:
 - (1) A swimming alert shall be issued by the Division when a single sample of water from a swimming area exceeds 276 enterococci per 100 milliliter and does not exceed 500 enterococci per 100 milliliter during the swimming season.
 - (2) A swimming advisory shall be issued by the Division when a single sample of water from a swimming area exceeds 500 enterococci per 100 milliliter during the swimming season.
- (c) A Tier III swimming area with a water sample result of 500 enterococci per 100 milliliter or higher on the first sample shall be resampled the following day. If the laboratory results of the second sample exceed 500 enterococci per 100 milliliter a swimming advisory shall be issued by the Division.
- (d) Signs posted pursuant to this Section shall be placed or erected in open view where the public may see the sign(s) prior to entering the water.
- (e) Signs shall convey the following:
 ATTENTION: SWIMMING IN THIS AREA IS NOT RECOMMENDED. BACTERIA TESTING INDICATES LEVELS OF CONTAMINATION THAT MAY BE HAZARDOUS TO YOUR HEALTH. THIS ADVISORY AFFECTS WATERS WITHIN 200' OF THIS SIGN. OFFICE OF THE STATE HEALTH DIRECTOR.

*History Note: Authority G.S. 130A-233.1;
 Eff. February 1, 2004.*

15A NCAC 18A .3404 SWIMMING ADVISORIES FOR POINT SOURCE DISCHARGES INTO SWIMMING AREAS (EFFECTIVE APRIL 1, 2021)

- (a) The Division of Marine Fisheries shall post at least one sign at a wastewater treatment plant that discharges into swimming waters, which shall stay posted until the discharge is removed. The sign for a wastewater treatment plant discharge shall state the following:
 WARNING! SEWAGE TREATMENT EFFLUENT DISCHARGE SITE. SWIMMING IS NOT ADVISED IN THESE WATERS BECAUSE OF THE INCREASED RISK OF ILLNESS. OFFICE OF THE STATE HEALTH DIRECTOR.
- (b) A swimming advisory shall be issued by the Division and at least one sign shall be posted at the public access to swimming waters that have been impacted by a wastewater system failure. The sign for waters impacted by a wastewater spill shall state the following:
 WARNING! WASTEWATER SPILL. SWIMMING IS NOT ADVISED IN THESE WATERS BECAUSE OF THE INCREASED RISK OF ILLNESS. OFFICE OF THE STATE HEALTH DIRECTOR.
- (c) A swimming advisory shall be issued by the Division and at least one sign shall be posted at a storm drain or pipe or storm water discharge that is discharging into a Tier 1 swimming area. A sign shall be placed to advise the public as they enter the area impacted by the storm drain or pipe or storm water discharge. For dry weather discharges, the sign shall state the following:
 WARNING! STORM WATER DISCHARGE AREA. SWIMMING WITHIN 200 YARDS OF THIS SIGN MAY INCREASE THE RISKS OF WATERBORNE ILLNESS. OFFICE OF THE STATE HEALTH DIRECTOR.
- For wet weather discharges, the sign shall state the following:
 WARNING! STORM WATER DISCHARGE AREA. WATERS MAY BE CONTAMINATED BY DISCHARGE FROM PIPE. SWIMMING IS NOT RECOMMENDED WITHIN 200 YARDS OF THIS SIGN DURING ACTIVE DISCHARGE. FOR MORE INFORMATION, CALL 252-726-6827. OFFICE OF THE STATE HEALTH DIRECTOR.
- (d) A swimming advisory shall be issued by the Division and at least two signs shall be posted at a storm drain or pipe where flood waters are being pumped into a swimming area. The signs shall state the following:
 SWIMMING IS NOT RECOMMENDED BETWEEN SIGNS. WATERS MAY BE CONTAMINATED BY DISCHARGE FROM PIPE. OFFICE OF THE STATE HEALTH DIRECTOR.
- (e) A swimming advisory shall be issued by the Division and at least two signs shall be posted at an area receiving dredge material on a swimming beach if the dredge material is being pumped from an area closed to shellfish harvesting. The signs shall state the following:

SWIMMING IS NOT RECOMMENDED BETWEEN SIGNS. WATERS MAY BE CONTAMINATED BY DISCHARGE FROM PIPE. OFFICE OF THE STATE HEALTH DIRECTOR.

History Note: Authority G.S. 113-134; 113-221.3; 143B-289.52;
Eff. January 1, 2004;
Readopted Eff. April 1, 2021.

15A NCAC 18A .3404 SWIMMING ADVISORIES FOR POINT SOURCE DISCHARGES INTO SWIMMING AREAS (EFFECTIVE UNTIL MARCH 31, 2021)

(a) A wastewater treatment plant that discharges into swimming waters shall be posted by the Division with at least one sign until the discharge is removed. The sign(s) for a wastewater treatment plant discharge shall convey the following:

ATTENTION: THESE WATERS MAY BE CONTAMINATED BY HUMAN OR ANIMAL WASTE.
SWIMMING IS NOT ADVISED IN THESE WATERS BECAUSE OF THE INCREASED RISK OF ILLNESS. OFFICE OF THE STATE HEALTH DIRECTOR.

(b) A swimming advisory shall be issued by the Division and at least two signs shall be posted at a storm drain or storm water discharge that is actively discharging into a swimming area. Signs shall be placed to advise the public as they enter the area impacted by the drain. The signs for a storm drain or storm water discharge shall convey the following:

SWIMMING IS NOT RECOMMENDED BETWEEN SIGNS. WATERS MAY BE CONTAMINATED BY DISCHARGE FROM PIPE. OFFICE OF THE STATE HEALTH DIRECTOR.

(c) A swimming advisory shall be issued by the Division and at least two signs shall be posted at a storm drain where flood waters are being pumped into a swimming area. The signs shall remain posted for at least 24 hours after the pumping of flood waters has ceased. The signs shall convey the following:

SWIMMING IS NOT RECOMMENDED BETWEEN SIGNS. WATERS MAY BE CONTAMINATED BY DISCHARGE FROM PIPE. OFFICE OF THE STATE HEALTH DIRECTOR.

(d) A swimming advisory shall be issued by the Division and at least two signs shall be posted at an area receiving dredge material on a swimming beach when the dredge material is being pumped from an area closed to shellfish harvesting. The signs shall convey the following:

SWIMMING IS NOT RECOMMENDED BETWEEN SIGNS. WATERS MAY BE CONTAMINATED BY DISCHARGE FROM PIPE. OFFICE OF THE STATE HEALTH DIRECTOR.

History Note: Authority G.S. 130A-233.1;
Eff. January 1, 2004.

15A NCAC 18A .3405 RESCINDING A PENDING SWIMMING ADVISORY OR SWIMMING ADVISORY (EFFECTIVE APRIL 1, 2021)

(a) A pending swimming advisory shall be rescinded by the Division of Marine Fisheries via social media release when the resample collected meets the bacteriological limit set forth in Rule .3402(a)(2) of this Section.

(b) A Tier I swimming area advisory shall be rescinded by the Division via social media and news release, including the removal of signs, when both of the following conditions are met:

- (1) the geometric mean has met the bacteriological limit set forth in Rule .3402(a)(1) of this Section; and
- (2) two consecutive weekly water samples meet the bacteriological limit set forth in Rule .3402(a)(2) of this Section.

(c) A Tier II swimming area advisory shall be rescinded by the Division via social media and news release, including the removal of signs, after water samples meet the bacteriological limit set forth in Rule .3402(b) of this Section.

(d) A swimming advisory resulting from a flood water discharge or the discharge of dredge material shall be rescinded by the Division via social media and news release, including the removal of signs, 24 hours after the discharge has ceased, to allow for tidal dispersion.

(e) A swimming advisory resulting from a wastewater system failure shall be rescinded by the Division via social media and news release, including the removal of signs, when failure has been corrected and water samples collected meet the bacteriological limit set forth in Rule .3402(a)(2) of this Section.

History Note: Authority G.S. 113-134; 113-221.3; 143B-289.52;
Eff. January 1, 2004;
Readopted Eff. April 1, 2021.

15A NCAC 18A .3405 RESCINDING A SWIMMING ADVISORY OR SWIMMING ALERT (EFFECTIVE UNTIL MARCH 31, 2021)

(a) A Tier I swimming area advisory shall be rescinded when two consecutive weekly water samples and the geometric mean meet the bacteriological limits in Rule 18A .3402(a) of this Section. A swimming alert shall be rescinded within 24 hours of compliance with Rule 18A .3402(a)(2) of this Section.

(b) A Tier II or Tier III swimming area advisory or alert shall be rescinded after water samples meet the bacteriological standard in Rule 18A .3402(b) or (c) of this Section.

(c) A swimming advisory resulting from a point source discharge or the discharge of dredge material shall be rescinded 24 hours after the discharge has ceased.

(d) When a swimming advisory or alert has been rescinded, the Division shall issue a press release to announce the lifting of the advisory or the alert and the sign(s) shall be removed immediately by the Division.

History Note: *Authority G.S. 130A-233.1;*
 Eff. January 1, 2004.

15A NCAC 18A .3406 DESTRUCTION OF SIGNS (EFFECTIVE APRIL 1, 2021)
15A NCAC 18A .3407 APPLICABILITY OF RULES (EFFECTIVE APRIL 1, 2021)

History Note: *Authority G.S. 130A-233.1;*
 Eff. January 1, 2004;
 Repealed Eff. April 1, 2021.

15A NCAC 18A .3406 DESTRUCTION OF SIGNS (EFFECTIVE UNTIL MARCH 31, 2021)
A person shall not mutilate, deface, pull down, destroy, hide, or steal any sign posted pursuant to this Section.

History Note: *Authority G.S. 130A-233.1;*
 Eff. January 1, 2004.

15A NCAC 18A .3407 APPLICABILITY OF RULES (EFFECTIVE UNTIL MARCH 31, 2021)
The rules of this Section shall apply to all marine recreational waters in coastal North Carolina.

History Note: *Authority G.S. 130A-233.1;*
 Eff. January 1, 2004.

SECTION .3500 – RULES GOVERNING THE SANITATION OF PRIMITIVE CAMPS

15A NCAC 18A .3501 DEFINITIONS

The following definitions shall apply throughout this Section:

- (1) "Approved" means food which complies with requirements of the NC Department of Agriculture or the US Department of Agriculture and the requirements of the Rules of this Section. "Approved" also means equipment determined by the Department to be in compliance with the Rules of this Section. Food service equipment which meets and is installed in accordance with National Sanitation Foundation Standards or equal shall be approved. These standards may be obtained from the National Sanitation Foundation, P.O. Box 130140, Ann Arbor, Michigan 48113— 140 and are also available for inspection at the Division of Environmental Health, 1632 Mail Service Center, Raleigh, NC 27699-1632.
- (2) "Department of Environment and Natural Resources" or "Department" means the North Carolina Department of Environment and Natural Resources or its authorized representative. For purposes of any notices required pursuant to the Rules of this Section, notice shall be mailed to "Division of Environmental Health, Environmental Health Services Section, North Carolina Department of Environment and Natural Resources," 1632 Mail Service Center, Raleigh, NC 27699-1632.
- (3) "Employee" means any camp personnel who handles food or drink during preparation or serving, or comes in contact with any eating or cooking utensils, or is employed by the camp at any time in which food or drink is prepared or served.

- (4) "Environmental Health Specialist" shall mean a person authorized to represent the Department on the local or state level in making inspections pursuant to state laws and rules.
- (5) "Equipment" shall mean refrigerators, insulated coolers, buckets, cooking appliances, serving utensils, or any other devices used to serve, hold or prepare food or drink.
- (6) "Food" means any raw, cooked, or processed edible substance, ice, beverage, or ingredient used or intended for use or for sale in whole or in part for human consumption.
- (7) "Good Repair" means capable of being cleaned, sanitized, and used for the intended purpose.
- (8) "Local Health Director" means the administrative head of a local health department or his authorized representative.
- (9) "Off-site" includes packouts, cookouts, or any activity where food is prepared outside the base camp.
- (10) "Permanent sleeping quarters" includes those buildings, cabins, platform tents, covered wagons and teepees that remain in a fixed location during the operating season and are used as primary residences for campers, staff, or user groups.
- (11) "Permit to Operate" means a permit issued by the Department upon review and approval of the operating primitive experience camp plan of operation.
- (12) "Person" means an individual, firm, association, organization, partnership, business trust, corporation, or company.
- (13) "Plan of Operation" means the procedures, methodologies and measures specifically related to food preparation and protection, drinking water, waste disposal and other general sanitation issues the primitive experience camp will employ to protect the health of campers.
- (14) "Potentially hazardous food" means any food or ingredient, natural or synthetic, in a form capable of supporting the growth of infectious or toxigenic microorganisms, including *Clostridium botulinum*. This term includes raw or heat treated foods of animal origin, raw seed sprouts, and treated foods of plant origin. The term does not include foods which have a pH level of 4.6 or below or a water activity (Aw) value of 0.85 or less.
- (15) "Primitive Experience Base Camp" means that portion of the primitive experience camp at a fixed location which contains structures, water supplies, toilets and other facilities necessary for the operation of the camp under the control or ownership of the primitive experience camp permittee.
- (16) "Primitive Base Experience Camp Permit" means the permit is issued for the base camp facilities and appurtenances upon determination that the base camp is in compliance with the Rules of this Section.
- (17) "Primitive Experience Camp" means a camp not served by any public electrical service providers and provides overnight outdoor primitive camping. Primitive Experience Camps include those camp establishments that provide food and overnight lodging accommodations for 72 consecutive hours or more per week at or from a permanent base camp for groups of children or adults engaged in overnight organized recreational or educational programs. Programs are operated and staffed by the camp and supervision of individual campers is a camp responsibility. This definition does not include campgrounds or other facilities that only rent property or camp sites for camping.
- (18) "Responsible person" means the administrator, operator, owner, or other person in charge of the operation at the time of the inspection. If no individual is the apparent supervisor, then any employee may be the responsible person
- (19) Sanitize means the approved bactericidal treatment by a process which meets the temperature and chemical concentration levels in accordance with Rule .3507 of this Section.
- (20) "Sewage" means the liquid and solid human body waste and liquid waste generated by water-using fixtures and appliances, including those associated with foodhandling. The term does not include industrial process wastewater or sewage that is combined with industrial process wastewater.
- (21) "Threat to the Public Health" means circumstances which create a significant risk of serious physical injury or serious adverse health effect.

*History Note: Authority G.S. 130A-248;
Eff. May 1, 2004;*

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3502 PRIMITIVE EXPERIENCE BASE CAMP PERMIT APPROVAL OF PLANS

Plans, drawn to scale, and specifications for primitive experience camps or facilities in existing primitive camps shall include a topographic map of the base camp, buildings, water supply system, waste water disposal system and other appurtenances

necessary to maintain base camp operation and compliance with the rules of this Section. Plans shall also include those sites used on a recurring (at least once each season) basis that are not part of the established base camp but are under the control of the ownership of the camp. Plans and specifications shall be submitted to the health department of the county in which the site is located. Plans, drawn to scale, and specifications shall also be submitted to the local health department for any additions or renovations to existing buildings or any new buildings or facilities in primitive experience camps. The local health department shall require a topographic map upon determination that the proposed changes will impact camp sanitation or drinking water supplies. Construction shall not be started until the plans and specifications have been approved by the local health department.

*History Note: Authority G.S. 130A-248;
Eff. May 1, 2004;*

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3503 PERMIT TO OPERATE

(a) No person shall operate a primitive experience camp within the State of North Carolina who does not possess a valid primitive experience base camp permit and a permit to operate issued by the Department. No permit to operate shall be issued until an evaluation by an environmental health specialist shows that the establishment complies with the Rules of this Section.

(b) The local health department shall review the operations plan and the facilities to determine compliance with the Rules of this Section. Once approved the local health department shall issue a permit to operate for the camp.

(c) Upon transfer of ownership or change of operation upon which the original permit was issued the responsible person shall notify the local health department within 72 hours.

(d) At least 30 days prior to permitting the responsible person shall submit a plan of operation to the local health department to determine compliance with the Rules of this Section. The plan shall include the following:

- (1) Scheduled dates of operation.
- (2) Number of campers and staff expected each session.
- (3) Description of general activities and programs the primitive experience camp will be offering each session.
- (4) Description of how food will be stored, prepared, transported and protected.
- (5) Proof of approved food service training required in Rule .3515(a) of this Section.
- (6) Description of how potable water will be made available, protected, treated and transported at base camp and in the field.
- (7) Description of how solid waste will be contained and disposed.
- (8) Methods of all sewage waste disposal.

(e) Any modifications or changes to the approved plan of operation shall be submitted in writing for approval to the local health department at least 30 days prior to change.

(f) Primitive experience camps that operate six months or less per calendar year and do not offer activities, programs, services or food to the public for pay during the remainder of the year shall also be required to obtain a seasonal permit for each operating season. No primitive experience camp required to pay a fee in accordance with G.S. 130A-248 (d) shall pay more than one annual fee unless the permit has been revoked.

- (1) Primitive experience camps shall submit a seasonal permit application at least 45 days prior to the opening session. The seasonal permit shall include the dates of operation and shall expire six months from the first date of operation. Primitive experience camp management shall provide written documentation to the local health department that the following items have been complied with prior to opening:

- (A) All equipment necessary for food temperature maintenance is operational and clean.
- (B) Utensils and equipment have been cleaned and sanitized.
- (C) The cooking and lodging areas shall be clean and free of vermin harborages.
- (D) All camp facilities are in good repair and clean.
- (E) The operating plans for the season specified in Paragraph (d) of this Rule have been submitted.

- (2) The local health department shall conduct an evaluation at least 30 days prior to the scheduled opening day of camp to verify the water system is in compliance with Rule .3508 Water Supply, of this Section. If the local health department is unable to meet the water sampling requirement, then the camp shall submit a water sample to a certified lab. Results shall be submitted to the local health department.

(g) Transitional permits shall not be issued to Primitive experience camps.

(h) The Department may impose conditions on the issuance of a permit to operate. Conditions may be specified for one or more of the following areas:

- (1) The number of persons served per session.

- (2) The categories of food served.
- (3) Modification or maintenance of water supplies, water use fixtures and sanitary sewage systems.
- (4) Use of facilities for more than one purpose.
- (5) Continuation of contractual arrangements upon which basis the permit was issued.
- (6) Submission and approval of plans for renovation.
- (7) Any other conditions necessary for the primitive experience camps to remain in compliance with the Rules of this Section.

(i) A permit may be suspended or revoked in accordance with G.S. 130A-23. A permit to operate shall not be issued after revocation or suspension until the camp has been reinspected and determined to be in compliance with the Rules of this Section. A reinspection shall be conducted within 30 days, after the request is made by the operator, administrator or other responsible party.

History Note: Authority G.S. 130A-248;

Eff. May 1, 2004;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3504 INSPECTIONS AND RE-INSPECTIONS

(a) For primitive experience camps that operate six months or less per calendar year, an unannounced inspection shall be conducted at least once during the operating season. For primitive experience camps that operate more than six months of each calendar year, an unannounced inspection shall be conducted at least once each six month operating period.

(b) Upon arrival at a primitive experience camp, Environmental Health Specialists shall identify themselves and their purpose in visiting that establishment. Environmental Health Specialists shall inquire as to the identity of the responsible person and invite the responsible person to accompany them during the inspection. Following the inspection, the Environmental Health Specialist shall offer to review the results of the inspection with the responsible person.

(c) Inspections of primitive experience camps shall be done on a form furnished by the Department to local health departments. The form shall provide for at least the following information:

- (1) the name and mailing address of the facility;
- (2) the name of the person to whom the permit is issued;
- (3) the permit and status of approval given;
- (4) standards of construction and operation as listed in Rules .3505 through .3517 of this Section;
- (5) a short explanation for all deficiencies;
- (6) the signature of the Environmental Health Specialist;
- (7) the date.

(d) If it is determined that the camp is not operating according to the approved plan of operation, the permit may be suspended or revoked until discrepancies are corrected.

(e) Grade cards shall not be posted.

History Note: Authority G.S. 130A-248;

Eff. May 1, 2004;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3505 SPECIFIC REQUIREMENTS FOR PRIMITIVE BASE CAMPS

Primitive experience camps base of operations shall comply with the following:

- (1) Any camp buildings such as shelters, storage facilities, food storage facilities, permanent sleeping quarters and sheds, shall be kept clean and in good repair,
- (2) Where bedding including sleeping bags or bed linens is provided by the primitive experience camp, such items shall be washed or laundered between users and kept in good repair.
- (3) All garbage and other solid wastes shall be stored and disposed of in a manner consistent with local, state and federal ordinances, rules and laws.
- (4) Toilet facilities shall be provided at convenient and accessible locations distributed throughout the base of operations at a rate of not more than 20 campers and staff per toilet seat.
- (5) All sewage shall be disposed of in an approved manner.
- (6) Base camps shall comply with Rule .3506 Sanitation of this Section.

History Note: Authority G.S. 130A-248;

Eff. May 1, 2004;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3506 SANITATION

Primitive experience camps may conduct cookouts, overnight trips or similar primitive camping activities provided accepted sanitation standards are maintained in accordance with the provisions of this Section. Written procedures regarding sanitation standards shall be posted or made readily available for inspection by the Department. It is the responsibility of the primitive experience camp to ensure that the approved procedures are being practiced, utilized and maintained. Minimum sanitation requirements for Primitive Experience Camps are as follows:

- (1) Off Site Food: Storage, Preparation and Cooking shall meet the following requirements.
 - (a) Temperature control, food preparation and food protection methods shall be implemented to ensure all potentially hazardous foods stored and prepared for off-site cooking maintain temperatures of 45 degrees or less or 140 degrees or higher and are protected from contamination. Written procedures describing the specific off site cooking activity and the proposed temperature control methods shall be submitted to the Department for approval. Any proposed changes to current procedures shall be submitted at least 10 working days prior to the scheduled activity. Specific approvals will remain valid so long as the activity remains part of the camp program unless the Department determines that procedures are not being maintained in accordance with the approval. The owner may request modifications to the original approval by submitting the request at least 10 working days prior to the scheduled activity. Where potentially hazardous foods are prepared off site, written procedures shall also include methods to prevent cross contamination. For the purpose of off-site food storage coolers with ice or ice packs are considered an approved method of temperature control. Off site potentially hazardous foods once cooked shall be consumed within two hours or discarded. Poultry stuffings, stuffed meats, and stuffings containing meat shall not be used.
 - (b) Potentially hazardous foods shall be thawed:
 - (i) in cold holding units at a temperature not to exceed 45° F (7°C);
 - (ii) under potable running water of a temperature of 70° F (21°C), or below, with sufficient water velocity to agitate and float off loose food particles into the overflow; or
 - (iii) as a part of the conventional cooking process.
 - (c) Potentially hazardous foods requiring cooking shall be cooked to heat all parts of the food to a temperature of at least 140° F (60° C) except as follows:
 - (i) poultry shall be cooked to at least 165° F (74°C) with no interruption of the cooking process; and
 - (ii) pork and any food containing pork shall be cooked to heat all parts of the food to at least 150° F (66° C); and
 - (iii) ground beef and foods containing ground beef shall be cooked to an internal temperature of at least 155° F (68° C); and
 - (iv) rare roast beef shall be cooked to an internal temperature of at least 130° F (54° C); and
 - (v) rare beef steak shall be cooked to a temperature of 130° F (54°C) unless otherwise ordered by the immediate consumer.
 - (d) Liquid eggs, uncooked frozen dry eggs and egg products shall be cooked before consumption. This Paragraph does not apply to pasteurized products.
 - (e) A food thermometer accurate to +/- 2 degrees F (+/- 1 degree C) shall be available to check food temperatures.
- (2) Off-Site Drinking Water
 - (a) Water transported for off site drinking shall be from an approved source and shall be transported and stored in clean, sanitized containers designated solely for this purpose. Where it is not practical to transport drinking water for off site activities, bactericidal treatment measures shall be provided to ensure that drinking water is free from disease causing organisms.
 - (b) Water shall be taken from free-flowing streams, springs and wells, however, water may be taken from still sources when free-flowing sources are unavailable. Water to be treated shall be visibly clear and free from debris, trash and organic matter.
- (3) Approved Methods of Bactericidal Treatment of Off-Site Drinking Water

- (a) Boiling: Water shall be brought to a rolling boil for a minimum of 5 minutes.
- (b) Chlorine: A minimum of 2 ppm free chlorine residual must be maintained for a minimum of 30 minutes. This method shall be used in conjunction with Subitem (3)(a) or (d) of this Rule.
- (c) Iodine: A minimum of 5 drops of 2% tincture of iodine per liter of water. For commercially prepared tablets, use per manufacturer's directions. This method shall be used in conjunction with Subitem (3)(a) or (d) of this Rule.
- (d) Filtration: Filter systems shall be capable of removing bacteria, cysts, and viruses. Filters shall have an absolute pore size of one micron or smaller.
- (4) Utensils and Equipment shall meet the following requirements:
 - (a) All eating, drinking, and cooking utensils, and other items used in connection with the preparation of food shall be kept clean and in good repair.
 - (b) All surfaces intended for multi use between campers or staff with which food or drink comes in contact shall consist of smooth, not readily corrodible, non-toxic materials in which there are no open cracks or joints that will collect food particles, slime, and be kept clean.
 - (c) Multi-use drinking and eating utensils intended for individual use shall be constructed of not readily corrodible, non toxic materials. Those multi-use drinking and eating utensils which do not meet all the construction provisions of Subitem (4)(b) of this Rule, shall be used by only one person and not reassigned to or reused by another individual.
 - (d) Where multi-use utensils are used, they shall be assigned to one individual and not shared until cleaned and sanitized by approved methods.
- (5) Cleaning of Utensils and Equipment shall meet the following requirements:
 - (a) Utensils and equipment shall be kept clean.
 - (b) Water used for cleaning shall meet the requirements of Items (2) and (3) of this Rule.
 - (c) Where an approved sanitizing process can not be implemented, each individual's multi-use utensils shall be cleaned separately to prevent cross contamination.
 - (d) Multi-use utensils may be cleaned together provided they are washed, rinsed, and sanitized by approved methods.
- (6) Handwashing for food preparers shall be in compliance with Rule .3515(c) of this Section.
- (7) Toxic materials shall be labeled and stored to prevent contamination of food, equipment and utensils.
- (8) Where permanent human waste disposal facilities which meet the requirements of 15A NCAC 18A .1900 are not provided at an off site activity, written procedures for waste disposal shall be provided to and approved by the Department. Disposal of human waste shall be in a hole that is at least six inches deep and has a diameter of at least four inches located at least 200 feet from any surface water. After use the hole shall be back filled with a soil to a depth of six inches.

History Note: Authority G.S. 130A-248;

Eff. June 1, 2004;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3507 SANITIZING PROCEDURES

Where required in these Rules, eating and drinking utensils shall be sanitized by one of the following methods:

- (1) Immersion for at least one minute in clean hot water of at least 170° F (77°C). A thermometer accurate to 3° F (5°C) shall be available.
- (2) Immersion for at least two minutes in a chemical bactericide of strength approved by the Department:
 - (a) for chlorine products, a solution containing at least 50 ppm of available chlorine at a temperature of at least 75°F (24°C);
 - (b) for iodophor products, a solution containing at least 12.5 ppm of available iodine and having a pH not higher than 5.0 and having a temperature of at least 75°F (24°C);
 - (c) For quaternary ammonium products, a solution containing at least 200 ppm of QAC and having a temperature of at least 75°F (24°C), provided that the product is labeled to show that it is effective in water having a hardness value at least equal to that of the water being used.
 - (d) Other equivalent products and procedures approved in 21 CFR 178.1010. 21 CFR 178.1010 is incorporated by reference including any subsequent amendments and additions. A copy of applicable provisions may be downloaded from <http://www.gpoaccess.gov/cfr/index.html>.

- (3) A testing method or equipment shall be available, convenient and regularly used to test chemical sanitizers to insure minimum prescribed strengths.

History Note: Authority G.S. 130A-248;
Eff. May 1, 2004;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3508 PRIMITIVE BASE CAMP WATER SUPPLY

(a) Water supplies shall be provided in accordance with 15A NCAC 18A .1700 Rules Governing the Protection of Water Supplies.

(b) Water samples for bacteriological analysis from non-community supplies shall be collected by the Department and submitted to the laboratory section of the Department or another laboratory certified by the Department for analysis, and at least annually thereafter for bacteriological analysis.

(c) Prior to the issuance of a permit, non-community water supplies shall be listed with the Public Water Supply Section, Division of Environmental Health.

(d) Cross-connections with unapproved water supplies, sewage lines, or other potential sources of contamination are prohibited. Hot and cold water shall be provided to food preparation, utensil and handwashing areas, and any other areas in which water is required for cleaning. Water shall be provided in sufficient quantity to carry out all food preparation, utensil washing, hand washing, cleaning, and other water-using operations.

History Note: Authority G.S. 130A-248;
Eff. June 1, 2004;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3509 SWIMMING POOLS

Swimming and wading pools shall be designed, constructed, operated and maintained in accordance with the Rules Governing Public Swimming Pools, 15A NCAC 18A .2500.

History Note: Authority G.S. 130A-248;
Eff. May 1, 2004;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3510 DRINKING WATER FACILITIES

Drinking water facilities shall be provided. Drinking fountains, if provided, shall be of a sanitary angle-jet design, shall be kept clean and shall be regulated such that water flow is at least two inches above the mouth piece. This Rule shall not be interpreted as prohibiting the pitcher service of water or the service of bottled water.

History Note: Authority G.S. 130A-248;
Eff. May 1, 2004;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3511 FOOD SUPPLIES

All food shall be obtained from sources that comply with all laws relating to food and food labeling and shall be properly identified. Food in hermetically sealed containers shall have been processed in a commercial food processing establishment operated in compliance with G.S. 106-120 through 145. Copies of G.S. 106-120 through 145 may be obtained from the Food and Drug Protection Division, North Carolina Department of Agriculture, 2 West Edenton Street, Raleigh NC, 27601-1094. All food shall be clean, wholesome, free from adulteration and spoilage, safe for human consumption, and shall be handled, served, or transported in such a manner as to prevent contamination, adulteration, and spoilage. Only approved containers and utensils may be used. Foods that are spoiled or otherwise unfit for human consumption shall be immediately disposed of as garbage or returned to the source except as specified in Rule .3518 of this Section. Foods to be returned to the source shall be marked as such and stored in a fashion so as not to contaminate other food.

History Note: Authority G.S. 130A-248;
Eff. May 1, 2004;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3512 MILK AND MILK PRODUCTS

- (a) Only Grade "A" pasteurized milk and milk products shall be used. The term "milk products" shall mean milk products as defined in 15A NCAC 18A .1200. Copies of 15A NCAC 18A .1200 may be obtained from the Department of Environment and Natural Resources, Division of Environmental Health, 1632 Mail Service Center, Raleigh, North Carolina 27699-1632.
- (b) The mixing of cream and milk or the pouring of either into jars, bottles, or other containers for storage therein shall be prohibited.
- (c) Bulk milk dispenser containers, as received from the distributor, shall be properly sealed, labeled with the name and grade of the contents and identity of the distributor. Only the outlet seal shall be broken in the establishment.
- (d) Milk and milk products shall be stored in a sanitary manner and shall be kept refrigerated, except when being served. Milk containers shall not be completely submerged in water. However, nothing in these Rules shall prohibit the placement of these items on ice while on display or being served.
- (e) Dry milk and dry milk products must be reconstituted according to manufacturer's directions and may not be stored for later use.

History Note: Authority G.S. 130A-248;

Eff. May 1, 2004;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3513 SHELLFISH

- (a) All shellfish and crustacea meat shall be obtained from sources in compliance with the Department's rules on shellfish and crustacea. Copies of 15A NCAC 18A .0300 through .0900 may be obtained from the Department. If the source of clams, oysters, or mussels is outside the state, the shipper's name shall be on the list of Interstate Certified Shellfish Shippers as published monthly by the Shellfish Sanitation Branch, Food and Drug Administration. If the source of cooked crustacea meat is outside the state it shall be certified by the regulatory authority of the state or territory of origin, and attested by the presence of an official permit number on the container.
- (b) All shucked shellfish and all cooked crustacea meat shall be obtained and stored in the clean single-service shipping containers in which packed at the source. Each original container shall be clearly identified with the name and address of the packer, re-packer, and the abbreviated name of the state. Shucked shellfish unit containers shall be dated in accordance with 15A NCAC 18A .0600.
- (c) All shucked shellfish and all cooked crustacea meat shall be stored in the original container. Each original container shall be clearly identified with the name and address of the packer, repacker and the abbreviated name of the state or territory.
- (d) All shellstock shall be stored in the containers in which packed at the source. Each original container shall be clearly identified with a uniform tag or label bearing the name and address of the shipper, the certificate number issued by the state or territory regulatory authority, the abbreviated name of the state, the name of the waters from which the shellfish were taken, the kind and quantity of the shellstock in the container, and the name and address of the consignee.
- (e) Shellstock shall be stored under refrigeration and in a manner to prevent cross-contamination to or from the shellstock. The re-use of single-service shipping containers and the storage of shucked shellfish in other containers are not allowed.
- (f) After each container of shellstock has been emptied, the management shall remove the stub of the tag and retain it for a period of at least 90 days.
- (g) With the exception of opening shellfish for immediate consumption on the premises, no shellfish shucking shall be performed unless the establishment holds a valid shellfish shucking permit.
- (h) Shellstock washing facilities shall consist of an approved mechanical shellfish washer, or a sink or slab with catch basin, indirectly drained into an approved sewage collection, treatment, and disposal system. The washing shall be done in a clean area, protected from contamination. A can wash facility shall not be used for the washing of shellstock or other foods.
- (i) The cooking of shellfish shall be accomplished in an area meeting the requirements of the rules of this Section.
- (j) Re-use of shells for the serving of food is prohibited. It shall not be considered reuse to remove a shellfish from its shell and return it to that same shell for service to the public. Shells shall be stored in a manner to prevent flies, insects, rodents, and odors.
- (k) All establishments that prepare, serve, or sell raw shellfish shall make available in camp literature to individual parents or guardians of campers or shall post in a conspicuous place where it may be readily observed by the public prior to consumption of shellfish, the following consumer advisory:
"Consumer Advisory

Eating raw oysters, clams, or mussels may cause severe illness. People with the following conditions are at especially high risk: liver disease, alcoholism, diabetes, cancer, stomach or blood disorder, or weakened immune system. Ask your doctor if you are unsure of your risk. If you eat shellfish and become sick, see a doctor immediately."

History Note: Authority G.S. 130A-248;

Eff. May 1, 2004;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3514 ICE HANDLING

(a) Ice which is to be used in drinks, ice water, tea, and coffee, or in connection with the chilling or serving of food shall be manufactured from an approved water supply and shall be stored and handled in a sanitary manner.

(b) Storage boxes shall be covered, located away from sources of contamination, maintained in good repair, and kept clean. Storage bins or boxes shall be provided with rims and covers designed to exclude spillage and drip.

(c) Ice grinders, pans, and buckets used in preparing chipped or crushed ice shall be protected from contamination, cleaned between usages, and kept in good repair; buckets and other containers used in the transportation of ice shall be stored above the floor in a clean place.

(d) Ice shall be dispensed or transferred with a scoop, spoon, or other sanitary method. When not in use, an ice scoop or spoon may be stored in the ice with the handle protruding or on a clean surface. Ice scoops shall not be stored in water. Ice compartments, bowls, buckets, or other containers shall be in good repair; washed and kept free of scum, rust, or other forms of contamination or adulteration and shall be protected from drip, dust, splash, and other means of contamination. Ice shall not be received, used, or accepted when there is evidence that it is not being handled and transported in a sanitary manner.

(e) Ice machines shall be kept clean.

History Note: Authority G.S. 130A-248;

Eff. May 1, 2004;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3515 FOOD SERVICE EMPLOYEES

(a) In order to operate a primitive experience camp the owner, operator, manager or responsible person of the camp who is employed full time in that particular camp must have successfully completed in the past three years a food service sanitation program as described in 15A NCAC 18A .2600. Evidence that a person has completed such a program shall be maintained at the base camp and provided to the Environmental Health Specialist upon request.

(b) No food service employee shall use tobacco in any form while engaged in the preparation, handling or serving of food or washing utensils.

(c) All food service employees shall wash their hands with soap and potable water prior to preparing food or handling of utensils, after each visit to the toilet, and as often as may be necessary to remove soil and contamination.

(d) No person who has a communicable or infectious disease that can be transmitted by foods, or who is a carrier of organisms that cause such a disease, or who has a boil, infected wound, or a disease with sudden onset and severe symptoms including cough and nasal discharge, shall work in food service in any capacity in which there is a likelihood of such person contaminating food or food contact surfaces with disease-causing organisms or transmitting the illness to other persons.

History Note: Authority G.S. 130A-248;

Eff. May 1, 2004;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3516 VERMIN CONTROL: PREMISES:

(a) Only those pesticides shall be used which have been approved for a specific use and properly registered with the Environmental Protection Agency and with the North Carolina Department of Agriculture and Consumer Services in accordance with the "Federal Insecticide, Fungicide & Rodenticide Act" and the "North Carolina Pesticide Law". Such pesticides shall be used as directed on the label and shall be so handled and stored as to avoid health hazards.

(b) Animal stables, if provided, shall be in a location removed from the main recreation center of activity. All manure shall be stored, removed, or disposed of in such a manner as to minimize the breeding of flies.

History Note: Authority G.S. 130A-248;

Eff. May 1, 2004;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3517 MISCELLANEOUS

- (a) Hazardous materials, such as fuel, chemicals, explosives, equipment and apparatuses, shall be handled and stored so as to minimize health hazards in accordance with existing laws, rules and ordinances.
- (b) Protective railings, fences, or similar enclosures shall be kept in good repair.

*History Note: Authority G.S. 130A-248;
Eff. May 1, 2004;*

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3518 PROCEDURE WHEN INFECTION SUSPECTED

When the local health department has reason to suspect the possibility of exposure to, or transmission of, infection within a foodhandling operation from any person or from any food or drink, the local health director shall act in accordance with the Communicable Disease Laws and Rules (G.S. 130A-133 through 148, 10A NCAC 41A).

*History Note: Authority G.S. 130A-248;
Eff. May 1, 2004;*

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3519 INFORMAL REVIEW PROCESS AND APPEALS PROCEDURE

- (a) If a permit holder disagrees with a decision of an Environmental Health Specialist on the interpretation, application or enforcement of the Rules of this Section the permit holder may:
 - (1) Request an informal review pursuant to Paragraphs (d) and (e) of this Rule; or
 - (2) Initiate an appeal in accordance with G.S. 150B.
- (b) The permit holder is not required to complete the alternative dispute resolution prior to initiating an appeal in accordance with G.S. 150B.
- (c) When a petition for a contested case is filed, the informal review process shall terminate.
- (d) If the permit holder requests an informal review, the request shall be in writing and shall be postmarked or hand-delivered to the local health department within seven days of notice of the decision giving rise to the review. The request shall briefly state the issues in dispute. In the event the inspection giving rise to the informal review was conducted by the Environmental Health Supervisor in the county or area where the primitive experience camp is located, or when the county or area has only one Environmental Health Specialist assigned to inspect primitive experience camps, the Regional Environmental Health Specialist assigned to that county or area shall conduct the local informal review. As soon as possible but at least within 30 days of receipt of the request, the person conducting the review shall contact the permit holder, provide that permit holder an opportunity to be heard on the issues in dispute and issue a written decision addressing the issues raised in the appeal. Copies of the decision shall be mailed to the permit holder and to the State Health Director. That decision shall be binding for the purposes of future inspections of the establishment in question unless modified pursuant to Paragraph (e) of this Rule or by the State Health Director.
- (e) Following receipt of the written decision of the Environmental Health Supervisor or his or her representative issued pursuant to Paragraph (d) of this Rule, the permit holder who initiated the informal review may appeal the resulting decision to an Informal Review Officer designated by the Department to be responsible for final decisions on appeals from throughout the state. Notice of such appeal shall be in writing, shall include a copy of the Environmental Health Supervisor's or his or her representative's decision and shall be postmarked or hand-delivered to the Local Health Department and to the Department within seven days of receipt of the written decision issued pursuant to Paragraph (a) of this Rule. Within 35 days of receipt of this appeal, the designated Informal Review Officer shall hold a conference in Wake County. Notice of the time and place of this conference shall be provided to the permit holder and the Environmental Health Supervisor for the county or area where the issue arose. Within 10 days following the date of the conference, the Informal Review Officer shall issue a written decision addressing the issues raised in the appeal and that decision shall be binding for purposes of future inspections of the establishment in question unless modified pursuant to Paragraph (f) of this Rule or by the State Health Director.
- (f) Appeals of the decision of the designated Informal Review Officer shall be in accordance with G.S. 150B.
- (g) Nothing in this Rule shall impact the right of a permit holder to a reinspection pursuant to Rule .3503 of this Section.

*History Note: Authority G.S. 130A-248;
Eff. May 1, 2004;*

SECTION .3600 – RULES GOVERNING THE SANITATION OF RESIDENT CAMPS

15A NCAC 18A .3601 DEFINITIONS

The following definitions shall apply throughout this Section:

- (1) "Approved" means food that complies with requirements of the N.C. Department of Agriculture and Consumer Services or the U.S. Department of Agriculture or 15A NCAC 18A .2600 Rules Governing The Sanitation of Food Service Establishment, and the requirements of the Rules of this Section. "Approved" also means equipment and procedures determined by the Department to be in compliance with the rules of this Section.
- (2) "Children's Foster Care Camp" means a residential child care facility which provides foster care at either a permanent camp site or in a wilderness setting as defined in G.S. 131D and 10A NCAC 70J .0100. Children's Foster Care Camps are licensed by the NC Department of Health and Human Services, Division of Health Service Regulation in accordance with G.S. 131D and 10A NCAC 70J .0100.
- (3) "Department of Environment and Natural Resources" or "Department" means the North Carolina Department of Environment and Natural Resources or its authorized representative. For purposes of any notices required pursuant to the rules of this Section, notice shall be mailed to: Division of Environmental Health, Environmental Health Services Section, North Carolina Department of Environment and Natural Resources, 1632 Mail Service Center, Raleigh, NC 27699-1632.
- (4) "Employee" means any camp personnel paid or volunteer who handle food or drink during preparation or serving, or who come in contact with any eating or cooking utensils, or who work at any time in a room in which food or drink is prepared.
- (5) "Environmental health specialist" means a person authorized to represent the Department on the local or state level in making inspections pursuant to state laws and rules.
- (6) "Equipment" means refrigeration, including racks and shelving used in refrigeration, utensil cleaning and culinary sinks and drain boards, warewashing and dishwashing machines, food preparation tables, counters, stoves, ovens and other food preparation and holding appliances.
- (7) "Food" means any raw, cooked or processed edible substance including meat, meat food products, poultry, poultry products, ice, beverage or ingredient used or intended for use or for sale in whole or in part for human consumption.
- (8) "Good repair" means capable of being cleaned and used for the intended purpose.
- (9) "Hermetically sealed container" means a container designed and intended to be secure against the entry of micro-organisms and to maintain the commercial sterility of its contents after processing.
- (10) "Limited resident camp" means a resident camp that is limited to a total of 90 campers and staff per session. A limited resident camp shall comply with the rules of this Section with the exception of Rule .3628(d) for all equipment excluding required dishwashing facilities.
- (11) "Local health director" means a local health director as defined in G.S. 301A-2(6).
- (12) "Meat" or "meat food products" means meat and meat food products as defined in G.S. 106-549.15(14).
- (13) "Off-site" means packouts, cookouts or any activity where food is prepared outside the approved kitchen facility.
- (14) "Permanent sleeping quarters" means those buildings, cabins, platform tents, covered wagons, or teepees that remain in a fixed location during the resident camp operation and are used as primary residences for campers, staff or user groups.
- (15) "Permit to operate" means a permit issued by the Department upon evaluation and approval of the Resident Camp facility.
- (16) "Person" means a person as defined in G.S. 130A-2(7).
- (17) "Potentially hazardous food" means any food or ingredient, natural or synthetic, in a form capable of supporting the growth of infectious or toxigenic microorganisms, including *Clostridium botulinum*. This term includes raw or heat-treated foods of animal origin, raw seed sprouts and treated foods of plant origin. The term does not include foods that have a pH level of 4.6 or below or a water activity (Aw) value of 0.85 or less.
- (18) "Poultry" or "poultry products" means poultry and poultry products as defined in G.S. 106-549.51(25) and (26).

- (19) "Resident camp" includes camp establishments which provide food and overnight lodging accommodations for 72 consecutive hours or more per week at a permanent base of operations for groups of children or adults engaged in organized recreational or educational programs and has a permanent connection to a public electrical service provider. Programs are operated and staffed by the camp and supervision of individual campers is a camp responsibility. This definition does not include campgrounds or other facilities that only rent property or campsites for camping. This definition does not include Primitive Experience Camp as defined in 15A NCAC 18A .3500. This definition does include Children's Foster Care Camps and Residential Therapeutic (Habilitative) Camps.
- (20) "Residential Therapeutic (Habilitative) Camp" is a residential treatment facility provided in a camping environment which is designed to help individuals develop behavior control, coping skills, self-esteem and interpersonal skills as defined in G.S. 122C and 10A NCAC 27G .5200. Therapeutic camps are licensed by the NC Department of Health and Human Services, Division of Health Service Regulation in accordance with G.S. 122C and 10A NCAC 27G .5200.
- (21) "Responsible person" means the administrator, operator, owner or other person in charge of the operation at the time of the inspection. If no individual is the apparent supervisor, then any staff member is the responsible person.
- (22) "Sanitize" means the approved bactericidal treatment by a process which meets the temperature and chemical concentration levels in Rule .3629 of this Section.
- (23) "Sewage" means sewage as defined in 15A NCAC 18A .1900. Sewage is the liquid and solid human body waste and liquid waste generated by water-using fixtures and appliances, including those associated with food handling. The term does not include industrial process wastewater or sewage that is combined with industrial process wastewater.
- (24) "Shellstock" means any shellfish which remains in their shells. Shellfish which are shucked or on the half-shell shall not be considered shellstock.
- (25) "Single service items" means cups, containers, lids, closures, plates, knives, forks, spoons, stirrers, paddles, straws, napkins, wrapping materials, toothpicks and similar articles intended for one-time, one-person use and then discarded.
- (26) "Utensils" means any kitchenware, tableware, glassware, cutlery, containers and similar items with which food or drink comes in contact during storage, preparation or serving.

History Note: Authority G.S. 130A-235; 130A-248;
Eff. October 1, 2007;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3602 STANDARDS AND APPROVAL OF PLANS

- (a) The owner or manager of a proposed resident camp shall submit plans, drawn to scale, as well as a topographic map, for buildings and equipment, water supply system, wastewater disposal system, and recreational waters to the health department of the county in which the site is located. Plans, drawn to scale, and specifications shall also be submitted to the local health department for any additions or renovations to existing buildings or any new buildings or facilities in existing resident camps. The local health department shall require that the camp submit a topographic map upon determination that the proposed changes will impact camp sanitation or drinking water supplies.
- (b) Construction shall not be started until the plans and specifications have been approved by the local health department.

History Note: Authority G.S. 130A-235; 130A-248;
Eff. October 1, 2007;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3603 PERMITS

- (a) No person shall operate a resident camp within the State of North Carolina who does not possess a valid permit from the Department except that residential therapeutic (habilitative) camps and children's foster care camps licensed by the Department of Health and Human Services, Division of Health Service Regulation are not required to obtain permits. No permit to operate shall be issued until an evaluation by the Department or its authorized agent shows that the resident camp complies with the requirements of this Section.
- (b) Resident camps that operate six months or less per calendar year and do not offer activities, programs, services or food to the public for pay during the remaining six months shall obtain a seasonal permit for each operating season as follows:

- (1) Camps must submit in writing information for a seasonal permit including the name of the camp, the name of the camp owner or responsible person, the physical and billing addresses of the camp, the planned dates of operation, the capacity of the camp including campers and staff, at least 45 days prior to the scheduled opening session. The seasonal permit shall include the dates of operation and shall expire six months from the date of issuance. For non-community water systems regulated under 15A NCAC 18A .1700, the local health department shall conduct a pre-opening evaluation at least 30 days prior to the scheduled opening day of camp to verify the water system is in compliance with Rule .3609 of this Section. If the local health department is unable to meet this requirement, it shall notify the camp and the camp shall submit a water sample to a lab certified by the North Carolina State Laboratory of Public Health to meet this requirement. Community water systems regulated under 15A NCAC 18C are not required to meet this sampling requirement.
 - (2) Prior to opening, resident camps shall provide to the local health department written documentation that:
 - (A) the equipment needed to maintain required food temperatures is operational, clean and sanitized as required;
 - (B) all other equipment and utensils are operational, clean and sanitized as required by the rules in this Section;
 - (C) dishmachines, if any, are clean and operating properly; and
 - (D) kitchen and lodging facilities are in good repair, clean and free of vermin.
- (c) Upon transfer of ownership of an existing resident camp, the Department shall evaluate the facility to determine compliance with this Section. The Department shall issue a permit if the resident camp satisfies all the requirements of this Section. If the Department determines that noncompliant items are construction or equipment problems that do not represent an immediate threat to the public health, a transitional permit shall be issued. The transitional permit shall expire 180 days after the date of issuance, unless suspended or revoked before that date, and shall not be renewed. Upon expiration of the transitional permit, the owner or operator shall have corrected the noncompliant items and obtained a permit, or the resident camp shall not continue to operate.
- (d) The Department may impose conditions on the issuance of a permit or transitional permit. Conditions may be specified for one or more of the following areas:
- (1) number of persons served;
 - (2) categories of food served;
 - (3) time schedules in completing minor construction items;
 - (4) modification or maintenance of water supplies, water use fixtures and sanitary sewage systems;
 - (5) use of facilities for more than one purpose;
 - (6) continuation of contractual arrangements upon which basis the permit was issued;
 - (7) submission and approval of plans for renovation; or
 - (8) other conditions necessary for the resident camp to remain in compliance with this Section.
- (e) A permit or transitional permit may be suspended or revoked in accordance with G.S. 130A-23. A new permit to operate shall be issued only after the resident camp has been reinspected by the Department and found to comply with this Section. This reinspection shall be conducted within a reasonable length of time, not to exceed 30 days, after the operator makes the request.

History Note: Authority G.S. 130A-23; 130A-235; 130A-248;
Eff. October 1, 2007;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3604 PUBLIC DISPLAY OF GRADE CARD

Inspections of resident camps shall be made in accordance with this Section. Upon completion of an inspection, the environmental health specialist shall remove the existing grade card, issue a new grade card and post the new grade card in a conspicuous place where the public may readily observe it upon entering the facility. The owner or operator shall keep the grade card posted at the location designated by the environmental health specialist at all times. If the responsible person of the resident camp objects to the location designated by the environmental health specialist, then the responsible person may suggest an alternative location that meets the criteria of this Rule. The grade card may be posted in another location that meets the criteria of this Rule if agreed upon by the responsible person and the environmental health specialist.

History Note: Authority G.S. 130A-235; 130A-248; 130A-249;
Eff. October 1, 2007;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3605 INSPECTIONS AND REINSPECTIONS

(a) For resident camps that operate six months or less per year, an unannounced inspection shall be conducted at least once during the operating season. For resident camps that operate more than six months per year, an unannounced inspection shall be conducted at least once each six-month operating period.

(b) Upon entry into a resident camp, the environmental health specialist shall identify herself or himself and state the purpose for the visit. The environmental health specialist shall inquire about the identity of the responsible person and invite the responsible person to accompany her or him during the inspection. If no staff member is identified as the responsible person, the environmental health specialist shall invite a staff member to accompany her or him on the inspection. Following the inspection, the environmental health specialist shall offer to review the results of the inspection with the responsible person.

(c) The grading of resident camps shall be done on an inspection form furnished by the Department to local health departments. The form shall provide the following information:

- (1) name and mailing address of the facility;
- (2) name of person to whom permit is issued;
- (3) permit and score given;
- (4) standards of construction and operation as listed in rules .3608 through .3638 of this Section;
- (5) short explanation for all points deducted;
- (6) signature of the environmental health specialist; and
- (7) date.

(d) In filling out the inspection form, points shall be deducted only once for a single occurrence or condition existing within the resident camp. Deductions shall be based on actual violations of the rules of this Section observed during the inspection. The environmental health specialist shall take zero, one-half or a full deduction of points depending upon the severity or the recurring nature of the violation.

(e) In determining whether items or areas of a resident camp are clean for purposes of enforcing the rules set forth in this Section and grading a resident camp, the environmental health specialist shall consider, among other things:

- (1) age of the accumulated material;
- (2) relative percentage of items that are clean and not clean;
- (3) cleaning practices of the resident camp; and
- (4) health risks posed by the circumstances.

(f) Upon request of the camp manager or her or his representative, a reinspection shall be made.

(g) In the case of resident camps that have been closed for failure to comply with the rules of this Section, a reinspection to consider the issuance or reissuance of a permit shall be made by the environmental health specialist.

(h) In the case of resident camps that request an inspection for the purpose of raising the alphabetical grade and hold unrevoked permits, the environmental health specialist shall make an unannounced inspection after the lapse of a reasonable period of time, not to exceed 15 days from the date of the request.

History Note: Authority G.S. 130A-235; 130A-248; 130A-249;

Eff. October 1, 2007;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3606 GRADING

(a) The sanitation grading of all resident camps shall be based on a system of scoring wherein all resident camps receiving a score of at least 90 percent shall be awarded Grade A; all resident camps receiving a score of at least 80 percent and less than 90 percent shall be awarded Grade B; all resident camps receiving a score of at least 70 percent and less than 80 percent shall be awarded Grade C. Permits shall be revoked for establishments receiving a score of less than 70 percent. The Sanitation Inspection of Resident Camps shall be used to document points assessed for violation of the Rules of this Section as follows:

- (1) Violation of Rule .3608 of this Section regarding site factors for camp facilities and activities and actual or potential health hazards shall be assessed a value of one point.
- (2) Violation of Rule .3609 of this Section regarding water supply, hot and cold water heating facilities in food preparation, utensil and hand washing, and areas required for cleaning shall be assessed a value of three points.
- (3) Violation of Rule .3609(d) of this Section regarding cross-connections shall be assessed a value of three points.

- (4) Violation of Rule .3610 of this Section regarding wastewater disposal shall be assessed a value of four points.
- (5) Violation of Rule .3611 of this Section regarding solid waste storage and cleaning facilities shall be assessed a value of two points.
- (6) Violation of Rule .3612 of this Section regarding swimming pools shall be assessed a value of one point.
- (7) Violation of Rule .3613(1) and (2) of this Section regarding camp building floors walls and ceilings construction, cleanliness and repair shall be assessed a value of one point.
- (8) Violation of Rule .3613(3) of this Section regarding lighting and ventilation adequacy and repair shall be assessed a value of one point.
- (9) Violation of Rule .3614(a) and (c) of this Section regarding sleeping quarters and lodging arrangement, cleanliness and repair shall be assessed a value of two points.
- (10) Violation of Rule .3614(b) of this Section regarding effective vermin exclusion shall be assessed a value of two points.
- (11) Violation of Rule .3614(d) of this Section regarding storage and handling of clean and dirty linen and clothing shall be assessed a value of one point.
- (12) Violation of Rule .3615(a), (b), (c) and (d) of this Section regarding approval, accessibility, adequateness, cleanliness and repair of lavatories, bathing and toilet facilities shall be assessed a value of two points.
- (13) Violation of Rule .3615(e) of this Section regarding cleanliness, repair of laundry facilities and handling of clean and soiled laundry shall be assessed a value of one point.
- (14) Violation of Rule .3616 of this Section regarding approval and cleanliness of drinking water facilities shall be assessed a value of two points.
- (15) Violation of Rule .3617(a) and (d) of this Section regarding storage and handling of pesticides and potentially hazardous materials shall be assessed a value of two points.
- (16) Violation of Rule .3617(b) and (e) of this Section regarding cleanliness of the premises and repair of protective enclosures shall be assessed a value of one point.
- (17) Violation of Rule .3617(c) of this Section regarding location of animal stables and approved manure storage and removal shall be assessed a value of two points.
- (18) Violation of Rule .3618(a) of this Section regarding size and construction of food service facilities and dining halls shall be assessed a value of one point.
- (19) Violation of Rule .3618(b) of this Section regarding catering of camp food service shall be assessed a value of two points.
- (20) Violation of Rule .3619 of this Section regarding field sanitation standards and procedures shall be assessed a value of three points.
- (21) Violation of Rule .3620(a) and (c) of this Section regarding food service employee clothing, hair restraints and use of tobacco shall be assessed a value of one point.
- (22) Violation of Rule .3620(b) or (e) of this Section regarding employee handwashing shall be assessed a value of four points.
- (23) Violation of Rule .3620(d) of this Section regarding exclusion of persons with a communicable or infectious disease that can be transmitted by food shall be assessed a value of three points.
- (24) Violation of Rule .3621 of this Section regarding food source, wholesomeness, handling, service and transportation shall be assessed a value of four points.
- (25) Violation of Rule .3622(a) through (f) of this Section regarding food protection during service and storage shall be assessed a value of three points.
- (26) Violation of Rule .3622(g) of this Section regarding storage of dry foods shall be assessed a value of one point.
- (27) Violation of Rule .3623 of this Section regarding milk and milk products shall be assessed a value of two points.
- (28) Violation of Rule .3624 of this Section regarding the source, storage and handling of ice shall be assessed a value of two points.
- (29) Violation of Rule .3625 of this Section regarding shellfish and crustacea meat shall be assessed a value of two points.
- (30) Violation of Rule .3626(a), (b), and (c) of this Section regarding refrigeration and thawing of foods shall be assessed a value of two points.

- (31) Violation of Rule .3626(d) of this Section regarding the protection of food from cross contamination by use of sanitized or gloved hands or utensils, sanitized surfaces and washing of produce shall be assessed a value of three points.
 - (32) Violation of Rule 3626(e) through (m) of this Section regarding time and temperature requirements of foods during storage, preparation, cooking, display, service, and transportation shall be assessed a value of four points.
 - (33) Violation of Rule 3626(n) of this Section regarding food thermometers shall be assessed a value of two points.
 - (34) Violation of Rule .3627 of this Section regarding re-service of foods shall be assessed a value of two points.
 - (35) Violation of Rule .3628 of this Section regarding equipment and utensil construction, repair and cleanliness shall be assessed a value of three points.
 - (36) Violation of Rule .3629(a) through (c), (e), (f), (k) and (n) of this Section regarding washing, rinsing and sanitizing of utensils and equipment shall be assessed a value of four points.
 - (37) Violation of Rule .3629(d), (g) through (j), (l), and (o) of this Section regarding approved dishwashing facilities and methods shall be assessed a value of three points.
 - (38) Violation of Rule 3629(m) regarding the hot water heating facilities for food service needs shall be assessed a value of three points.
 - (39) Violation of Rule .3630 in this Section regarding storage and handling of utensils and equipment shall be assessed a value of two points.
 - (40) Violation of Rule .3631 of this Section regarding food service area storage spaces shall be assessed a value of one point.
 - (41) Violation of Rule .3632 of this Section regarding food service area lighting shall be assessed a value of one point.
 - (42) Violation of Rule .3633 of this Section regarding food service ventilation shall be assessed a value of one point.
 - (43) Violation of Rule .3634 of this Section regarding approved and properly located hand washing lavatory facilities in food service areas shall be assessed a value of three points.
 - (44) Violation of Rule .3635 of this Section regarding the food service area toilet facilities shall be assessed a value of one point.
 - (45) Violation of Rule .3636 of this Section regarding food service area floor construction, cleanliness and repair shall be assessed a value of one point.
 - (46) Violation of Rule .3637 of this Section regarding food service area wall and ceiling construction, cleanliness and repair shall be assessed a value of one point.
 - (47) Violation of Rule .3638(a) through (c) of this Section regarding use of trip kitchens, residential style educational kitchens and domestic kitchens shall be assessed a value of one point.
 - (48) Violation of Rule .3638(d) through (g) of this Section regarding toxic materials, food service laundry, mop and broom storage shall be assessed a value of one point.
 - (49) Violation of Rule .3638(h) and (i) of this Section regarding live animals and pest control measures in food service areas shall be assessed a value of two points.
- (b) The grading of resident camps shall be based on the standards of operation and construction as set forth in Rules .3608 through .3638 of this Section.
- (c) The posted grade card shall be black on a white background. All graphics, letters and numbers for the grade card shall be approved by the State. The alphabetical and numerical sanitation score shall be 1.5 inches in height. No other public displays representing sanitation level of the establishment shall be posted by the local health department, except for sanitation awards issued by the local health department. Sanitation awards shall be in a different color and size from the grade card and must be labeled as an award.
- (d) Nothing in this Rule shall affect the right of a camp manager to a reinspection pursuant to Rule .3605 of this Section.
- (e) Nothing in this Rule shall prohibit the Department from immediately suspending or revoking a permit pursuant to G.S. 130A-23(d).

History Note: Authority G.S. 130A-23; 130A-235; 130A-248; 130A-249; Eff. October 1, 2007; Amended Eff. July 1, 2008; Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3607 PROCEDURE WHEN INFECTION SUSPECTED

When the local health department has reason to suspect the possibility of exposure to, or transmission of, infection within a resident camp from any person or from any food or drink, the local health director shall act in accordance with the Communicable Disease Laws and Rules (G.S. 130A-134 through 148, 10A NCAC 41A).

*History Note: Authority G.S. 130A-235; 130A-485;
Eff. October 1, 2007;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.*

15A NCAC 18A .3608 SITE

The topography, drainage and other site factors for the resident camp facilities and activities, shall be such that the site is free of actual or potential health hazards.

*History Note: Authority G.S. 130A-235; 130A-248;
Eff. October 1, 2007;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.*

15A NCAC 18A .3609 WATER SUPPLY

- (a) In Resident Camps, water supplies shall be in accordance with 15A NCAC 18A .1700, Rules Governing the Protection of Water Supplies.
- (b) Water samples for bacteriological analysis from non-community supplies shall be collected by the Department and submitted to the North Carolina State Laboratory of Public Health or another lab certified by the North Carolina State Laboratory of Public Health for analysis, at least annually for bacteriological analysis.
- (c) Prior to issuance of a permit, the responsible person shall list non-community water supplies with the Public Water Supply Section, Division of Environmental Health.
- (d) Cross-connections with unapproved water supplies, sewage lines or other potential sources of contamination are prohibited.
- (e) Hot water heating facilities shall be provided. Hot and cold running water under pressure shall be provided to food preparation, utensil and handwashing areas, and any other areas in which water is required for cleaning. Running water under pressure shall be provided in sufficient quantity to carry out all food preparation, utensil washing, handwashing, cleaning and other water-using operations.

*History Note: Authority G.S. 130A-235; 130A-248;
Eff. October 1, 2007;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.*

15A NCAC 18A .3610 LIQUID WASTES

All sewage and wastewater in resident camps shall be disposed of in accordance with 15A NCAC 18A .1900 or 15A NCAC 02H .0200.

*History Note: Authority G.S. 130A-235; 130A-248;
Eff. October 1, 2007;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.*

15A NCAC 18A .3611 SOLID WASTES AND BY-PRODUCTS DISPOSAL

- (a) In Resident Camps, all solid wastes containing food scraps and other decomposable material shall, prior to disposal, be kept in leak-proof, non-absorbent containers such as garbage cans, which shall be kept covered with tight-fitting lids when filled or stored, or not in continuous use. Lids shall be kept in place, except for cans inside the kitchen, which are being used during normal operations. The contents of these cans without lids in place shall be removed when the garbage can becomes full, or when flies and foul odor occurs, and the cans shall be washed. Storage racks elevated above the ground are required for outside storage of garbage cans. All dry rubbish (including scrap paper, cardboard or similar items) shall be stored in containers.

(b) The rooms, enclosures, designated areas and containers shall be adequate for the storage of all solid wastes accumulating on the premises. Cleaning facilities, including a mixing faucet with hose threads, shall be provided and each container, room or designated area shall be cleaned after emptying or removal of wastes.

(c) Indoor or outdoor facilities shall be provided for the washing and storage of all garbage cans and mops. Cleaning facilities shall include combination faucet, hot and cold water, threaded nozzle and curbed impervious pad sloped to drain.

(d) Where containerized systems are used for garbage storage, facilities shall be provided for the cleaning of such systems with a dumpster pad sloped to drain into a sewer system and hot and cold running water available for cleaning. Alternate methods can be used for off-site cleaning by having a contract with a waste management company that will take the dumpster or containerized system to an off-site location for cleaning. A contract for off-site cleaning shall constitute compliance with this provision and evidence of such contract shall be made available within 21 days to the Environmental Health Specialist upon request.

History Note: Authority G.S. 130A-235; 130A-248;

Eff. October 1, 2007;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3612 SWIMMING POOLS

When Swimming Pools are provided for recreational use in resident camps, they shall meet the requirements in 15A NCAC 18A .2500, Rules Governing Public Swimming Pools.

History Note: Authority G.S. 130A-235; 130A-248;

Eff. October 1, 2007;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3613 CAMP BUILDINGS CONSTRUCTION AND MAINTENANCE REQUIREMENTS

All resident camp buildings shall be kept clean and in good repair and shall comply with the following specific requirements:

- (1) All floors shall be of such materials and so constructed to be easily cleanable, shall be kept free of obstacles to cleaning and shall be kept clean and in good repair. The floor area shall be sufficient to accommodate all necessary operations. Floors in dressing or locker rooms; laundry rooms; and toilet rooms shall be of non-absorbent materials such as sealed concrete, sealed wood, terrazzo, tile, durable grades of linoleum or plastic. In all rooms in which water is routinely discharged to the floor, or in which floors are subjected to flood-type cleaning, floors shall be sealed concrete, terrazzo, or tile and shall slope to drain and be provided with floor drains.
- (2) The walls of all rooms shall be kept clean and in good repair. All walls and ceilings in dressing or locker rooms; toilet rooms and bathrooms shall be easily cleanable; and walls shall have washable surfaces to the highest level reached by splash or spray in rooms or areas where such occur.
- (3) All rooms and areas shall be well lighted and ventilated, by natural or artificial means, which shall be effective under actual use conditions. Lighting fixtures and ventilation equipment shall be kept clean and in good repair.

History Note: Authority G.S. 130A-235; 130A-248;

Eff. October 1, 2007;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3614 LODGING FACILITIES

(a) In Resident Camps, permanent sleeping quarters shall provide cross ventilation, at least 30 inches between beds, a minimum of six feet between heads of sleepers and at least one bed for every camper. Only single beds or double level bunk beds shall be allowed.

(b) Effective methods, such as mosquito netting, screening and self-closing doors, or individual mosquito netting shall be provided to exclude insects, bats and vectors.

(c) Lodging facilities shall be kept clean and in good repair.

(d) Clean linen and clothes shall be stored and handled separately from soiled linen and clothes.

History Note: Authority G.S. 130A-235; 130A-248;

Eff. October 1, 2007;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3615 TOILET: HANDWASHING: LAUNDRY: AND BATHING FACILITIES

- (a) All resident camps shall be provided with toilet and handwashing facilities within 500 feet of permanent sleeping quarters.
- (b) Toilet facilities shall be provided at a rate of not more than 20 campers and staff per toilet seat. Urinals may be provided for up to one-third of required seats for males.
- (c) Lavatory facilities with potable running water, soap and individual towels or hand-drying devices shall be provided and located convenient to all toilet facilities.
- (d) Bathing facilities shall be provided with hot and cold potable water.
- (e) All toilet, handwashing and bathing fixtures shall be kept clean and in good repair.
- (f) Laundry facilities, if provided, shall be kept clean and in good repair. Soiled laundry shall be handled and stored separately from clean laundry. Clean linen and clothes shall be stored and transported in clean containers.

*History Note: Authority G.S. 130A-235; 130A-248;
Eff. October 1, 2007;*

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3616 DRINKING WATER FACILITIES

In Resident Camps, drinking water facilities shall be provided. Drinking fountains, if provided, shall be of a sanitary angle-jet design, shall be kept clean and shall be properly regulated such that water flow is at least two inches above the mouth piece. This Rule shall not be interpreted as prohibiting the pitcher service of ice water or the service of bottled water.

*History Note: Authority G.S. 130A-235; 130A-248;
Eff. October 1, 2007;*

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3617 PREMISES: VERMIN CONTROL AND MISCELLANEOUS

- (a) In Resident Camps, only those pesticides shall be used which have been approved for a specific use and properly registered with the Environmental Protection Agency and with the North Carolina Department of Agriculture and Consumer Services. Such pesticides shall be used as directed on the label and shall be handled and stored to avoid health hazards.
- (b) The Resident Camp premises shall be kept neat, clean and free of litter.
- (c) Animal stables, if provided, shall be in a location removed from the main recreation center of activity. All manure shall be stored, removed or disposed of to minimize the breeding of flies.
- (d) Potentially hazardous materials such as fuel, chemicals, explosives, equipment and apparatuses, shall be handled and stored to minimize health hazards.
- (e) Protective railings, fences or similar enclosures around the camp shall be provided and shall be kept in good repair.

*History Note: Authority G.S. 130A-235; 130A-248;
Eff. October 1, 2007;*

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3618 FOOD SERVICE FACILITIES

- (a) In Resident camps, food service facilities shall include a kitchen of adequate size for the number of meals served. The facility shall be completely enclosed, of permanent construction and contain a dining hall providing protection from the elements and dust.
- (b) If camp food service is provided by contract with an outside person or camp food service is operated by an outside firm, the overall responsibility for food service sanitation remains with the camp management. The camp management shall confirm that all food provided by an outside person is approved.

*History Note: Authority G.S. 130A-235; 130A-248;
Eff. October 1, 2007;*

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3619 FIELD SANITATION

Resident camps may conduct cookouts, overnight trips or similar primitive camping activities provided field sanitation standards are maintained in accordance with the provisions of the rules of this Section. Written procedures regarding field sanitation standards shall be posted or made readily available for inspection by the Department. The resident camp shall ensure the approved procedures are being practiced, utilized and maintained. Field sanitation requirements for resident camps are as follows:

- (1) Off-Site Food: Storage, Preparation and Cooking shall meet the following requirements:
 - (a) Temperature control, food preparation and food protection methods shall be implemented to ensure all potentially hazardous foods stored and prepared for off-site cooking maintain temperatures of 45 degrees F (7 degrees C) or less or 135 degrees F (57 degrees C) or higher and are protected from contamination. Written procedures describing the specific off-site cooking activity and the proposed temperature control methods shall be submitted to the Department for approval. Any proposed changes to current procedures shall be submitted to the Department for approval. Specific approvals shall remain valid so long as the activity remains part of the camp program unless the Department determines that procedures are not being maintained in accordance with the approval. Where potentially hazardous foods are prepared off-site, written procedures shall also include methods to prevent cross contamination. For the purpose of off-site food storage, coolers with ice or ice packs are an approved method of temperature control. Off-site potentially hazardous foods once cooked shall be consumed within two hours or discarded. Poultry stuffings, stuffed meats and stuffings containing meat shall not be used.
 - (b) Potentially hazardous foods shall be thawed as follows:
 - (i) in cold holding units at a temperature not to exceed 45 degrees F (7 degrees C);
 - (ii) under potable running water of a temperature of 70 degrees F (21 degrees C), or below, with sufficient water velocity to agitate and float off loose food particles into the overflow; or
 - (iii) as a part of the cooking process.
 - (c) Potentially hazardous foods requiring cooking shall be cooked to heat all parts of the food to a temperature of at least 145 degrees F (63 degrees C) except as follows:
 - (i) poultry shall be cooked to at least 165 degrees F (74 degrees C) with no interruption of the cooking process;
 - (ii) pork and any food containing pork shall be cooked to heat all parts of the food to at least 150 degrees F (66 degrees C);
 - (iii) ground meat food products shall be cooked to an internal temperature of at least 155 degrees F (68 degrees C);
 - (iv) roast beef shall be cooked to an internal temperature of at least 130 degrees F (54 degrees C); and
 - (v) beef steak shall be cooked to a temperature of 130 degrees F (54 degrees C) unless otherwise ordered by the immediate consumer.
 - (d) Liquid eggs, uncooked frozen dry eggs and egg products shall be cooked before consumption. This Sub-item does not apply to pasteurized products.
 - (e) A metal stem-type food thermometer accurate to 2 degrees F (1 degree C) shall be available to check potentially hazardous food temperatures.
- (2) Off-Site Drinking Water shall meet the following requirements:
 - (a) Water transported for off-site drinking shall be from an approved source and shall be transported and stored in clean, sanitized containers designated solely for this purpose. Where it is not practical to transport drinking water for off-site activities, treatment measures shall be provided to ensure that drinking water is free from disease causing organisms.
 - (b) Water shall be taken from free-flowing streams, springs and wells if available. Water may be taken from still sources when free-flowing sources are unavailable. Water shall be visibly clear and free from debris, trash and organic matter.
- (3) Treatment of Off-Site Drinking Water shall meet the following requirements:
 - (a) Water shall be brought to a rolling boil for a minimum of one minute; or
 - (b) Water shall be filtered to remove cysts and viruses by using a filtration system with an absolute pore size of one micron or smaller, and treated with:
 - (i) A minimum of 2 parts per million of free chlorine residual maintained for a minimum of 30 minutes; or

- (ii) A minimum of 5 drops of 2 percent tincture of iodine per liter of water. For commercially prepared tablets, manufacturer's directions shall be followed; or
- (c) Alternate methods of treatment capable of removing bacteria, viruses, cysts and parasites if approved by the Department. Documentation that demonstrates the method is equivalent to SubItem (3)(a) or (b) of this Rule shall be submitted by the owner or operator for approval.
- (4) Utensils and Equipment shall meet the following requirements:
 - (a) All eating, drinking and cooking utensils, and other items used in connection with the preparation of food shall be kept clean and in good repair.
 - (b) All surfaces intended for multi-use between campers or staff with which food or drink comes in contact shall consist of smooth, not readily corrodible, non-toxic materials in which there are no open cracks or joints that will collect food particles or slime and be kept clean.
 - (c) Multi-use drinking and eating utensils which do not meet all the construction provisions of SubItem (4)(b) of this Rule shall be used by only one individual, constructed of not readily corrodible, non-toxic materials, and shall not be reassigned to or reused by another individual.
 - (d) Where multi-use eating utensils are used, they shall be assigned to one individual and not shared until cleaned and sanitized by approved methods.
- (5) Cleaning of Utensils and Equipment shall meet the following requirements:
 - (a) Utensils and equipment shall be kept clean.
 - (b) Water used for cleaning shall meet the requirements of Items (2) and (3) of this Rule.
 - (c) Where an approved sanitizing process cannot be implemented, each individual's multi-use utensils shall be cleaned separately to prevent cross-contamination.
 - (d) Multi-use utensils not assigned for individual use may be cleaned together provided they are washed, rinsed and sanitized by approved methods.
- (6) Handwashing for food preparers shall be in compliance with Rule .3620(b) of this Section. Facilities shall be provided for employees' handwashing; these may consist of a pan, potable water, soap and single-use towels. Hair restraints are not required for field sanitation employees.
- (7) Toxic materials shall be labeled and stored to prevent contamination of food, equipment and utensils.
- (8) Where permanent human waste disposal facilities which meet the requirements of 15A NCAC 18A .1900 are not provided at an off-site activity, written procedures for waste disposal shall be provided to and approved by the Department. Disposal of human waste shall be in a hole that is at least six inches deep and has a diameter of at least four inches located at least 200 feet from any surface water. After use, the hole shall be back filled with soil to a depth of six inches.

*History Note: Authority G.S. 130A-235; 130A-248;
Eff. October 1, 2007;*

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3620 FOOD SERVICE EMPLOYEES

- (a) In Resident Camp food service, all employees shall wear clean outer clothing and shall be clean as to their person and methods of food handling. No employee shall use tobacco in any form while engaged in the washing of eating and cooking utensils or in the preparation, handling or serving of food.
- (b) Employees shall wash their hands in a lavatory which meets the requirements of Rule .3634 of this Section before starting work, after each visit to the toilet, and as often as may be necessary to remove soil and contamination.
- (c) Effective hair restraints such as hairnets, caps or wrap around visors shall be worn by employees engaged in the preparation or handling of food to prevent the contamination of food or food contact surfaces. Wigs and hairspray do not constitute compliance with this Rule. This Rule does not apply to employees who only serve beverages, set tables, or participate in family dining-table type of service if they present a minimal risk of contaminating exposed food.
- (d) No person who has a communicable or infectious disease that can be transmitted by foods, or who is a carrier of organisms that cause such a disease, or who has a boil, infected wound, or a disease with sudden onset and severe symptoms including cough and nasal discharge, shall work in food service in any capacity in which there is a likelihood of such person contaminating food or food contact surfaces, with disease-causing organisms or transmitting the illness to other persons.
- (e) Employees may have beverages in areas where food is prepared as long as those beverages are covered and consumed in a sanitary manner. Beverage containers shall not be stored on or above a food contact surface and must be handled in a manner to avoid cross-contamination.

*History Note: Authority G.S. 130A-235; 130A-248;
Eff. October 1, 2007;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.*

15A NCAC 18A .3621 FOOD SUPPLIES

In Resident Camps, all food shall be obtained from sources that comply with all laws relating to food and food labeling and shall be identified. All meat, meat food products, poultry and poultry products shall have been inspected for wholesomeness where required under a federal, state or local regulatory program; and, the source shall be identifiable from labeling on carcasses, cuts, unit packages, bulk packages or from bills of sale. All food shall be clean, wholesome, and free from adulteration and spoilage, safe for human consumption and shall be handled, served or transported in such a manner to prevent contamination, adulteration and spoilage. Only approved containers and utensils may be used. Foods that are spoiled or otherwise unfit for human consumption shall be immediately disposed of as garbage or returned to the source except as specified in Rule .3607 of this Section. Foods to be returned to the source shall be marked as such and stored in a fashion not to contaminate other food.

*History Note: Authority G.S. 130A-235; 130A-248;
Eff. October 1, 2007;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.*

15A NCAC 18A .3622 FOOD PROTECTION

(a) In Resident Camps, all unwrapped or unenclosed food and drink on display shall be protected in such manner that the direct line from the customer's mouth to the food shall be intercepted by glass or similar shields and shall be otherwise protected from public handling or other contamination, except that hand openings may be permitted on counter fronts. A continually staffed beverage station is not required to provide glass or similar shields for beverages, ice and beverage garnishes. Contaminated beverages, ice or beverage garnishes shall be removed from the beverage station. This requires counter protector installations for all cafeteria counters, salad bars and similar type service to prevent contamination by customers' coughing and sneezing. Nothing in this Rule shall require food kept in enclosed cases to be wrapped or covered as long as effective measures are taken to prevent contamination in multi-level shelving units.

(b) Consumer self-service is permitted only under the following conditions:

- (1) Buffet-style service. Protective shields, equivalent to counter protectors, are provided to intercept contamination.
- (2) Consumer self-service. When customers are allowed to return to a self-service area, clean and sanitized tableware other than flatware, beverage cups and glasses, shall be made available for each return trip. Written notice shall be provided informing customers that clean tableware needs to be used for return trips.
- (3) Family-style service. In resident camps featuring this style of service, patrons elect to participate in the family dining-table type of service. Ordinary serving dishes and utensils are acceptable.
- (4) Private events. When service is provided for a club, organization or private individual at a planned event from which the public is excluded:
 - (A) potentially hazardous foods shall be replaced at least every two hours;
 - (B) food containers shall be arranged conveniently so consumers' clothing does not come in contact with food;
 - (C) dispensing utensils shall be in the food with their handles at least two inches above the top of the food and the container;
 - (D) at the conclusion of the event, food that has not been consumed, shall be discarded; and
 - (E) protective shields are not required for buffet-style service.

(c) Foods, except raw vegetables that are to be cooked, shall be kept under cover when not in the process of preparation and serving. Foods shall not be stored on the floor, or in direct contact with shelves and racks of cold storage boxes, or permitted to come in contact with dirty clothes, newspapers, pasteboard, previously-used paper or other contaminated surfaces. If open dishes and pans containing food are stacked, food shall be protected with wax paper, foil or plastic food film. Food transported to a camp shall not be accepted unless wrapped, boxed or covered to prevent contamination and maintained at temperatures required in Rule .3626 of this Section. Food and drink shall not be served to the general public in the kitchen.

(d) Containers for onions, slaw, mustard and other condiments not kept in accordance with the requirements of Paragraph (a) of this Rule shall have covers and be kept covered when not in use. Sugar shall be dispensed with either pour-type dispensers or individual packages. Staff shall avoid unnecessary handling of food in the process of serving.

- (e) Dustless methods of floor cleaning shall be used and all except emergency floor cleaning shall be done during those periods when the least amount of food and drink is exposed, such as after closing, or between meals.
- (f) Foods shall not be stored under exposed sewer lines.
- (g) Dry beans, grits, flour, sugar and similar food products shall be stored in approved, covered containers, or glass jars and labeled accordingly.

History Note: Authority G.S. 130A-235; 130A-248;

Eff. October 1, 2007;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3623 MILK AND MILK PRODUCTS

- (a) Only Grade "A" pasteurized milk and milk products shall be used for campers and staffing in resident camps. The term "milk products" shall mean milk products as defined in 15A NCAC 18A .1200. Copies of 15A NCAC 18A .1200 may be obtained from the Department of Environment and Natural Resources, Division of Environmental Health, 1632 Mail Service Center, Raleigh, NC 27699-1632.
- (b) The mixing of cream and milk or the pouring of either into jars, bottles or other containers for storage is prohibited. Where meals are served in a communal or family type dining area, milk may be served by pouring it into individual glasses or cups from original containers of not more than one-gallon capacity, which have been provided by a milk distributor. The milk remaining in the container shall be immediately refrigerated and used for cooking purposes only. The transfer of milk from its original container into any type of container other than glasses or cups as specified in this Rule is prohibited.
- (c) Bulk milk dispenser containers, as received from the distributor, shall be sealed, labeled with the name and grade of the contents and identity of the distributor.
- (d) Milk and milk products shall be stored in a sanitary manner and shall be kept refrigerated, except when being served. Milk containers shall not be completely submerged in water. Nothing in the rules in this Section shall prohibit the placement of milk and milk products on ice while on display or being served.
- (e) Reconstituted dry milk and dry milk products may be used in instant desserts and whipped products, or for cooking and baking purposes.

History Note: Authority G.S. 130A-235; 130A-248;

Eff. October 1, 2007;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3624 ICE HANDLING

- (a) In Resident Camps, ice that is to be used in fountain drinks, ice water, tea and coffee, or in connection with the chilling or serving of salads, vegetables or other foods shall be manufactured from a water supply meeting the requirements of Rule .3609 of this Section and shall be stored and handled in a sanitary manner.
- (b) Storage boxes shall be covered, located away from sources of contamination, maintained in good repair and kept clean. Storage bins or boxes shall be provided with rims and covers designed to exclude spillage and drip.
- (c) Ice grinders, pans and buckets used in preparing chipped or crushed ice shall be protected from contamination, cleaned between usages and kept in good repair. Buckets and other containers used in the transportation of ice shall be stored above the floor in a clean place.
- (d) Ice shall be dispensed or transferred with a scoop, spoon or other sanitary method. When not in use, an ice scoop or spoon may be stored in the ice with the handle protruding or on a clean surface. Ice scoops shall not be stored in water. Fountain ice compartments, bowls, buckets or other containers shall be in good repair; washed and kept free of scum, rust, and mold; and shall be protected from drip, dust, splash and other means of contamination. Ice shall not be received, used or accepted when there is evidence that it is not being handled and transported in a sanitary manner.
- (e) Ice machines shall be kept clean.

History Note: Authority G.S. 130A-235; 130A-248;

Eff. October 1, 2007;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3625 SEAFOOD

- (a) In Resident Camps, all shellfish and crustacea meat shall be obtained from sources in compliance with 15A NCAC 18A .0300 through .0900 which may be obtained from the Department. If the source of clams, oysters, or mussels is outside the

state, the shipper's name shall appear on the "Interstate Certified Shellfish Shippers List" as published monthly by the Shellfish Sanitation Branch, Food and Drug Administration. If the source of the cooked crustacea meat is within the United States, the processor's name, address, and certificate number with State abbreviation shall appear on the container. If the source of the cooked crustacea meat is outside the United States, containers must meet Federal labeling requirements, Food and Drug Administration, HHS Food Labeling requirements, 21 CFR Chapter 1, Part 101-Food Labeling.

(b) All shucked shellfish shall be stored in the original container. Each original container shall be identified with the name and address of the packer or repacker, and the certification number, and the abbreviated name of the state or territory. Shucked shellfish unit containers shall be dated in accordance with 15A NCAC 18A .0600.

(c) All shellstock shall be stored in the containers in which packed at the source. Each original container shall be identified with a uniform tag or label bearing the name and address of the shipper, the certificate number issued by the state or territory regulatory authority, the abbreviated name of the state, the name of the waters from which the shellfish were taken, the date of harvest, the kind and quantity of the shellstock in the container, and the name and address of the consignee.

(d) Shellstock shall be stored at temperatures and by methods in accordance with 15A NCAC 18A .0427. The re-use of single-service shipping containers and the storage of shucked shellfish in other containers are not allowed.

(e) After each container of shellstock has been emptied, the management shall remove the tag and retain it for a period of at least 90 days.

(f) With the exception of opening shellfish for immediate consumption on the premises, no shellfish shucking shall be performed unless the resident camp holds a valid shellfish shucking permit issued by the department.

(g) Shellstock washing facilities shall consist of a mechanical shellfish washer, or a sink or slab with catch basin, indirectly drained into a sewage collection, treatment, and disposal system. The washing shall be done in a clean area, protected from contamination. A can wash facility shall not be used for the washing of shellstock or other foods.

(h) The cooking of shellfish shall be accomplished in an area meeting the requirements of the rules of this Section.

(i) Re-use of shells for the serving of food is prohibited. It shall not be considered reuse to remove a shellfish from its shell and return it to that same shell for service to the public. Shells shall be stored in a manner to prevent flies, insects, rodents, and odors.

(j) All resident camps that prepare, serve, or sell raw shellfish shall post in a conspicuous place where it may be readily observed by the public prior to consumption of shellfish, the following consumer advisory:

"Consumer Advisory

Eating raw oysters, clams, or mussels may cause severe illness. People with the following conditions are at especially high risk: liver disease, alcoholism, diabetes, cancer, stomach or blood disorder, or weakened immune system. Ask your doctor if you are unsure of your risk.

If you eat shellfish and become sick, see a doctor immediately."

(k) Cooked crustacea meat shall be held at 40° F or less.

*History Note: Authority G.S. 130A-235; 130A-248;
Eff. October 1, 2007;*

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3626 REFRIGERATION: THAWING: AND PREPARATION OF FOOD

(a) All potentially hazardous foods requiring refrigeration shall be kept at or below 45 degrees F (7 degrees C), except when being prepared or served in resident camps. An air temperature thermometer accurate to 2 degrees F (1 degree C) shall be provided in all refrigerators.

(b) Refrigeration and freezer space shall be provided to accommodate the volume of food handled.

(c) Potentially hazardous foods shall be thawed:

- (1) in refrigerated units at a temperature not to exceed 45 degrees F (7 degrees C);
- (2) under potable running water of a temperature of 70 degrees F (21 degrees C), or below, with sufficient water velocity to agitate and float off loose food particles into the overflow;
- (3) as a part of the conventional cooking process; or
- (4) in a microwave oven only when the food will be immediately transferred to conventional cooking equipment as part of a continuous cooking process or when the entire, uninterrupted cooking process takes place in the microwave oven.

(d) Anyone preparing food shall have used anti-bacterial or liquid soap, immediately prior to food preparation or shall use clean, plastic disposable gloves or sanitized utensils during food preparation. This requirement is in addition to all

handwashing requirements in this Section. Food shall be prepared with the least possible manual contact, with utensils and preparation surfaces that have been cleaned and rinsed prior to use. Preparation surfaces that come in contact with potentially hazardous foods shall be sanitized as provided in Rule .3629 of this Section. Raw fruits and raw vegetables shall be washed with potable water before being cooked or served.

(e) Potentially hazardous foods requiring cooking shall be cooked to heat all parts of the food to a temperature of at least 145 degrees F (63 degrees C) except as follows:

- (1) poultry, poultry stuffings, stuffed meats and stuffings containing meat shall be cooked to heat all parts of the food to at least 165 degrees F (74 degrees C) with no interruption of the cooking process;
- (2) pork and any food containing pork shall be cooked to heat all parts of the food to at least 150 degrees F (66 degrees C);
- (3) ground meat food products shall be cooked to an internal temperature of at least 155 degrees F (68 degrees C);
- (4) roast beef shall be cooked to an internal temperature of 130 degrees F (54 degrees C); and
- (5) beef steak shall be cooked to a temperature of 130 degrees F (54 degrees C) unless otherwise ordered by the immediate consumer.

(f) Liquid, or uncooked frozen, dry eggs and egg products shall be used only for cooking and baking purposes. This Paragraph does not apply to pasteurized products.

(g) Potentially hazardous foods that have been cooked and then refrigerated shall be reheated to 165 degrees F (74 degrees C) or higher throughout before being served or before being placed in a hot food storage facility except that, food in intact packages from food manufacturing plants may initially be reheated to 135 degrees F (57 degrees C). Reheating time shall not exceed two hours.

(h) All potentially hazardous foods, except roast beef, shall be stored at temperatures of 135 degrees F (57 degrees C) or above; or 45 degrees F (7 degrees C) or below except during necessary periods of preparation and serving. Roast beef shall be stored at a temperature of at least 130 degrees F (54 degrees C) or above; or 45 degrees F (7 degrees C) or below.

(i) Time only, rather than the temperature requirements set forth in Paragraph (h) of this Rule, may be used as the public health control for a working supply of potentially hazardous food before cooking, or for ready-to-eat potentially hazardous food that is displayed or held for service for immediate consumption if:

- (1) the food is marked or otherwise identified to indicate the time that is four hours past the point in time when the food is removed from temperature control;
- (2) the food is cooked and served, served if ready-to-eat, or discarded, within four hours from the point in time when the food is removed from required temperature control;
- (3) food in unmarked containers or packages or marked to exceed the four hour limit in Subparagraph (1) of this Paragraph, is discarded; and
- (4) written procedures approved by the Department, as being in accordance with the rules in this Section, are maintained in the resident camp for the handling of food from the time of completion of the cooking process or when the food is otherwise removed from required temperature control. These procedures shall be made available to the Department upon request.

(j) Time only, rather than temperature requirements as set forth in Paragraph (h) of this Rule, may be used as the public health control for a working supply of potentially hazardous food before cooking, or for ready-to-eat potentially hazardous food that is displayed or held for staff or camper take-out, if:

- (1) the food is marked or otherwise identified to indicate the time that is two hours past the point in time when the food is removed from temperature control;
- (2) the food is cooked and served, served if ready-to-eat, or discarded, within two hours from the point in time when the food is removed from required temperature control;
- (3) food in unmarked containers or packages or marked to exceed the two hour limit in Subparagraph (1) of this Paragraph, is discarded; and
- (4) written procedures approved by the Department, as being in accordance with the Rules in this Section, are maintained in the resident camp for the handling of food from the time of completion of the cooking process or when the food was otherwise removed from required temperature control. These procedures shall be made available to the Department upon request.

(k) A resident camp wishing to move foods controlled under Rule .3626(j) to Rule .3626(i) for immediate consumption on the premises, shall have their written procedures for the handling of the food from the time of completion of the cooking process or when the food was otherwise removed from required temperature control, approved by the Department, as being in accordance with the rules in this Section, and shall maintain those approved procedures in the resident camp. These procedures shall be made available to the Department upon request.

- (l) In a resident camp that serves a highly susceptible population, time only, rather than temperature, may not be used as the public health control for raw eggs.
- (m) All potentially hazardous food that is transported must be maintained at temperatures as noted in Paragraph (h) of this Rule.
- (n) A metal stem-type food thermometer accurate to 2 degrees F (1 degree C) shall be available to check potentially hazardous food temperatures.

*History Note: Authority G.S. 130A-235; 130A-248;
Eff. October 1, 2007;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.*

15A NCAC 18A .3627 RE-SERVING OF FOOD

In Resident Camps, food once served to a consumer shall not be served again and not left for the next consumer. Packaged food, other than potentially hazardous food, that is still packaged and is still wholesome, may be re-served.

*History Note: Authority G.S. 130A-235; 130A-248;
Eff. October 1, 2007;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.*

15A NCAC 18A .3628 FOOD SERVICE UTENSILS AND EQUIPMENT

- (a) In Resident Camps, all eating, drinking, cooking utensils, tables, sinks, cabinets, hoods, shelves, equipment, fixtures and other items used in connection with the preparation of food shall be kept clean and in good repair.
- (b) All surfaces with which food or drink come in contact shall consist of smooth, not readily corrodible, non-toxic materials in which there are no open cracks or joints that will collect food particles and slime, and shall be kept clean.
- (c) Shelves, tables and counters shall not be covered with paper, cardboard, oilcloth or other absorbent material, and shall be free of crevices. Dining table linen or similar dining table coverings, if used, shall be kept clean and in good repair.
- (d) Equipment placed into operation after the effective date of the rule, and all dishwashing facilities shall meet NSF/ANSI food equipment standards. Food service equipment that is certified for sanitation by an American National Standards Institute (ANSI)-accredited program shall be approved. NSF/ANSI food equipment standards are incorporated by reference including subsequent amendments and editions. These standards may be obtained from ANSI, 1819 L Street, NW, 6th Floor, Washington, DC 20036, at a cost of six-hundred sixty-five dollars (\$665.00) and are also available for inspection at the Division of Environmental Health, 1632 Mail Service Center, Raleigh, NC 27699-1632. If equipment is not listed by an ANSI accredited education service program, the owner or operator shall submit documentation to the Department that demonstrates that the equipment is at least equivalent to ANSI sanitation standards. In doing so, if the components of the equipment are the same as those meeting ANSI sanitation standards, then the Department shall deem the equipment equivalent. For purposes of the rules of this Section, toasters, mixers, microwave ovens, hot water heaters and hoods shall not be considered to be equipment and shall not be required to meet ANSI sanitation standards. Limited resident camps are exempt from this Rule except for required dishwashing facilities. All existing equipment, excluding dishwashing facilities, not in compliance with this Rule must be brought into compliance by May 1, 2012.
- (e) Single-use articles such as formed buckets, bread wrappers, aluminum pie plates and No. 10 cans shall be used only once except that containers made of plastic, glass or other smooth, not readily corrodible, non-toxic materials having smooth sides and of a construction that can be easily cleaned may be reused.
- (f) Beverage dispensers installed or replaced after the effective date of this Rule shall be designed to avoid activation by the lip of a cup or glass when these dispensers are used to refill cups or glasses.

*History Note: Authority G.S. 130A-235; 130A-248;
Eff. October 1, 2007;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.*

15A NCAC 18A .3629 CLEANING OF EQUIPMENT AND UTENSILS

- (a) All equipment and fixtures shall be kept clean in resident camps. All cloths used by chefs and other employees in the kitchen shall be clean.
- (b) All multi-use eating and drinking utensils shall be washed, rinsed and subjected to a bactericidal treatment after each usage as specified in Paragraph (c) of this Rule.

(c) In a hand dishwashing operation, after cleaning and rinsing, all multi-use eating and drinking utensils shall be subjected to one of the following or other equivalent bactericidal processes:

- (1) Immersion for at least one minute in the third compartment in clean hot water at a temperature of at least 170 degrees F (77 degrees C). A thermometer accurate to 2 degrees F (1 degrees C) shall be available and convenient to the compartment. Where hot water is used for bactericidal treatment, a booster heater that maintains a water temperature of at least 170 degrees F (77 degrees C) in the third compartment at all times when utensils are being washed shall be used. The heating device may be integral with the immersion compartment.
- (2) Immersion for at least two minutes in the third compartment in a chemical bactericide of strength:
 - (A) for chlorine products, a solution containing at least 50 parts per million of available chlorine at a temperature of at least 75 degrees F (24 degrees C);
 - (B) for iodophor products, a solution containing at least 12.5 parts per million of available iodine and having a pH not higher than 5.0 and having a temperature of at least 75 degrees F (24 degrees C); or
 - (C) for quaternary ammonium products, a solution containing at least 200 parts per million of QAC and having a temperature of at least 75 degrees F (24 degrees C), provided that the product is labeled to show that it is effective in water having a hardness value at least equal to that of the water being used.
- (3) Other equivalent products and procedures approved in 21 CFR 178.1010 "Sanitizing Solutions" from the "Food Service Sanitation Manual" which is hereby incorporated by reference including subsequent amendments, published by the U.S. Food and Drug Administration.

(d) A testing method or equipment shall be available, convenient and regularly used to test chemical sanitizers to ensure minimum prescribed strengths.

(e) The supply of eating and drinking utensils shall be of sufficient quantity to allow washing, rinsing, sanitizing and air-drying before reuse. All multi-use utensils except pizza pans and similar type pans (not used for table service) used in the storage, preparation, cooking or serving of food or drink shall be cleaned and rinsed immediately after the day's operations, after each use or upon completion of each meal as indicated. Pizza pans and similar type pans (not used for table service) that are continually subjected to high temperatures do not require cleaning after each use, or day's use but shall be kept clean and maintained in good repair.

(f) In addition to washing and rinsing multi-use utensils as indicated in Paragraph (c) of this Rule, preparation surfaces which come in contact with potentially hazardous foods and are not subjected to heat during routine cooking operations shall be sanitized. Utensils and equipment that have been used for the preparation of raw meat or raw poultry shall not be used for the preparation of cooked meat, cooked poultry or other ready-to-eat products unless such utensils and equipment have been cleaned and sanitized. Examples of food contact surfaces that must be sanitized are utensils used in preparing cold salads and cold beverages, cutting boards, table tops, knives, saws and slicers. For utensils and equipment that are either too large or impractical to sanitize in a dishwashing machine or dishwashing sink, and for those resident camps that do not have dishwashing equipment, a spray-on or wipe-on sanitizer may be used. When spray-on or wipe-on sanitizers are used, the chemical strengths shall be those required for sanitizing multi-use eating and drinking utensils.

(g) Hand dishwashing facilities shall consist of an approved three-compartment sink of sufficient size and depth to submerge, wash, rinse and sanitize utensils and shall have splash back protection and drain boards that are an integral part of and continuous with the sink. These drain boards shall be of a sufficient size to accommodate the drainage of liquids of the washed utensils after being sanitized. Air-drying of utensils may be accomplished with the use of a drain board, overhead or wall mounted shelves, or with the use of stationary or portable racks or by cross stacking.

(h) Where the Department determines that the volume of dishes, glasses and utensils to be washed cannot be processed in a single warewashing facility, separate dish, glass or utensil washing facilities shall be required. Separate vegetable washing facilities shall be provided in resident camps which wash raw vegetables except where plan review shows that volume and preparation frequency do not require separate vegetable washing facilities or where vegetables are purchased pre-washed and packaged. Resident camps which scale, eviscerate, thaw or wash fish, raw poultry or other food shall provide separate sinks with preparation space for these processes except where plan review shows that volume and preparation frequency do not require separate washing facilities.

(i) When warewashing machines are used, the machine and its auxiliary components shall be operated in accordance with the machine's data plate and other manufacturer's instructions. Machines shall be fitted with drain boards on each side, and a countersunk sink or a sink with a faucet, spray nozzle or brushes for pre-cleaning, pre-flushing or pre-soaking of the utensils in the dirty dish lane. Thermometers indicating the wash and rinse water temperatures shall be provided and kept in good repair.

(j) When warewashing machines are used, the machines shall be approved as sufficient for size, capacity and type for the number of utensils to be washed. Glasses may be washed with power-driven brushes and passed through door-type machines, which are also used for dishwashing, for final rinse and bacterial treatment. For this method, a motor-driven glass-washer and a single-vat sink shall suffice.

(k) Warewashing machines shall render equipment clean to sight and touch and provide bactericidal treatment in accordance with Paragraph (c) of this Rule.

(l) When only single-service eating and drinking utensils are used, at least an approved two-compartment sink shall be provided. This sink shall be of sufficient size to submerge, wash, rinse and sanitize utensils and shall have splash back protection and drain boards that are an integral part of and continuous with the sink. These drain boards shall be of sufficient size to accommodate the drainage of liquids of the washed utensils after being sanitized. Air drying of utensils may be accomplished with the use of a drain board, overhead or wall mounted shelf or with the use of stationary or portable racks.

(m) Facilities for the heating of water shall be provided. Capacity of hot water heating facilities shall be based on number and size of sinks, capacity of dishwashing machines and other food service and cleaning needs. Hot water storage tanks shall provide a minimum of 130 degree F (54 degree C) hot water when water is not used for sanitizing; when hot water is used for sanitizing, a minimum storage temperature of 140 degree F (60 degrees C) hot water is required.

(n) No article, polish or other substance containing any cyanide preparation or other poisonous material shall be used for the cleaning or polishing of eating or cooking utensils.

(o) In determining the sufficiency of the size of drain boards, machine dishwashers and sinks in a resident camp, the environmental health specialist shall consider the number and size of multi-use utensils regularly cleaned. For drain boards only, the specialist shall also consider the available shelf space, racks and other areas that may be used for air-drying.

History Note: Authority G.S. 130A-235; 130A-248;

Eff. October 1, 2007;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3630 STORAGE AND HANDLING OF UTENSILS AND EQUIPMENT

(a) After bactericidal treatment, utensils shall be air-dried and stored above the floor in a clean place in resident camps. Wherever practicable, containers and utensils shall be covered or inverted or stored in tight, clean cabinets; and glasses and cups shall be stored inverted in a sanitary manner. It shall not be considered practicable to invert plates and bowls that slide when inverted or to cover plates and bowls positioned for immediate use during business hours. Utensils and equipment shall be handled in such a manner to prevent contamination, and employees shall avoid handling clean surfaces that will come in contact with customers' mouths.

(b) Drain racks, trays and shelves shall be made of not readily corrodible material, and shall be kept clean. These items are not required to be made of plastic.

(c) Spoons, spatulas, dippers, and other in-use utensils shall be stored between uses in the food product with the handles extending out of the food, stored dry on a clean surface or in a container of water if the water is maintained at a temperature of at least 140F.

(d) When utensils are used to dispense frozen products or moist foods, the utensils may be stored in running water dipper wells only when the water has sufficient velocity to flush food residues into the overflow drain.

(e) Single-service utensils shall be purchased only in sanitary containers, shall be stored therein in a clean, dry place until used, and shall be handled in a sanitary manner. Single-service cup dispensers or similar devices shall be used when single-service cups are used. Nothing in the rules in this Section shall prohibit the use of plastic bags in which single-service cups or similar devices are received as the dispenser for those items.

History Note: Authority G.S. 130A-235; 130A-248;

Eff. October 1, 2007;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3631 FOOD SERVICE AREA STORAGE SPACES

(a) Storage spaces shall be kept clean in resident camps. The contents shall be neatly arranged to facilitate cleaning and to prevent insect and rodent harboring.

(b) All items stored in rooms where food or single-service items are stored shall be at least 12 inches (30.48 cm.) above the floor when placed on stationary storage units or six inches (15.24 cm.) above the floor when placed on portable storage units or otherwise arranged to permit cleaning. For purposes of this Rule, the term "portable" does not require wheels.

- (c) Shelves in storage rooms where food or single-service items are stored shall be constructed approximately one inch (2.54 cm.) from the wall, unless stripped or caulked.
- (d) Nothing in this Rule shall prohibit the use of non-absorbent wooden shelves that are in good repair in dry storage areas.

History Note: Authority G.S. 130A-235; 130A-248;
Eff. October 1, 2007;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3632 FOOD SERVICE AREA LIGHTING

- (a) In Resident Camps, all areas in which food is prepared, or in which utensils are washed, shall be provided with at least 50 foot-candles of light on food preparation work levels and at utensil washing work levels. At least 10 foot-candles of light at 30 inches above the floor shall be provided in all other areas, including storage rooms and walk-in units. This shall not include dining areas except during cleaning operations. Fixtures shall be kept clean and in good repair.
- (b) In determining whether the lighting at a particular location meets the requirements of this Rule, the Environmental Health Specialist shall take the measurement with the light meter at the level where work is performed or at 30 inches above the floor if not at a work station identified in Paragraph (a) of this Rule. The environmental health specialist shall place the meter on the surface where the measurement is to be taken and shall not obstruct the path of the light to the surface in question. Instruments used to measure lighting shall be maintained and operated by the Environmental Health Specialist in accordance with the manufacturer's instructions as to ensure their accuracy.
- (c) Light bulbs in food preparation, storage and display areas shall be shatterproof or shielded to preclude the possibility of broken bulbs or lamps falling into food. Shatterproof or shielded bulbs need not be used in food storage areas where the integrity of the unopened packages will not be affected by broken glass falling onto them and the packages, prior to being opened, are capable of being cleaned.
- (d) Heat lamps shall be protected against breakage by a shield surrounding and extending beyond the bulb, leaving only the face of the bulb exposed.

History Note: Authority G.S. 130A-235; 130A-248;
Eff. October 1, 2007;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3633 FOOD SERVICE AREA VENTILATION

In Resident Camps, ventilation equipment shall be kept clean and in good repair.

History Note: Authority G.S. 130A-235; 130A-248;
Eff. October 1, 2007;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3634 FOOD SERVICE AREA LAVATORY FACILITIES

- (a) In Resident Camps, lavatory facilities, including hot and cold running water and a combination supply faucet or tempered water and sanitary towels or hand-drying devices and soap, shall be provided for staff and campers in food preparation and utensil washing areas.
- (b) For employees, at least one lavatory shall be provided in the kitchen area in addition to any lavatories that may be provided in employees' toilet rooms.
- (c) Dishwashing sinks, vegetable sinks and pot sinks shall not be used as handwashing facilities.
- (d) The lavatories shall be kept clean and in good repair.

History Note: Authority G.S. 130A-235; 130A-248;
Eff. October 1, 2007;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3635 FOOD SERVICE AREA TOILET FACILITIES

- (a) Unless specified elsewhere in the rules in this Section, every resident camp kitchen shall be provided with toilet facilities located within 500 feet and readily accessible to employees and campers during all operational hours. Toilets for campers shall be so located that the campers do not pass through the kitchen to enter the toilet rooms. Intervening rooms or vestibules,

if provided, shall be constructed and maintained in accordance with this Rule. Floors and walls shall be constructed of non-absorbent, washable materials. Floors, walls and ceilings shall be kept clean and in good repair.

(b) Signs shall be posted to advise campers and staff of the locations and identities of the toilet rooms. Legible signs that read that employees must wash their hands before returning to work shall be posted conspicuously in each employee's toilet room.

(c) Toilet rooms shall be provided with self-closing doors and kept free of flies. Windows shall be screened if used for ventilation. Toilet rooms shall not be used for storage of food, utensils or equipment. Self-closing doors are not required for toilet rooms that open into the interior of a building and the exterior doors of the building are self-closing.

(d) Fixtures shall be kept clean and in good repair.

(e) All wastewater shall be disposed of in accordance with 15A NCAC 18A .1900 or 15A NCAC 02H .0200.

History Note: Authority G.S. 130A-235; 130A-248;

Eff. October 1, 2007;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3636 FOOD SERVICE AREA FLOORS

(a) In Resident Camps, the floors of all rooms in which food is stored, prepared, handled or served, or in which utensils are washed, shall be of such construction to be easily cleaned, and shall be kept clean and in good repair. Food waste on the floor as a result of that day's preparation process is not a violation of this Rule as long as the food waste is removed at regular intervals and prior to closing.

(b) Floors in areas where food is to be prepared or stored may be of sealed concrete, terrazzo, quarry or vinyl tile, wood covered with composition flooring or equal, except that:

- (1) carpet may be used in wait stations and self-service bars;
- (2) there will be no flooring requirements for portable cooking units which may be used in a dining room for occasional service at individual tables; and
- (3) nothing in this Section shall prohibit the use of approved anti-skid floor applications where needed for safety reasons.

(c) The joints between walls and floors shall be rounded or be otherwise constructed to provide a tight seal between the floor and wall.

(d) Floors, which are subjected to flood type cleaning, shall be provided with floor drains and shall slope to drain.

(e) Clean carpet, in good repair, may be used in dining areas.

History Note: Authority G.S. 130A-235; 130A-248;

Eff. October 1, 2007;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3637 FOOD SERVICE AREA WALLS AND CEILINGS

(a) In Resident Camps, walls and ceilings of all rooms in which food is stored, handled, prepared or served or in which utensils are washed or stored shall be kept clean and in good repair. Water stains on walls or ceilings do not constitute a violation of this Rule unless mold or mildew is present.

(b) The walls of kitchens and other rooms used for the preparation of food and the washing of utensils shall be smooth, washable and be kept clean. Acceptable wall materials include glazed tile; fiberglass reinforced panels, stainless steel, wood or metal; wall board painted with washable, non-absorbent paint; and brick, cinder blocks, slag blocks or concrete blocks, if glazed, tiled, plastered or filled to provide a smooth surface. Ceilings in kitchens and other rooms used for the preparation of food or the washing of utensils shall be washable. Acceptable materials include perforated or non-perforated vinyl faced acoustical tile, and fiberglass reinforced panels and painted wallboard.

(c) The walls and ceilings of dry storage rooms shall be permanent; however, a washable finish is not required.

(d) The interior walls of wait stations that prepare beverages and bars that only prepare beverages and wash utensils with no food preparation other than garnishes for drinks shall be finished to be smooth and washable.

History Note: Authority G.S. 130A-235; 130A-248;

Eff. October 1, 2007;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3638 KITCHEN PREMISES: MISCELLANEOUS

(a) In a Resident Camp, none of the camp activities shall be conducted in any room used for private living areas.

- (b) Packout or trip kitchens where food is portioned and stored for cookouts or overnight trips, where utensils and equipment are not returned to a central kitchen for cleaning, and are not located in the same building as a camp kitchen, shall be equipped with at least a two-compartment sink with 24-inch drainboards or countertop space at each end for handling dirty items and air drying clean items. Sinks shall be of sufficient size to submerge, wash, rinse and sanitize utensils and equipment. Any area where food is portioned shall also be equipped with a separate handwash lavatory with a hot and cold mixing faucet, soap and individual towels or hand-drying device.
- (c) Residential style educational activity kitchens with non-commercial utensils and equipment may be used by groups of 32 or less campers and staff to prepare meals only for members of the group. Field sanitation measures of Rule .3619 may be used in these facilities.
- (d) Soiled linens, coats and aprons shall be kept in containers provided for this purpose. Laundered table linen and cleaning cloths shall be stored in a clean place until used.
- (e) Toxic materials, cleaners, sanitizers or similar products used in a camp shall be labeled with the common name or manufacturer's label.
- (f) A separate area for storage of toxic materials shall be provided and marked as toxic materials. This requirement shall not apply to cleaners and sanitizers used frequently in the operation of the camp kitchen that are stored for availability and convenience if the materials are stored to prevent the contamination of food, equipment, utensils, linens and single-service items.
- (g) Storage shall be provided for mops, brushes, brooms, hoses and other items in routine use.
- (h) The premises under control of the management shall be kept free of items that provide fly or mosquito breeding places or rodent harborages. Effective measures such as fly repellent fans, self-closing doors, screens and routine use of approved pesticides shall be taken to keep insects, rodents, animals and other public health pests out of the camp kitchen and food service area storage spaces.
- (i) Only those pesticides which have been registered with the U.S. Environmental Protection Agency and with the North Carolina Department of Agriculture and Consumer Service shall be used. Such pesticides shall be used as directed on the label and shall be handled to avoid health hazards.
- (j) Except as specified below, live animals shall not be allowed in a food preparation, storage or dining area. Live animals shall be allowed in the following situations if their presence will not result in the contamination of equipment, utensils, linens and unwrapped single-service and single-use items:
 - (1) fish or crustacea in aquariums or display tanks;
 - (2) patrol dogs accompanying police or security officers in offices and dining, sales and storage areas; and
 - (3) service animals accompanying persons with disabilities in areas that are not used for food preparation.

*History Note: Authority G.S. 130A-235; 130A-248;
Eff. October 1, 2007;*

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3639 INFORMAL REVIEW PROCESS AND APPEALS PROCEDURE

- (a) If a Resident Camp manager disagrees with a decision of an environmental health specialist on the interpretation, application or enforcement of the rules of this Section, the camp manager may:
 - (1) request an informal review pursuant to Paragraphs (d) and (e) of this Rule; or
 - (2) initiate a contested case in accordance with G.S. 150B.
- (b) The camp manager is not required to complete the informal review prior to initiating a contested case in accordance with G.S. 150B.
- (c) When petition for a contested case is filed, the informal review process shall terminate.
- (d) If the camp manager requests an informal review, the request shall be in writing and shall be postmarked or hand delivered to the local health department within seven days of notice of the decision giving rise to the review. The request shall briefly state the issues in dispute. In the event the inspection giving rise to the informal review was conducted by the environmental health supervisor in the county or area where the resident camp is located, or when the county or area has only one environmental health specialist assigned to inspect resident camps, the regional environmental health specialist assigned to that county or area shall conduct the local informal review. As soon as possible but at least within 30 days of receipt of the request, the person conducting the review shall contact the camp manager, provide that camp manager an opportunity to be heard on the issues in dispute and issue a written decision addressing the issues raised in the appeal. Copies of the decision shall be mailed to the camp manager and to the State Health Director. That decision shall be binding for the purposes of future inspections of the resident camp in question unless modified pursuant to Paragraph (e) of this Rule or by the State Health Director.

- (e) Following receipt of the written decision of the environmental health supervisor or his or her representative issued pursuant to Paragraph (d) of this Rule, the camp manager who initiated the informal review may appeal the resulting decision to an Informal Review Officer designated by the Department to be responsible for final decisions on appeals from throughout the State. Notice of such appeal shall be in writing, shall include a copy of the environmental health supervisor's or her or his representative's decision and shall be postmarked or hand-delivered to the local health department and to the Department within seven days of receipt of the written decision issued pursuant to Paragraph (a) of this Rule. Within 35 days of receipt of this appeal, the designated informal review officer shall hold a conference in Wake County. Notice of the time and place of this conference shall be provided to the camp manager and the environmental health supervisor for the county or area where the issue arose. Within ten days following the date of the conference, the informal review officer shall issue a written decision addressing the issues raised in the appeal and that decision shall be binding for purposes of future inspections of the resident camp in question unless modified pursuant to Paragraph (g) of this Rule or by the State Health Director.
- (f) If the decision on appeal at the local or state level results in a change in the score resulting from an inspection of a resident camp, the environmental health specialist shall post a new grade card reflecting that new score.
- (g) Appeals of the decision of the designated informal review officer shall be in accordance with G.S. 150B.
- (h) Nothing in this Rule shall impact the right of a camp manager to a reinspection pursuant to Rule .3605 of this Section.

*History Note: Authority G.S. 130A-235; 130A-248;
Eff. October 1, 2007;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.*

SECTION .3800 - PRIVATE DRINKING WATER WELL SAMPLING

15A NCAC 18A .3801 DEFINITIONS

The following definitions shall apply throughout this Section:

- (1) "Certified laboratory" means the North Carolina State Laboratory of Public Health certified by the US Environmental Protection Agency or a laboratory certified by the Certification Section of the North Carolina Public Health Laboratory pursuant to 10A NCAC 42D to perform tests to determine the presence of coliform bacteria or the chemical constituents to be tested.
- (2) "Coliform bacteria" or "total coliform" means aerobic or facultative anaerobic, gram-negative, non-spore forming, rod shaped bacteria included in the genera *Klebsiella*, *Enterobacter*, *Escherichia* and *Citrobacter*. Coliform bacteria originate in soil, vegetation or the intestinal tract of warm-blooded animals. The presence of coliform bacteria in a water sample indicate the presence of a pathway for bacteria and possibly pathogens to gain entry into a water supply system.
- (3) "Department of Environment and Natural Resources" or "Department" means the North Carolina Department of Environment and Natural Resources. The term also means the authorized representative of the Department.
- (4) "Fecal coliform bacteria" or "fecal coliform" means a sub-group of coliform bacteria that are present in the intestinal tract and feces of warm-blooded animals. The presence of fecal coliform bacteria in a water sample indicate fecal contamination and the presumed presence of pathogens in the water supply
- (5) "Local Health Department" means the county or district health department or its successor.
- (6) "Private drinking water well" means a private drinking water well as defined in G.S. 87-85(10a).

*History Note: Authority G.S. 87-97;
Eff. July 1, 2008;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.*

15A NCAC 18A .3802 SAMPLE COLLECTION

- (a) Within 30 days after it issues a certificate of completion for a private drinking water well that is newly constructed, the local health department shall collect water samples and submit them to a certified laboratory for analyses or ensure that water samples are collected from the well by a certified laboratory and tested by a certified laboratory. All testing shall be done in accordance with the rules of this Section.
- (b) The sample collector shall use aseptic sampling techniques for collection of coliform bacteria and sampling techniques and containers for chemical constituents following methods described in 40 CFR 141.23 and 40 CFR 143.4, which are hereby incorporated by reference including any subsequent amendments and editions, and available free of charge at: <https://www.ecfr.gov/>.

- (c) Water samples shall be collected from the sample tap at the well or the closest accessible collection point to the water source at a threadless sample tap, provided the sampling point shall precede any water treatment devices.
- (d) The well owner shall provide access and a source of power for the purpose of collecting the required water sample.
- (e) For all newly constructed private drinking water wells, samples for total coliform and fecal coliform bacteria shall be collected after the disinfectant agent has been flushed from the well and water supply system. The water shall be free of disinfectant before collection of samples for bacteria. Required water samples shall not be collected from wells that are not constructed and located in accordance with the rules of 15A NCAC 02C .0100 and .0300, which are hereby incorporated by reference, including any subsequent amendments and editions.
- (f) Samples shall be transported to the laboratory following the procedures for sample preservation and within holding times required in 40 CFR 141.23 and 143.4, and 141.21(f), which is hereby incorporated by reference including any subsequent amendments and editions, and available free of charge at: <https://www.ecfr.gov/>

History Note: Authority G.S. 87-97;
Eff. July 1, 2008;
Readopted Eff. April 1, 2021.

15A NCAC 18A .3803 SAMPLE ANALYSIS

- (a) Water samples shall be analyzed in the North Carolina State Laboratory of Public Health or a certified laboratory.
- (b) A water sample shall be tested for total coliform bacteria and if present, further analyzed for the presence of fecal coliform bacteria or E. coli.
- (c) A water sample shall be analyzed for Arsenic, Barium, Cadmium, Chromium, Copper, Fluoride, Lead, Iron, Magnesium, Manganese, Mercury, Nitrate, Nitrite, Selenium, Silver, Sodium, Zinc and pH.
- (d) Testing protocols shall follow EPA methods as published in the applicable sections of the most recent 40 CFR 141 and 143, Federal Register updates and the North Carolina Drinking Water Laboratory Certification rules of Section 10A NCAC 42D. Copies may be obtained from the National Archives and Records Administration through their website at <http://www.gpoaccess.gov/cfr/index.html>.

History Note: Authority G.S. 87-97;
Eff. July 1, 2008;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3804 REPORTING

- (a) Laboratories shall report results of chemical and bacteriological water sample analyses for each new private drinking water well to:
- (1) the local health department;
 - (2) the DENR Private Water Supply Protection Branch; and
 - (3) the DHHS Division of Public Health, Epidemiology Section, Occupational and Environmental Epidemiology Branch.
- (b) Certified laboratories reporting results of sampling required by the rules of this Section shall use the reporting format developed by the North Carolina State Laboratory of Public Health for reporting private well-water sample results and shall include well identification information and a guide for interpreting sample results.
- (c) For the purposes of any notices required pursuant to the rules of this Section, notice shall be mailed to "Division of Environmental Health, On-Site Water Protection Section, North Carolina Department of Environment and Natural Resources," 1642 Mail Service Center, Raleigh, NC 27699-1642.

History Note: Authority G.S. 87-97;
Eff. July 1, 2008;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

15A NCAC 18A .3805 DATA REVIEW

- (a) For all private well sampling data where chemical or biological contaminants are detected exceeding the Maximum Contaminant Levels (MCLs) for public drinking water, as defined in 15A NCAC 18C, the North Carolina Occupational and Environmental Epidemiology Branch (OEEB) shall provide the following to the local health department from which the sample was collected:
- (1) information about the contaminant(s) exceeding public drinking water MCLs;

- (2) recommendations for water use limitations or treatment options to reduce exposure to a level comparable to meeting public drinking water MCLs; and
 - (3) recommendations about the need for and the frequency of repeat sampling.
- (b) The local health department shall provide information to the well owner or respective lease holder concerning chemical and biological contaminants exceeding public drinking water MCLs and the need for exposure limitation, remediation, or future sampling.

History Note: Authority G.S. 87-97;
Eff. July 1, 2008;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

SUBCHAPTER 18B - MOSQUITO CONTROL

SECTION .0100 - STATE AID FOR MOSQUITO CONTROL

Codifier's Note: 15A NCAC 18B .0100 was transferred and recodified from 10 NCAC 10C .0200, effective April 4, 1990.

15A NCAC 18B .0101	PROGRAM APPLICATION FORMS
15A NCAC 18B .0102	ALLOWABLE CREDITS
15A NCAC 18B .0103	SPENDING RESTRICTIONS
15A NCAC 18B .0104	AGREEMENTS
15A NCAC 18B .0105	AUTHORIZED OFFICIALS
15A NCAC 18B .0106	ALLOCATION OF FUNDS FOR MOSQUITO CONTROL ACTIVITIES
15A NCAC 18B .0107	AUTHORIZED CHANGES IN ALLOCATION RULES

History Note: Authority G.S. 130A-347;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. September 1, 1990; June 1, 1990; January 1, 1986; October 1, 1984; July 1, 1982; January 1, 1980;
Repealed Eff. July 1, 2011 pursuant to G.S. 150B-21.7.

15A NCAC 18B .0108 CRITERIA FOR APPROVAL AND DISAPPROVAL

History Note: Authority G.S. 130A-347;
Eff. January 1, 1980;
Amended Eff. January 1, 1986; July 1, 1982;
Repealed Eff. July 1, 2011 pursuant to G.S. 150B-21.7.

SECTION .0200 - SANITATION OF BEDDING (TRANSFERRED TO 02 NCAC 61 .0101-.0112)

15A NCAC 18B .0201 was transferred and recodified from 10 NCAC 10C .0312, 15A NCAC 18B .0202-.0204 were transferred and recodified from 10 NCAC 10C .0314-.0316, 15A NCAC 18B .0205-.0211 were transferred and recodified from 10 NCAC 10C .0318-.0324, 15A NCAC 18B .0212 was transferred and recodified from 10 NCAC 10C .0326, transfers and recodifications effective April 4, 1990.

15A NCAC 18B .0201	DEFINITIONS (TRANSFERRED TO 02 NCAC 61 .0101)
15A NCAC 18B .0202	AUTHORIZED SANITIZING PROCESSES (TRANSFERRED TO 02 NCAC 61 .0102)
15A NCAC 18B .0203	OTHER METHODS OF SANITIZING (TRANSFERRED TO 02 NCAC 61 .0103)
15A NCAC 18B .0204	DISPOSAL OF UNCLEAN BEDDING (TRANSFERRED TO 02 NCAC 61 .0104)

**15A NCAC 18B .0205 STORAGE OF SECONDHAND OR PREVIOUSLY-USED MATERIALS
(TRANSFERRED TO 02 NCAC 61 .0105)**

15A NCAC 18B .0206 NON-TRANSFERABLE REGISTRATION (TRANSFERRED TO 02 NCAC 61 .0106)

**15A NCAC 18B .0207 TRANSFER OF MANUFACTURERS' AND SANITIZERS' LICENSES (TRANSFERRED
TO 02 NCAC 61 .0107)**

15A NCAC 18B .0208 LICENSE FEES AND APPLICATIONS (TRANSFERRED TO 02 NCAC 61 .0108)

15A NCAC 18B .0209 CANCELLATION OF LICENSES (TRANSFERRED TO 02 NCAC 61 .0109)

15A NCAC 18B .0210 DURABLE MATERIALS FOR TAGS (TRANSFERRED TO 02 NCAC 61 .0110)

15A NCAC 18B .0211 EFFECTIVE DATE OF LICENSES (TRANSFERRED TO 02 NCAC 61 .0111)

15A NCAC 18B .0212 SEVERABILITY (TRANSFERRED TO 02 NCAC 61 .0112)

SECTION .0300 - CONTROL OF IMPOUNDED WATER

Codifier's Note: 15A NCAC 18B .0300 was transferred and recodified from 10 NCAC 10C .0400, effective April 4, 1990.

15A NCAC 18B .0301 DEFINITIONS
15A NCAC 18B .0302 APPLICATION
15A NCAC 18B .0303 ISSUANCE OF CONSTRUCTION PERMIT
15A NCAC 18B .0304 INSPECTIONS
15A NCAC 18B .0305 IMPOUNDING PERMIT
15A NCAC 18B .0306 REPORTS
15A NCAC 18B .0307 INSPECTION OF IMPOUNDED WATERS
15A NCAC 18B .0308 CORRECTION MEASURES
15A NCAC 18B .0309 SURVEILLANCE

*History Note: Authority G.S. 130A-348;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. September 1, 1990; June 30, 1980; June 15, 1979;
Repealed Eff. July 1, 2011 pursuant to G.S. 150B-21.7.*

SUBCHAPTER 18C - WATER SUPPLIES

SECTION .0100 - PUBLIC WATER SUPPLY DEFINITIONS

Rules .0101 - .0102 of Title 15A Subchapter 18C of the North Carolina Administrative Code (T15A.18C .0101 - .0102); has been transferred and recodified from Rules .0701 - .0702 Title 10 Subchapter 10D of the North Carolina Administrative Code (T10.10D .0701 - .0702), effective April 4, 1990.

15A NCAC 18C .0101 PURPOSE AND SCOPE

*History Note: Authority G.S. 130A-315;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Amended Eff. October 1, 1984; September 1, 1979; January 1, 1978;
Repealed Eff. September 1, 1990.*

15A NCAC 18C .0102 DEFINITIONS

(a) The definitions contained in G.S. 130A-2, G.S. 130A-290, and G.S. 130A-313 shall apply to this Subchapter.

(b) The definitions contained in 40 C.F.R. 141.2 are hereby incorporated by reference including any subsequent amendments and editions except the following definitions are not adopted:

- (1) "Contaminant;"
- (2) "Maximum contaminant level;"
- (3) "Person;"
- (4) "Public Water System;" and
- (5) "Supplier of water."

Copies of governing federal regulations may be obtained at no cost from the United States Environmental Protection Agency's (USEPA) homepage at <http://water.epa.gov/lawsregs/rulesregs/sdwa/index.cfm> or from the USEPA's Drinking Water Hotline at 1-800-426-4791.

(c) In addition to the definitions referred to in Paragraph (a) and (b) of this Rule, the following definitions shall apply to this Subchapter:

- (1) "Act" means the North Carolina Drinking Water Act.
- (2) "Air gap" means the unobstructed vertical distance through free atmosphere between the lowest effective opening from any pipe or faucet conveying a water or waste to a tank, plumbing fixture, receptor, or other assembly and the flood level rim of the receptacle. These vertical, physical separations shall be at least twice the effective opening of the water supply outlet, never less than one inch (25 mm) above the receiving vessel flood rim.
- (3) "Backflow" means the undesirable reversal of flow of a liquid, gas, or other substance in a potable water distribution piping system as a result of a cross-connection.
- (4) "Backflow preventer" means an assembly, device, or method that prohibits the backflow of water into potable water supply systems.
- (5) "Class I reservoir" means a reservoir from which water flows by gravity or is pumped directly to a treatment plant or to a small intervening storage basin and thence to a treatment plant.
- (6) "Class II reservoir" means a reservoir from which the water flows by gravity or is pumped to a Class I reservoir prior to final entrance to a water treatment plant.
- (7) "Class III reservoir" means an impoundment used for electric power generation, flood control and similar purposes, and that serves as a source of raw water for a community water system.
- (8) "Cross-connection" means:
 - (A) any physical connection between a potable water supply system and any other piping system, sewer fixture, container, or device, whereby water or other liquids, mixtures, or substances may flow into or enter the potable water supply system;
 - (B) any potable water supply outlet that is submerged or is designed or intended to be submerged in non-potable water or in any source of contamination; or
 - (C) an air gap, that does not meet the requirements set forth in Subparagraph (2) of this Paragraph.
- (9) "Community Water System intake" means the structure at the head of a conduit into which water is diverted from a stream or reservoir for transmission to a water treatment facility.
- (10) "Division" means the Department of Environmental Quality, Division of Water Resources.
- (11) "Fecal Coliform" means bacteria that serve as indicators of recent fecal contamination. Fecal Coliforms include the Family Enterobacteriaceae, Genus Escherichia, Species coli.
- (12) High-Health Hazard: A cross-connection or potential cross-connection involving any substance that could, if introduced into the potable water supply, cause illness or death, spread disease, or have a high probability of causing such effects.
- (13) Low-Health Hazard: A cross-connection or potential cross-connection involving any substance that generally would not be a health hazard but would constitute a nuisance or be aesthetically objectionable if introduced into the potable water supply.
- (14) "Mobile Home Park" means a site or tract of land where spaces are provided for lease or rental only for the placement of mobile homes.
- (15) "Mobile home subdivision" means a subdivided site or tract of land in which lots are sold for the placement of mobile homes.
- (16) "Non-potable water supply" means waters not approved for drinking or other household uses.

- (17) "Non-regulated public water system" means a public water system that meets the exclusion conditions set forth in G.S. 130A-314.
- (18) "Potable water supply" means water approved for drinking and other household uses.
- (19) "Raw water" means surface water or groundwater that because of bacteriological quality, chemical quality, turbidity, color, or mineral content makes it unsatisfactory as a source for a community water system without treatment.
- (20) "Raw water reservoir" means a natural or artificial impoundment used for the primary purpose of storing raw water to be subsequently treated for use as a source of water for a community water system.
- (21) "Service connection" means a piped connection from a water main for the purpose of conveying water to a building or onto premises for human use. A service connection begins:
 - (A) at the point downstream of a service meter; or
 - (B) for unmetered service, at the point of connection to the potable water supply system.
- (22) "Water supply product" means any chemical or substance added to a public water system in conjunction with a treatment technique or material used in construction of a public water system. The term includes any material used in the manufacture of public water system components, appurtenances, pipe, storage tank, or valve that comes in contact with water intended for use in a public water system.

History Note: Authority G.S. 130A-311 through 130A-327; P.L. 93-523; 40 C.F.R. 141.2;
 Eff. January 1, 1977;
 Readopted Eff. December 5, 1977;
 Amended Eff. April 1, 2014; July 1, 1994; August 1, 1991; January 1, 1991; September 1, 1990;
 Readopted Eff. July 1, 2019.

SECTION .0200 – LOCATION OF SOURCES OF PUBLIC WATER SUPPLIES

15A NCAC 18C .0201 SURFACE SUPPLIES FOR PUBLIC WATER SYSTEMS

- (a) A surface supply may be used for a community or a non-transient, non-community water system with disinfection and without filtration if it complies with the provisions of this Section and Rule .2005 of this Subchapter.
- (b) Such water supply shall be derived from uninhabited wooded areas.
- (c) The entire watershed shall be either owned or controlled by the person supplying the water or be under the control of the federal or state government; however, no such new water supply shall be created except where the water system owner shall own in its entirety the watershed from which the water will be obtained.
- (d) The water after disinfection shall be of potable quality as determined by bacteriological and chemical tests performed by a certified laboratory. The presence of contaminants shall not exceed the limits set forth in Section .1500 of this Subchapter.
- (e) The water source shall have a WS-I classification as established by the Environmental Management Commission and shall meet the quality standards for that classification, codified in 15A NCAC 02B. Copies are available for public inspection as set forth in Rule .0102 of this Subchapter.

History Note: Authority G.S. 130A-315; 130A-318; P.L. 93-523;
 Eff. January 1, 1977;
 Readopted Eff. December 5, 1977;
 Amended Eff. April 1, 2014; July 1, 1994; February 1, 1987; September 1, 1979;
 Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .0202 SURFACE SUPPLIES FROM CLASSIFIED WATERSHEDS

Any surface water that is to receive treatment for removal of dissolved matter or suspended matter in order to be used for a public water system shall be obtained from a source that meets the WS-I, WS-II, WS-III, WS-IV or WS-V stream classification standards established by the Environmental Management Commission codified in 15A NCAC 02B. Copies are available for public inspection as set forth in Rule .0102(a) of this Subchapter.

History Note: Authority G.S. 130A-315; 130A-318; P.L. 93-523;
 Eff. January 1, 1977;
 Readopted Eff. December 5, 1977;
 Amended Eff. April 1, 2014; July 1, 1994; September 1, 1990; February 1, 1987; September 1, 1979;

Readopted Eff. July 1, 2019.

15A NCAC 18C .0203 PUBLIC WELL WATER SUPPLIES

(a) A site or sites for a water supply well to be used as a community or non-transient, non-community water system shall be investigated by an authorized representative of the Department prior to approval. Approval by the Department is required in addition to any approval or permit issued by any other state agency. The site shall meet the following requirements at the time of approval:

- (1) The well shall be located on a lot so that the area within 100 feet of the well is owned or controlled by the person supplying the water. The supplier of water shall be able to protect the well lot from potential sources of pollution and to construct landscape features for drainage and diversion of pollution.
- (2) The minimum horizontal separation between the well and known potential sources of pollution shall be as follows:
 - (A) 100 feet from any sanitary sewage disposal system, sewer, or a sewer pipe unless the sewer is constructed of water main materials and joints, in which case the sewer pipe shall be at least 50 feet from the well;
 - (B) 200 feet from a subsurface sanitary sewage treatment and disposal system designed for 3000 or more gallons of wastewater a day flows, unless the well water source is from a confined aquifer;
 - (C) 500 feet from a septage disposal site;
 - (D) 100 feet from buildings, mobile homes, permanent structures, animal houses or lots, or cultivated areas to which chemicals are applied;
 - (E) 100 feet from surface water;
 - (F) 100 feet from a chemical or petroleum fuel underground storage tank with secondary containment;
 - (G) 500 feet from a chemical or petroleum fuel underground storage tank without secondary containment;
 - (H) 500 feet from the boundary of a ground water contamination area;
 - (I) 500 feet from a sanitary landfill or non-permitted non-hazardous solid waste disposal site;
 - (J) 1000 feet from a hazardous waste disposal site or in any location that conflicts with the North Carolina Hazardous Waste Management Rules cited as 15A NCAC 13A;
 - (K) 300 feet from a cemetery or burial ground; and
 - (L) 100 feet from any other potential source of pollution.
- (3) The Department may require greater separation distances or impose other protective measures if necessary to protect the well from pollution, taking into consideration factors such as:
 - (A) the hazard or health risk associated with the source of pollution;
 - (B) the proximity of the potential source to the well;
 - (C) the type of material, facility, or circumstance that poses the source or potential source of pollution;
 - (D) the volume or size of the source or potential source of pollution;
 - (E) hydrogeological features of the site that could affect the movement of contaminants to the source water;
 - (F) the effect that well operation might have on the movement of contamination; and
 - (G) the feasibility of providing additional separation distances or protective measures.
- (4) The lot shall be graded or sloped so that surface water is diverted away from the wellhead. The well shall not have greater than a one percent annual chance of flooding.
- (5) If a supplier of water demonstrates that it is impracticable, taking into consideration feasibility and cost, to locate water from any other approved source and an existing well can no longer provide water that meets the requirements of this Subchapter, a representative of the Division may approve a variance for a smaller well lot and reduced separation distances to meet existing demands. Additional monitoring under this Part or other conditions shall be imposed if necessary to mitigate the increased risk from the variance.

(b) The Division of Water Resources may grant a variance from the minimum horizontal separation distances for public water supply wells set out in Parts (a)(2)(D) and (E) of this Rule.

- (1) Such variance shall require the following findings:
 - (A) the well supplies water to a non-community water system as defined in G.S. 130A-313(10)(b) or supplies water to a business or institution, such as a school, that has become a non-community water system through an increase in the number of people served by the well;

- (B) it is impracticable, taking into consideration feasibility and cost, for the public water system to comply with the minimum horizontal separation distance set out in Parts (a)(2)(D) and (E) of this Rule;
 - (C) there is no reasonable alternative source of drinking water available to the public water supply system and;
 - (D) the granting of the variance will not result in an unreasonable risk to public health.
- (2) Such variance shall require that the non-community public water supply well meet the following requirements:
- (A) the well shall comply with the minimum horizontal separation distances set out in Parts (a)(2)(D) and (E) of this Rule to the maximum extent practicable;
 - (B) the well shall meet a minimum horizontal separation distance of 25 feet from a building, mobile home, or other permanent structure that is not used primarily to house animals;
 - (C) the well shall meet a minimum horizontal separation distance of 100 feet from any animal house or feedlot and from cultivated areas to which chemicals are applied;
 - (D) the well shall meet a minimum horizontal separation distance of 50 feet from surface water; and
 - (E) the well shall comply with all other requirements for public well water supplies set out in Paragraph (a) of this Rule.

History Note: Authority G.S. 130A-315; 130A-318; P.L. 93-523; S.L. 2011-394;
 Eff. January 1, 1977;
 Readopted Eff. December 5, 1977;
 Amended Eff. July 7, 2014; July 1, 1994; September 1, 1990; September 1, 1979;
 Readopted Eff. July 1, 2019.

SECTION .0300 - SUBMISSION OF PLANS: SPECIFICATIONS: AND REPORTS

Rules .0301 - .0308 of Title 15A Subchapter 18C of the North Carolina Administrative Code (T15A.18C .0301 - .0308); has been transferred and recodified from Rules .0901 - .0908 Title 10 Subchapter 10D of the North Carolina Administrative Code (T10.10D .0901 - .0908), effective April 4, 1990.

15A NCAC 18C .0301 APPLICABILITY: PRIOR NOTICE

- (a) All persons, including units of local government, intending to construct, alter, or expand a community or non-transient, non-community water system shall give written notice thereof, including submission of applicable Water System Management Plan, engineering reports, and engineering plans and specifications to the Department, as required by the rules of this Section. Any construction, alteration, or expansion which affects capacity, hydraulic conditions, operating units, the functioning of water treatment processes or the quality of water to be delivered shall require submission of the documents described in this Paragraph. A non-community water system using surface water or ground water under the direct influence of surface water shall be subject to the provisions of this Rule. Non-transient, non-community water systems shall not be subject to the provisions of this Rule unless constructed, altered, or expanded on or after July 1, 1994.
- (b) Water System Management Plan and Engineer=s Report shall be submitted to the Department at least 60 days prior to the date upon which action by the Department is desired.
- (c) All reports, other than those in Paragraph (b) of this Rule, engineering plans and specifications and other data intended for approval shall be submitted to the Department at least 30 days prior to the date upon which action by the Department is desired.
- (d) If revisions to the Water System Management Plan are necessary, the system applicant will be notified. A revised Water System Management Plan will constitute a resubmittal and additional time will be required for review.
- (e) If revisions to the engineering plans or specifications are necessary, the engineer who prepared them will be notified. Revised engineering plans and specifications will constitute a resubmittal and additional time will be required for review.

History Note: Authority G.S. 130A-315; 130A-317; P.L. 93-523;
 Eff. January 1, 1977;
 Readopted Eff. December 5, 1977;
 Amended Eff. July 1, 1994; September 1, 1990; March 1, 1989; June 30, 1980; September 1, 1979;
 Temporary Amendment Eff. October 1, 1999;
 Amended Eff. August 1, 2000;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .0302 SUBMITTALS

- (a) All plans, specifications, reports, or other data shall be submitted in triplicate for review by the Public Water Supply Section, Division of Water Resources at 512 N Salisbury Street, Room 1304A, Raleigh NC 27604-1170, or 1634 Mail Service Center, Raleigh NC 27699-1634.
- (b) Engineering plans shall consist of legible prints having black, blue, or brown lines on a white background suitable for microfilming. The engineering plans shall not be more than 36 inches wide and 48 inches long and not be less than 11 inches wide and 17 inches long.
- (c) An applicant subject to G.S. 143-355(l) shall submit three copies of the adopted Local Water Supply Plan. If information required in the Engineer's Report or the Water System Management Plan is included in an adopted Local Water Supply Plan, a submittal to the Department may incorporate this information by referencing the location in the adopted Local Water Supply Plan.
- (d) Existing systems that have previously submitted an Engineer's Report and a Water System Management Plan in accordance with Rule .0307 of this Section shall document any changes either as revised reports and plans or addendums.

*History Note: Authority G.S. 130A-315; 130A-317; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Amended Eff. July 1, 1994; December 1, 1991; September 1, 1990; June 30, 1980; September 1, 1979;
Temporary Amendment Eff. October 1, 1999;
Amended Eff. April 1, 2014; August 1, 2000;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.*

15A NCAC 18C .0303 SUBMISSIONS REQUIRED BY ENGINEER AND APPLICANT

- (a) Detailed Engineer's Reports and engineering plans and specifications shall be prepared by a professional engineer licensed to practice in the State of North Carolina. These documents shall bear an imprint of the registration seal of the engineer. Upon completion of the construction or modification, the applicant shall submit a certification statement signed and sealed by a registered professional engineer stating that construction was completed in accordance with approved engineering plans and specifications, including any provisions stipulated in the Department's plan approval letter or authorization to construct letter, and revised only in accordance with the provisions of Rule .0306 of this Section. The statement shall be based upon observations during and upon completion of construction by the engineer or a representative of the engineer's office who is under the engineer's supervision.
- (b) A Water System Management Plan as required in Paragraph (c) of Rule .0307 of this Section shall include a signed certification stating that the information submitted is true, accurate, and complete. This certification shall be in accordance with Paragraph (d) of this Rule.
- (c) The applicant shall submit a signed certification, prior to Final Approval, stating that the requirements in Paragraph (d) (Operation and Maintenance Plan) and Paragraph (e) (Emergency Management Plan) of Rule .0307 of this Section have been satisfied, and that the system will have a certified operator as required by Section .1300 of this Subchapter prior to operation. This certification shall be in accordance with Paragraph (d) of this Rule.
- (e) The certifications required in Paragraphs (b) and (c) of this Rule shall be provided on a form provided by the Department and shall be signed by the following individual or his duly authorized representative:
 - (1) for a corporation, limited liability company, home owner association or a non-profit organization: a president, vice president, secretary, or treasurer;
 - (2) for a partnership or sole proprietorship: by a general partner or the proprietor; or
 - (3) for a municipality, State, Federal or other agency: by either a principal executive officer or ranking elected official.

*History Note: Authority G.S. 130A-315; 130A-317; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Amended Eff. July 1, 1994; December 1, 1987; September 1, 1979;
Temporary Amendment Eff. October 1, 1999;*

*Amended Eff. August 1, 2000;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.*

15A NCAC 18C .0304 APPLICATION FOR APPROVAL: BY WHOM MADE

Applications for approval shall be filed by the current owner on blanks which will be supplied by the Department. If ownership changes before Final Approval, the new owner shall submit a new Water System Management Plan in accordance with Rule .0307 of this Section.

*History Note: Authority G.S. 130A-315; 130A-317; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Amended Eff. September 1, 1990;
Temporary Amendment Eff. October 1, 1999;
Amended Eff. August 1, 2000;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.*

15A NCAC 18C .0305 APPROVALS NECESSARY BEFORE CONTRACTING OR CONSTRUCTING

(a) No construction shall be undertaken, and no contract for construction, alteration, or installation shall be entered into, unless the Department determines the system complies with G.S. 130A-317(c) and the Department issues the authorization to construct letter. This authorization shall be issued following completion and submittal of the Engineer's Report and Water System Management Plan, as specified in Rule .0307(b) and (c) of this Section, and approval of the engineering plans and specifications by the Department. Authorization to construct from the Department shall be valid for 36 months from the date of the letter. Authorization to construct may only be extended if the rules governing a public water supply and site conditions have not changed since the letter was issued. The authorization to construct and the approval for engineering plans and specifications letters from the Department shall be posted at the primary entrance of the job site during construction.

(b) Upon request, permission to drill test wells at approved sites in order to establish the quality and quantity of the ground water shall be granted by the Department prior to completion and submittal of the Engineer's Report and Water System Management Plan and approval of engineering plans and specifications. All wells abandoned, either temporarily or permanently, shall be abandoned in accordance with 15A NCAC 02C .0113 (Well Construction Standards) and all local ordinances.

(c) Units of local government that have an adopted water system extension program pursuant to Section .1800 of this Subchapter, upon submission to and approval of their program by the Department, shall be excluded from the requirements of submitting engineering plans and specifications for water main extensions that would not have adverse effect upon the existing system supply or pressure, provided the following requirements are met:

- (1) Engineering plans and specifications for all such extensions shall be prepared by or under the direct supervision of an engineer licensed to practice in the State of North Carolina.
- (2) All engineering plans shall be approved by the unit of local government's engineering department or its consulting engineers prior to the commencement of construction.
- (3) The Department shall have approved the extension program submitted by the unit of local government prior to construction commencing.
- (4) The extension program submitted for review and approval by the Department shall provide for establishing ownership, operation, and maintenance of water system extensions and shall constitute prior notice of proposed construction.
- (5) Where design is to be based on a local government's standard specifications in lieu of written separate specifications for each extension project, the standard specifications shall have been previously approved by the Department.
- (6) The local government shall have obtained from the Department a letter stating they have met the requirements set forth in Section .1800 of this Subchapter.
- (7) An annual up-to-date plan of the entire public water system shall be maintained by the supplier of water and made available on request by the Department.

*History Note: Authority G.S. 130A-315; 130A-317; P.L. 93-523;
Eff. January 1, 1977;*

Readopted Eff. December 5, 1977;
Amended Eff. July 1, 1994; September 1, 1990; September 1, 1979;
Temporary Amendment Eff. October 1, 1999;
Amended Eff. August 1, 2000;
Readopted Eff. July 1, 2019.

15A NCAC 18C .0306 CHANGES IN ENGINEERING PLANS OR SPECIFICATIONS AFTER APPROVAL

Deviations from the approved engineering plans and specifications or changes in site conditions affecting capacity, hydraulic conditions, operating units, the functioning of water treatment processes, the quality of water to be delivered, or any provisos stipulated in the Department's original and subsequent letters of approval must be approved by the Department before any construction or installation. Revised engineering plans and specifications shall be submitted in time to permit the review and approval of such plans or specifications before any construction work affected by such deviations is begun. The Secretary may seek injunctive relief under G.S. 130A-18, assess an administrative penalty under G.S. 130A-22(b), or revoke or suspend engineering plan approval under G.S. 130A-23 for any violation of this Rule.

History Note: Authority G.S. 130A-315; 130A-317; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Amended Eff. November 1, 1987;
Temporary Amendment Eff. October 1, 1999;
Amended Eff. August 1, 2000;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .0307 ENGINEER'S REPORT, WATER SYSTEM MANAGEMENT PLAN AND OTHER PLANS

(a) The applicant shall submit to the Department an Engineer's Report and Water System Management Plan.

(b) Engineer's Report. The Engineer's Report shall contain a system description for the entire project, including scheduled phase development and the following information, where applicable:

- (1) description of all existing water systems related to this project;
- (2) identification of the municipality, community, area, or facility to be served by the proposed water system;
- (3) the name and address of the applicant;
- (4) a description of the nature of the establishments and of the area to be served by the proposed water system;
- (5) a description of the future service areas of the public water system for 5, 10, 15 and 20 years;
- (6) consideration of alternative plans for meeting the water supply requirements of the area, including, for new systems, obtaining water service from an existing system;
- (7) for applicants seeking State loan or grant support for the project, financial considerations, including:
 - (A) technical alternatives;
 - (B) the costs of integral units; and
 - (C) the total costs.
- (8) population records and trends, present and anticipated future water demands, and present and future yield of source or sources of water supply, including provisions to supply water to other systems;
- (9) character of source or sources of water supply, including:
 - (A) hydrological or hydrogeological data;
 - (B) stream flow rates or well yields;
 - (C) for surface sources, analytical results for chemical, mineral, bacteriological, and physical qualities; and
 - (D) the location and nature of sources of pollution.
- (10) proposed water treatment processes, including:
 - (A) the criteria and basis of design of units;
 - (B) the methods or procedures used in arriving at recommendations; and
 - (C) the reasons or justifications for any deviations from conventional or indicated process or method.
- (11) for purchased water, a copy of the agreement with the supplier and the hydraulic analysis showing the supplier's capabilities for supplying the purchased water;
- (12) a description of the design basis of the source, treatment, and distribution system, and the useful life of all sources, treatment, and transmission facilities including pipes, pumping stations, and storage facilities;

- (13) for existing system projects intending to alter or expand a distribution system, a statement of maximum daily treated water supply and maximum daily demand, including supporting documentation and calculations; and
 - (14) for existing systems, a prioritized list of infrastructure improvements.
- (c) Water System Management Plan. The Water System Management Plan shall document the ability to finance, operate, and manage the system in accordance with this Subchapter for the current owner and for any entity that assumes ownership of the water system within the first 24 months of operation. The Water System Management Plan shall include the following information, where applicable:
- (1) Organization:
 - (A) a description of organizational structure or a chart showing all aspects of water system management and operation;
 - (B) an identification of positions responsible for policy decisions ensuring compliance with State rules and the day-to-day operation of the system; and
 - (C) a copy of all contracts for management or operation of the water system by persons or agencies other than the system's owner.
 - (2) Ownership:
 - (A) identify the ownership structure, such as sole proprietor, partnership, corporation, limited liability company, homeowner association, nonprofit organization, local government unit, state or federal agency, or other legal entity, and disclose if the ownership of the system is expected to change once the system is constructed and, if known, identify the future owners;
 - (B) provide the mailing address and street address of the owner and the physical location of the water system;
 - (C) disclose any encumbrances, trust indentures, bankruptcy decrees, legal orders or proceedings, or other items that may affect or limit the owner's control over the system and describe how compliance with the requirements of this Subchapter will be maintained; and
 - (D) describe the legal authority, such as ownership, leases or recorded easements, allowing inspection, repair, and maintenance of system components.
 - (3) Management qualifications:
 - (A) describe the qualifications of the owners and managers of the water system, including training and experience in owning or managing a water system; and
 - (B) provide the name and Public Water Supply Identification Number of all public water systems owned within the last five years as well as all systems operated under contract for another owner within the last five years. If any system has been assessed a penalty for violating a requirement set forth in this Subchapter, describe how the owner will prevent similar violations at this system.
 - (4) Management training. Describe plans to keep management current with regulatory requirements for managing and operating a public water system.
 - (5) Policies. The system shall have policies regarding the following procedures:
 - (A) cross-connection control;
 - (B) customer information, complaints, and public education;
 - (C) budget development and rate structure;
 - (D) response and notification if water quality violations occur;
 - (E) customer connection, disconnection, billing, and collection; and
 - (F) safety procedures.
 - (6) System monitoring, reporting and record keeping. The applicant shall provide:
 - (A) a summary of the applicable system monitoring and reporting requirements; and
 - (B) a description of procedures for keeping and compiling records and reports in accordance with this Subchapter.
 - (7) Financial Plans. The plan shall contain the following financial information, where applicable:
 - (A) Units of Local Government:
 - (i) For projects that require the unit of local government to incur debt, the unit of local government shall submit a statement from the Local Government Commission stating that debt issue has been approved.
 - (ii) For projects that do not require the unit of local government to incur debt, the unit of local government shall submit the following:

- (I) a statement from the unit of local government documenting that they are in compliance with G. S. 159, Article 3, The Local Government Budget and Fiscal Control Act; and
 - (II) estimated revenues, expenditures, and rate structure for the construction, operation and maintenance, administration, and reasonable expansion of the project. This information shall be provided on a form designated by the Department and shall demonstrate that revenues are greater than expenses.
- (B) The North Carolina Utilities Commission's financial determination may be used as the financial plan for systems subject to its regulations:
 - (i) submit a copy of the Order Granting Franchise and Approving Rates from the North Carolina Utility Commission; or
 - (ii) submit a copy of the Order Recognizing Continuous Extension and Approving Rates from the North Carolina Utilities Commission.
- (C) Non-transient non-community water systems. Owners of existing non-transient non-community water system(s) which receive no violation of this Subchapter during the preceding three years shall provide a description of negative impacts the project would have on the financial ability to comply with this Subchapter. The owner of either a proposed new or existing non-transient non-community water system that was in violation of this Subchapter within the prior three years shall follow the requirements in Part (D) of this Subparagraph.
- (D) All other community and non-transient non-community water systems shall document the following:
 - (i) analysis that compares anticipated revenues with planned expenditures for a five-year period that demonstrates a positive cash flow in each year, and a 20-year equipment replacement cost plan documenting the methods to finance equipment replacement;
 - (ii) the creation and funding of a continuous operating cash reserve greater than or equal to one-eighth of the annual operating, maintenance, and administrative expenses for the water system. The operating cash reserve shall be fully funded by the end of the first year of operation;
 - (iii) the creation and funding of an emergency cash reserve greater than or equal the cost of replacing the largest capacity pump. The emergency cash reserve shall be fully funded by the end of the fifth year of operation; and
 - (iv) a description of the budget and expenditure control procedures that assure budget control for the applicant, including procedures or policies to prevent misuse of funds and a demonstration that the system has adopted generally accepted accounting procedures.
 - (v) In lieu of Sub-Items (ii) and (iii) of this Paragraph, substitute documentation shall be accepted in the following instances:
 - (I) an applicant with multiple water systems showing reserves affording greater or equal capabilities; or
 - (II) an applicant showing equivalent financial capacity to comply with requirements of this Section.
- (8) One Water System Management Plan may be submitted on behalf of an applicant owning and operating multiple water systems or an applicant pursuing multiple alterations or expansions and may include future projected construction or system acquisitions. The applicant shall submit a new Water System Management Plan for a project not covered under the existing Water System Management Plan or if violations of this Subchapter occur or continue at a system under an applicant's ownership or control.
- (d) Operation and Maintenance Plan. The plan shall be completed prior to submitting the applicant's certification in accordance with Rule .0303(c) of this Section. This plan shall be accessible to the operator on duty at all times and available to the Department upon request. The Operation and Maintenance Plan shall include, at a minimum, a description of the location and routine operation and maintenance procedures for:
 - (1) components of the treatment facility;
 - (2) pumps, meters, valves, blowoffs, and hydrants;
 - (3) backflow devices;
 - (4) storage tanks; and
 - (5) all other appurtenances requiring routine operation and maintenance.

(e) Emergency Management Plan. The Emergency Management Plan shall be completed prior to submitting the applicant certification required in Rule .0303(c) of this Section. The Emergency Management Plan shall be available to personnel responsible for emergency management and operator on duty at all times and available to the Department upon request. The supplier of water shall consider using the principles, practices, forms, nomenclature, structure, and definitions found in the National Incident Management System and shall contain the following information where applicable:

- (1) For community water systems, a plan with the following elements shall be required:
 - (A) an identification and phone numbers of personnel responsible for emergency management, including public water system, local, State, and federal emergency contacts;
 - (B) an identification of foreseeable natural and human-caused emergency events, including water shortages and outages;
 - (C) a description of the emergency response plan for each identified event;
 - (D) a description of the notification procedures; and
 - (E) an identification and evaluation of all facilities and equipment whose failure would result in a water outage or water quality violations.
- (2) For a supplier of water that treats and furnishes water from a surface water source, completion of the Source Water Protection Plan in accordance with Rule .1305 of this Subchapter shall fulfill the Emergency Management Plan requirement.
- (3) For non-transient, non-community water systems, the plan shall contain the positions and phone numbers of responsible persons to contact in the event of an emergency, including public water system, local, State and federal emergency contacts.

*History Note: Authority G.S. 130A-315; 130A-317; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Amended Eff. July 1, 1994; September 1, 1990; June 30, 1980; September 1, 1979;
Temporary Amendment Eff. October 1, 1999;
Amended Eff. August 1, 2000;
Readopted Eff. July 1, 2019.*

15A NCAC 18C .0308 ENGINEERING PLANS AND SPECIFICATIONS

(a) Engineering Plans. Engineering Plans for water supply systems shall consist of the following:

- (1) title information including the following:
 - (A) name of the city, town, board, commission or other owner for whom the plans were prepared;
 - (B) the locality of the project;
 - (C) the general title of the set of drawings and prints;
 - (D) the specific title of each sheet;
 - (E) the date; and
 - (F) the scales used;
- (2) a preliminary plat plan or map showing the location of proposed sources of water supply;
- (3) a general map of the entire water system showing layout and all pertinent topographic features;
- (4) detail map of source or sources of water supply;
- (5) layout and detail plans for intakes, dams, reservoirs, elevated storage tanks, standpipes, pumping stations, treatment plants, transmission pipelines, distribution mains, valves, and appurtenances and their relation to any existing water system, and the location of all known existing structures or installations and natural barriers that might interfere with the proposed construction; and
- (6) the north point.

(b) Specifications. Complete detailed specifications for materials, equipment, workmanship, test procedures and specified test results shall accompany the plans. The specifications shall include, where applicable:

- (1) the design and number of chemical feeders, mixing devices, flocculators, pumps, motors, pipes, valves, filter media, filter controls, laboratory facilities and equipment, and water quality control equipment and devices;
- (2) provision for continuing with minimum interruption the operation of existing water supply facilities during construction of additional facilities;
- (3) safety devices and equipment;
- (4) procedure for disinfection of tanks, basins, filters, wells and pipes; and

- (5) identification of type, brand name, and model number for all back flow devices.
- (c) One copy of the engineering plans and specification, upon approval, will be returned to the person or persons making application for approval.

History Note: Authority G.S. 130A-315; 130A-317; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Amended Eff. July 1, 1994; July 1, 1993;
Temporary Amendment Eff. October 1, 1999;
Amended Eff. August 1, 2000;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .0309 FINAL APPROVAL

- (a) No construction, alteration, or expansion of a water system, subject to approval as described in Section .0300 of this Subchapter, shall be placed into final service or made available for human consumption until the applicant has complied fully with Section .0300 of this Subchapter and received Final Approval from the Department.
- (b) Temporary approval may be granted by the Department for system alterations required to remedy an imminent hazard as determined by the Department.

History Note: Authority G.S. 130A-315; 130A-317; P.L. 93-523;
Temporary Adoption Eff. October 1, 1999;
Eff. August 1, 2000;
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SECTION .0400 – WATER SUPPLY DESIGN CRITERIA

15A NCAC 18C .0401 MINIMUM REQUIREMENTS

The design criteria given in this Section are the minimum requirements for approval of plans and specifications by the Department. The Department provides supplemental criteria for design of water systems in Sections .0500-.1000 of this Subchapter.

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; July 1, 1994; September 1, 1979;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .0402 WATER SUPPLY WELLS

- (a) Well Construction. The construction of water supply wells shall conform to well construction regulations and standards of the Department, codified in 15A NCAC 02C.
- (b) Upper Terminal of Well. A well casing shall terminate neither below ground nor in a pit. The pump pedestal for above ground pumps of every water supply well shall project not less than six inches above the concrete floor of the well house or the concrete slab surrounding the well. A well casing shall project at least one inch above the pump pedestal. For submersible pumps, the casing shall project at least six inches above the concrete floor or slab surrounding the well head.
- (c) Sanitary Seal. The upper terminal of a well casing shall be sealed watertight, with the exception of a vent pipe or vent tube having a downward-directed, screened opening.
- (d) Concrete Slab or Well House Floor. A water supply well shall have a continuous bond concrete slab or well house concrete floor extending at least three feet horizontally around the outside of the well casing. Minimum thickness for the concrete slab or floor shall be four inches.
- (e) Sample Tap and Waste Discharge Pipe. Faucets or spigots shall be provided for sampling both raw water prior to treatment and treated water prior to delivery to the first customer. Sample spigots shall not be threaded for hose connection.

Threaded hose bibs shall be equipped with anti-siphon devices. A water sample tap and piping arrangement for discharge of water to waste shall be provided.

(f) Physical Security and Well Protection. A water supply well shall be secured against unauthorized access and protected from the weather. One of the following structures shall be provided:

- (1) Well house. A well house shall be constructed as follows:
 - (A) Structures shall comply with applicable provisions of state and local building codes.
 - (B) Drainage shall be provided by floor drain, wall drain, or slope to door.
 - (C) Access into the structure shall be a doorway with minimum dimensions of 36 inches wide and 80 inches high.
 - (D) The structure shall have adequate space for the use and maintenance of the piping and appurtenances. If treatment is provided at the well, the provisions of Rule .0404(a) of this Section shall apply.
 - (E) The structure shall be secured with lock and key.
- (2) Prefabricated structures. A prefabricated structure shall be constructed as follows:
 - (A) A well-head cover shall be hinged and constructed so that it can be lifted by one person.
 - (B) A locking mechanism shall be provided.
 - (C) The structure shall not be permanently fastened to the slab.
- (3) Fencing and temperature protection. Fencing and temperature protection shall be constructed as follows:
 - (A) The fence height shall be a minimum of six feet.
 - (B) The fence shall be constructed of chain link with locked access.
 - (C) The fence shall enclose the well, hydropneumatic tank, and associated equipment.
 - (D) Access shall be provided for maintenance and operation.
 - (E) The well, piping, treatment equipment, and electrical controls shall be protected against freezing. Wrapping with insulation shall be acceptable for appurtenances such as the air vent, meter, valves, and sample taps, provided they are visible and accessible. Insulation shall be jacketed.

(g) Yield:

- (1) Wells shall be tested for yield and drawdown. A report or log of at least a 24-hour drawdown test to determine yield shall be submitted to the Department for each well.
- (2) Wells shall be located so that the drawdown of any well shall not interfere with the required yield of another well.
- (3) The combined yield of all wells of a public water system shall provide in 12-hours pumping time the daily flow requirements as determined in Rule .0409 of this Section.
- (4) The capacity of the permanent pump to be installed in each well shall not exceed the yield of the well as determined by the drawdown test.
- (5) A residential community water system using well water as its source of supply and designed to serve 50 or more connections shall provide at least two wells. A travel trailer park or campground designed to serve 100 or more connections shall provide at least two wells. In lieu of a second well, another approved water supply source may be accepted.
- (6) A totalizing meter shall be installed in the piping system from each well.

(h) Initial Chemical Analyses. A representative sample of water from every new water supply well shall be collected and submitted for chemical analyses to the State Laboratory of Public Health or to a certified laboratory. The results of the analysis shall demonstrate that the water is treatable to meet the water quality standards in Section .1500 of this Subchapter, and this treatment shall be provided before the well is placed into service.

(i) Continuous Disinfection. Continuous application of chlorine, hypochlorite solution, or another approved and equally efficient disinfectant shall be provided for all well water supplies introduced on or after January 1, 1972. Equipment for determining residual chlorine concentration in the water shall be included in the plans and specifications.

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; July 1, 1994; September 1, 1990; January 1, 1986; March 31, 1980;
Readopted Eff. July 1, 2019.

(a) Unimpounded Stream. Both the minimum daily flow of record of the stream and the estimated minimum flow calculated from rainfall and run-off shall exceed the maximum daily draft for which the water treatment plant is designed, with due consideration given to requirements for future expansion of the treatment plant. The Department shall approve a water plant capacity greater than the minimum daily flow of record of the stream if rules or regulations of other government agencies will not be violated.

(b) Impoundments. Raw water storage capacity shall be sufficient to reasonably satisfy the designed water supply demand during periods of drought.

(c) Clearing of Land for Impoundment. The area in and around the proposed impoundment of class I and class II reservoirs shall be cleared as follows:

- (1) The area from normal full level to five feet below the normal pool elevation of the impoundment shall be cleared and grubbed of all vegetation and shall be kept cleared until the reservoir is filled. Secondary growth shall be removed prior to flooding.
- (2) The entire area below the five-foot water depth shall be cleared and shall be kept cleared of all growth of less than six inches in diameter until the reservoir is filled. Stumps greater than six inches in diameter shall be cut off at ground level.
- (3) All brush, trees, and stumps shall be burned or removed from the proposed reservoir.

(d) Existing Impoundments. Existing impoundments shall be approved as raw water sources if the following conditions are met.

- (1) The requirements of Paragraph (c) of this Rule and Section .0200 of this Subchapter shall be met.
- (2) A class I or class II reservoir shall meet the requirements of Section .1200 of this Subchapter.
- (3) The supplier of water shall have an engineer, along with other consultants as needed, conduct a study of the impoundment and provide the Department with information to determine whether the requirements of this Subchapter are met. The study shall include:
 - (A) plans and specifications of the impounding structure;
 - (B) information concerning clearing of the land for the impoundment, as provided in Paragraph (d) of this Rule;
 - (C) information concerning sources of pollution on the watershed;
 - (D) documentation of control by the supplier of water of the impoundment and 50-foot margin around the impoundment measured from the normal pool elevation;
 - (E) information concerning the quality of the water and sediments which could cause water quality fluctuations, such as lake stratification, turnover, and algae bloom; and
 - (F) other information necessary to show that the proposed source will meet the requirements of this Subchapter.

(e) A margin of at least 50 feet around a class I and class II reservoir, measured from the normal pool elevation, shall be owned or controlled by the supplier of water.

(f) Intakes, Pumps, Treatment Units, and Equipment. Raw water intakes, pumps, treatment units, and equipment shall be designed to provide water of potable quality that meets the water quality requirements stated in Section .1500 of this Subchapter.

*History Note: Authority G.S. 130A-315; 130A-317; P.L. 93-523;
Eff. January 1, 1977;
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Amended Eff. July 1, 1994; July 1, 1992; September 1, 1990;
Readopted Eff. July 1, 2019.*

15A NCAC 18C .0404 WATER TREATMENT FACILITIES

(a) Physical Security and Facility Protection. Treatment equipment and chemicals shall be secured against unauthorized access and shall be protected against the weather as follows:

- (1) Structures shall comply with provisions of state and local building codes.
- (2) Drainage shall be provided by floor drain, wall drain, or slope to door.
- (3) Access to the structure shall be a doorway with minimum dimensions of 36 inches wide and 80 inches high. The doorway shall be large enough to accommodate installation or removal of equipment.
- (4) The structure shall have space to facilitate operation and maintenance of treatment equipment, storage of chemicals, required piping and appurtenances, electrical controls, and laboratory testing.

(b) Mixing and Dispersion of Chemicals. Provisions shall be made for mixing and dispersion of chlorine and other chemicals applied to the water. Facilities treating surface water or ground water influenced by surface water shall comply with the disinfection requirements in Rule .2002 of this Subchapter.

(c) Chemical Feed Machines:

- (1) Durable chemical feed machines designed for adjustable accurate control of feed rates shall be installed for application of all chemicals necessary for treatment of the water. Sufficient stand-by units to assure uninterrupted operation of the treatment processes shall be provided. Continuous chemical application shall be protected from electrical circuit interruption that could result in overfeed or underfeed or otherwise interrupt the feed of chemicals.
- (2) Chemical feed lines from the feeders to the points of application shall be of material sized for the design flow rate and corrosion resistant and shall be accessible for cleaning and protected against freezing. The length and the number of bends shall be reduced to a minimum.
- (3) Piping and appurtenances shall be constructed of suitable material for the chemical being added and the specific application.
- (4) A separate feeder shall be used for each chemical applied.

(d) Disinfection Equipment:

- (1) Equipment designed for application of chlorine or some other approved, equally efficient disinfectant shall be provided. Spare units shall be available. The plans and specifications shall describe the equipment.
- (2) Chlorinators shall be installed in tightly constructed, above ground rooms with mechanical ventilation to the outside air. The capacity of exhaust fans shall be sufficient to discharge all air in the rooms every 60 seconds. The fans or their suction ducts shall be located not more than eight inches above floor level. Provisions for entrance of fresh air shall be made. The point of discharge shall be so located as not to contaminate the air in any building or inhabited areas. Electrical switches for operation of fans shall be located outside the chlorinator rooms. Rooms used for storage of chlorine cylinders shall be designed as described in this Subparagraph.

(e) Meters and Gauges. Meters and gauges, including raw and finished water meters, shall be installed to indicate and record water flow entering the treatment facility and water pumped or conducted to the distribution system.

(f) Prevention of Backflow and Backsiphonage. Water treatment facilities shall not have submerged inlets and interconnections whereby non-potable water, water of questionable quality, or other liquids may be siphoned or forced into or otherwise allowed to enter the finished water supply.

(g) Chemical Storage. Separate space for storing at least a 30-day supply of chemicals shall be provided. A separate room or partitioned space shall be provided for storage of dry fluoride chemicals or liquid fluoride chemicals in portable containers.

(h) Laboratory. Space, equipment, and supplies shall be provided for daily chemical and bacteriological tests. A layout of laboratory furniture and equipment shall be included in the plans.

(i) Waste Handling and Disposal:

- (1) Provisions shall be made for disposal of water treatment plant wastes, such as clarification sludge, softening sludge, iron-manganese sludge, filter backwash water, and brines. Untreated waste shall not be returned to the head of the water treatment plant.
- (2) Recycling of supernatant or filtrate from waste treatment facilities treating filter wash water, sedimentation basin sludge, or clarifier basin sludge to the head of the water treatment plant may be allowed if the following conditions are met:
 - (A) The water recycled shall be less than 10 percent by volume of the raw water entering the water treatment plant.
 - (B) A permit has been issued by the appropriate regulatory authority for discharge of wastes to sanitary sewer, stream, lagoon or spray irrigation.
 - (C) The raw water does not contain excessive algae, finished water taste and odor problems are not encountered, and contaminant levels do not exceed allowable levels as set forth in this Subchapter.

*History Note: Authority G.S. 130A-315; 130A-317; P.L. 93-523;
Eff. January 1, 1977;
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Amended Eff. July 1, 1994;
Readopted Eff. July 1, 2019.*

15A NCAC 18C .0405 STORAGE OF FINISHED WATER

(a) Ground Level Storage:

- (1) **Finished Water Ground Storage Tank.** Finished water ground storage tanks shall be provided with a light-proof and insect-proof cover of concrete, steel, or equivalent material approved by the Department. The construction joints between side walls and the covers of concrete tanks or reservoirs shall be above ground level and above flood level, except that clearwells constructed below filters may be excepted from this requirement if total design, including waterproof joints, gives equal protection from flooding.
- (2) **Access Manholes.** The access manholes for finished water ground storage tanks or reservoirs shall be framed at least four inches above the tank or reservoir covers at the opening and shall be fitted with solid covers of materials that overlap the framed openings and extend down around the frames at least two inches. The covers for the openings shall be hinged at one side and fitted with a locking device.
- (3) **Venting.** Finished water ground storage tanks or reservoirs shall have vents with screened, downward directed openings. The vent and screen shall be of corrosion resistant material.
- (4) **Overflow.** The overflow pipes for finished water ground storage tanks or reservoirs shall not be connected directly to sewers or storm drains. Screens or other devices to prevent access by vermin, such as rodents and insects, shall be provided in the overflow pipe.
- (5) **Inlets and Outlets.** Water supply inlets and outlets of finished water ground storage tanks and reservoirs shall be located and designed to provide circulation of the water and to meet the CT requirements in Section .2000 of this Subchapter. Baffles shall be constructed where necessary to provide thorough circulation of the water.
- (6) **Drain Valves.** All finished water ground storage tanks and reservoirs shall be equipped with drain valves that allow for unobstructed emptying of the tank.

(b) Elevated Storage Tanks:

- (1) **Standards.** The specifications for elevated tanks, stand-pipes, towers, paints, coatings, and other appurtenances shall meet the appropriate ANSI/AWWA Standards D100 11, D102 17, and D103 09 of the American Water Works Association, Inc., incorporated by reference including any subsequent amendments and editions. Copies may be obtained for public inspection as set forth in Rule .0503 of this Subchapter.
- (2) **Elevation of Storage Tanks.** The elevation of storage tanks shall be sufficient to produce a designed minimum distribution system pressure of 20 pounds per square inch at peak demand (fire flow) and 30 pounds per square inch during peak flow.
- (3) **Elevated storage tanks** shall be designed to minimize water age by avoiding short-circuiting of flows and dead-zones.
- (4) **Drain.** Elevated storage tanks shall be equipped with drain valves that allow for unobstructed emptying of the tank.

(c) Hydropneumatic Storage Tanks, referred to in this Rule as Pressure Tanks:

- (1) **Use of Pressure Tanks.** Where well yields and pumping capacities are sufficient, pressure tanks may be used to control pumps, stabilize pressures, and provide a minimum of storage. Pressure tanks shall have the capacity to maintain a minimum pressure of 30 pounds per square inch throughout periods of peak flow. Pressure tanks shall not be considered acceptable for meeting total storage requirements for public water systems of over 300 connections, except as provided in Paragraph (d) of this Rule.
- (2) **Corrosion Control.** Pressure tanks shall be galvanized after fabrication and provided with an ANSI/NSF approved liner or coating in accordance with Rule .1537 of this Subchapter.
- (3) **Required Parts.** Pressure tanks shall have access manholes, bottom drains, pressure gauges, and properly sized safety and vacuum relief valves.
- (4) **Controls.** Automatic pressure and start-stop controls for the operation of pumps shall be provided.
- (5) **Hydropneumatic Storage Tanks.** Hydropneumatic storage tanks shall conform to the construction and inspection requirements for pressure vessels adopted by the North Carolina Department of Labor and codified in 13 NCAC 13, incorporated by reference including any subsequent amendments and editions.
- (6) **Appurtenances to pressure tanks,** such as valves, drains, gauges, sight tubes, safety devices, air-water volume controls, and chemical feed lines, shall be protected against freezing.

(d) High Yield Aquifers:

- (1) **Equipment.** In lieu of providing elevated storage for public water systems over 300 connections in areas where aquifers are known to produce high yields, such as 400-500 gpm from an eight-inch well, a system of extra well pumping capacity, auxiliary power generating equipment, pressure tanks, controls, alarms, and

monitoring systems may be provided. The design and installation of such system shall assure that reliable, continuous service is provided.

- (2) **Auxiliary Power.** A system relying on high-yield aquifers under Paragraph (d) of this Rule shall have an adequate number of wells equipped with sufficient pumping capacity so that the required flow rate will be maintained if the single largest capacity well and pump are out of operation. Auxiliary power generating equipment shall be provided for each well sufficient to operate the pump, lights, controls, chemical feeders, alarms, and other electrical equipment.
- (3) **Pump Control.** Pressure tanks designed in accordance with Paragraph (c) of this Rule and Section .0800 of this Subchapter shall be provided to maintain pressure and control the pump operation.
- (4) **Alarm System.** An alarm system shall be provided that will send a visual or audible signal to a constantly monitored location so that the water system operator will be advised of a primary power failure.

*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; July 1, 1994; September 1, 1990; October 1, 1986; June 30, 1980;
Readopted Eff. July 1, 2019.*

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.

15A NCAC 18C .0407 ELECTRICAL SYSTEMS

Electrical wiring and equipment shall comply with applicable provisions of the national, state, and local electrical codes. Protection against moisture and overheating shall be provided.

History Note: Authority G.S. 130A-315; 130A-317; P.L. 93-523;
 Eff. January 1, 1977;
 Readopted Eff. December 5, 1977;
 Amended Eff. July 1, 1994;
 Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .0408 LEAD FREE CONSTRUCTION

(a) All pipe, pipe fitting, solder or flux used in the installation or repair of a public water system shall be lead free.

(b) "Lead free" means:

- (1) not containing more than 0.2 percent lead when used with respect to solder and flux; and
- (2) not more than a weighted average of 0.25 percent lead when used with respect to the wetted surfaces of pipes, pipe fittings, plumbing fittings, and fixtures.

History Note: Authority G.S. 130A-315; P.L. 93-523; 40 C.F.R. 141;
 Eff. June 1, 1988;
 Amended Eff. August 1, 2002;
 Readopted Eff. July 1, 2019.

15A NCAC 18C .0409 SERVICE CONNECTIONS

(a) Local Water Supply Plan. Units of local government that are operating under a local water supply plan in accordance with G.S. 143-355(l) shall not be limited in the number of service connections.

(b) No local water supply plan. A public water system that does not have a local water supply plan as stated in Paragraph (a) shall limit its number of service connections as follows:

- (1) A public water system shall meet the daily flow requirements specified in Table 1:

Table 1: Daily Flow Requirements

Type of Service Connection	Daily Flow for Design
Residential	400 gallon/connection
Mobile Home Parks	250 gallon/connection
Campgrounds and Travel Trailer Parks	100 gallon/space
Marina	10 gallon/boat slip
Marina with bathhouse	30 gallon/boat slip
Rest Homes and Nursing Homes	
with laundry	120 gallon/bed
without laundry	60 gallon/bed
Schools	15 gallon/student
Day Care Facilities	15 gallon/student
Construction, work, or summer camps	60 gallon/person
Business, office, factory (exclusive of industrial use)	
without showers	25 gallon/person/shift
with showers	35 gallon/person/shift
Hospitals	300 gallon/bed

or;

- (2) A public water system shall meet the daily flow requirements calculated as follows:
- (A) If records of the previous year are available that reflect daily usage, the average of the two highest consecutive days of record of the water treated shall be the value used to determine if there is capacity to serve additional service connections. Unusual events, such as massive line breaks or line flushings, shall not be considered.
- (B) If complete daily records of water treated are not available, the public water system shall multiply the daily average use based on the amount of water treated during the previous year of record by the appropriate factor to determine maximum daily demand, as follows:
- (i) A system serving a population of 10,000 or less shall multiply the daily average use by 2.5; or
- (ii) A system serving a population greater than 10,000 shall multiply the daily average use by 2.0.

(c) A supplier of water shall include the impact that demands from anticipated in-ground irrigation systems, multi-family units, or vacation rental homes will have on the daily flow needs determined in Paragraph (b) of this Rule.

(d) If two years of metered usage data exists, a supplier of water may recalculate the daily flow requirements based on the actual usage. If actual demands are lower than the projected demand, recovered supply may be used to support additional connections in accordance with Paragraph (b) of this Rule.

(e) A supplier of water shall be exempt from using Table 1 in Subparagraph (b)(1) of this Rule and any other design flow standards established by the Department or the Commission to determine the daily flow requirements, provided that a professional engineer licensed pursuant to G.S. 89C prepares, seals, and signs documentation supporting alternative daily flow requirements that are sufficient to sustain the water usage required in the engineering design by using low-flow fixtures or flow reduction technologies.

History Note: Authority G.S. 130A-315; 130A-317; P.L. 93-523;
Eff. July 1, 1994;
Readopted Eff. July 1, 2019.

SECTION .0500 - SUPPLEMENTAL DESIGN CRITERIA

Rules .0501 - .0502 of Title 15A Subchapter 18C of the North Carolina Administrative Code (T15A.18C .0501 - .0502); has been transferred and recodified from Rules .1701 - .1702 Title 10 Subchapter 10D of the North Carolina Administrative Code (T10.10D .1701 - .1702), effective April 4, 1990.

15A NCAC 18C .0501 PURPOSE

For the protection of the public health, and pursuant to authority granted by Article 10 of Chapter 130A of the General Statutes of North Carolina, the Commission for Public Health hereby adopts the following rules (15A NCAC 18C .0500 through .1000) as supplemental design criteria for approval of plans and specifications.

History Note: Authority G.S. 130A-315; 130A-317; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Amended Eff. July 1, 1994; September 1, 1991; September 1, 1979;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .0502 DESIGN CRITERIA

Community and non-transient, non-community water systems and non-community water systems using surface water or ground water under the influence of surface water shall comply with these supplemental design criteria unless alternate design proposals are approved by the Department. The Department shall consider the following factors in approving an alternate design:

- (1) The potential health risk of using the alternate design;
- (2) The need for deviation from the supplemental design criteria;
- (3) The degree of deviation from the supplemental design criteria; and
- (4) The capability of the alternate design to meet the maximum contaminant levels, treatment techniques and other requirements of this Subchapter.

History Note: Authority G.S. 130A-315; 130A-317; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Amended Eff. July 1, 1994; September 1, 1979; January 1, 1978;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .0503 OTHER DESIGN STANDARDS

In evaluating public water systems or water system design features, in addition to the rules in this Subchapter, the Department shall consider standards from the American Water Works Association or Recommended Standards for Water Works – Policies for the Review and Approval of Plans and Specifications for Public Water Supplies by the Great Lakes – Upper Mississippi River Board of State and Provincial Public Health and Environmental Managers which are incorporated by reference, including any subsequent amendments and editions. Copies of the American Water Works Association standards may be obtained from the American Water Works Association, 6666 W. Quincy Avenue, Denver, Colorado 80235 with costs determined by the American Water Works Association and available at www.awwa.org/Publications/Standards. Copies of the Recommended Standards for Water Works may be obtained from the Minnesota Department of Administration available at <https://www.mnbookstore.com/other/miscellaneous-state-agency-products/miscellaneous/recommended-standards-water-14349.html> and for a cost of nineteen dollars and ninety-five cents (\$19.95). An electronic copy can be obtained at no cost from the Minnesota Department of Health website, located at <https://www.health.state.mn.us/communities/environment/water/tenstates/standards.html>.

History Note: Authority G.S. 130A-315; 130A-317; P.L. 93-523;
Eff. July 1, 2019 (this Rule was previously codified in 15A NCAC 18C .0715).

SECTION .0600 - RAW SURFACE WATER FACILITIES

15A NCAC 18C .0601 IMPOUNDMENTS: PRE-SETTLING RESERVOIRS

(a) Construction of a pre-settling reservoir shall be required if wide and rapid variations in turbidity, bacterial concentrations, or chemical qualities occur, or where the following raw water quality standards are not met: turbidity - 150 NTU, coliform bacteria - 3000/100 ml, fecal coliform bacteria - 300/100 ml, or color - 75 CU. If impoundment of the water supply stream

does not or will not provide raw water of acceptable quality, a pre-settling reservoir located outside the watershed or catchment area shall be required.

(b) The Department shall approve alternatives to pre-settling reservoirs if a supplier of water demonstrates that engineered pretreatment providing an additional treatment barrier to low raw water quality will be installed and that the overall designed treatment process will comply with all other applicable requirements of this Subchapter. Pilot plant studies under Rule .0714 of this Subchapter shall be required to demonstrate treatment effectiveness unless operational data demonstrating treatment effectiveness for the variety of water quality that is experienced at the treatment facility are already available.

(c) The Department shall approve capacity increases at existing surface water treatment facilities without addition or up-sizing of pre-settling reservoirs if:

- (1) historical data or full-scale pilot studies demonstrate that the plant will provide treatment in accordance with this Subchapter without additional pre-settling; or
- (2) the use of alternative technology alleviates the need for additional pre-settling.

History Note: Authority G.S. 130A-315; 130A-317; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Readopted Eff. July 1, 2019.

15A NCAC 18C .0602 RAW WATER INTAKES

(a) Stream Intakes. The intake structure for unimpounded streams shall be constructed so that it will not be affected by flood water or damaged by floating debris. It shall be located and designed to minimize entrance of sand, silt, fish and debris. A bar screen or grating shall be provided, with the area of the openings designed to restrict the entrance velocity to 30 feet per minute or less.

(b) Reservoir Intakes. Where water quality variations affecting the treatment process will occur at different depths of a reservoir, the intake structure shall be constructed with multiple inlets that can be readily opened and closed for selection of the optimum water quality level. A bar screen or grating shall be provided, with the area of the openings designed to restrict the entrance velocity to 50 feet per minute or less.

History Note: Authority G.S. 130A-315; 130A-317; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .0603 INTAKE CONDUITS

The pipes, tunnels, or flumes used for intake conduits shall be designed to conduct water at self-cleaning velocities of at least two feet per second. A screen, accessible for cleaning, shall be provided to protect the pumps.

History Note: Authority G.S. 130A-315; 130A-317; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .0604 PUMPS: POWER FACILITIES

At least two pumping units with necessary check valves, gate valves, piping and appurtenances shall be provided for both raw water and finished water. Auxiliary facilities shall be provided to supply power or to provide other means to satisfy the design minimum water needs of the system.

History Note: Authority G.S. 130A-315; 130A-317; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

SECTION .0700 - SURFACE WATER TREATMENT FACILITIES

Rules .0701 - .0709 of Title 15A Subchapter 18C of the North Carolina Administrative Code (T15A.18C .0701 - .0709); has been transferred and recodified from Rules .1901 - .1909 Title 10 Subchapter 10D of the North Carolina Administrative Code (T10.10D .1901 - .1909), effective April 4, 1990.

15A NCAC 18C .0701 FLASH OR RAPID MIXING FACILITY

Mixing shall be adequate to obtain rapid and thorough dispersal of the chemicals in the raw water before it enters the flocculation basins. The design of the flash mix facilities shall provide sufficient and efficient transfer of energy to the water to effect thorough mixing.

History Note: Authority G.S. 130A-315; 130A-317; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .0702 AIR MIXING

Diffused air mixing may be used only in conjunction with mechanical or baffled mixers.

History Note: Authority G.S. 130A-315; 130A-317; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .0703 MECHANICAL FLOCCULATION

- (a) Basin Inlet and Outlet. The design of inlets and outlets of flocculation basins shall prevent short circuiting of the water and destruction or deterioration of the floc.
- (b) Detention Period. The flocculation basins shall have a theoretical detention period of not less than 30 minutes.
- (c) Agitator Control. The agitators of flocculation basins shall be equipped with variable speed controls.
- (d) Paddles. Peripheral speed and paddle configuration shall be designed to obtain optimum velocity gradient.

History Note: Authority G.S. 130A-315; 130A-317; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Amended Eff. July 1, 1994;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015;
Amended Eff. July 1, 2019.

15A NCAC 18C .0704 BAFFLED MIXING AND FLOCCULATION BASINS

- (a) Detention Period. The theoretical detention period of baffled mixing and flocculation shall be at least 25 minutes.
- (b) Velocities
 - (1) The velocity of the water between the baffles shall be as follows:
 - (A) first third of basin -- 1.5 feet per second;
 - (B) second third of basin -- 0.75 feet per second; and
 - (C) last third of basin -- 0.4 to 0.5 feet per second.
 - (2) The velocity of the water under and over the baffles shall not exceed the velocity between the baffles.

History Note: Authority G.S. 130A-315; 130A-317; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .0705 CONDUITS: PIPES AND FLUMES: GATES AND VALVES

Conduits conducting flocculated or coagulated water to sedimentation basins shall have sufficient capacity to limit velocity of flow to 0.5 feet per second. The optimum velocity to prevent both the breaking up and the settling of the floc is considered to be 0.5 feet per second.

History Note: *Authority G.S. 130A-315; 130A-317; P.L. 93-523;*
 Eff. January 1, 1977;
 Readopted Eff. December 5, 1977;
 Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23,
 2015.

15A NCAC 18C .0706 SEDIMENTATION BASINS

- (a) Inlets. Inlets to sedimentation basins shall be designed to dissipate inlet velocities before the diffusion walls or before other entrance arrangements designed to provide uniform flow across the basins.
- (b) Detention Period. A theoretical detention period of four hours shall be the minimum standard unless case specific engineering evidence is presented to demonstrate equivalent treatment efficiency at a shorter period of detention.
- (c) Bottom of Basin. The bottom of the basin shall be sloped and provided with a drain valve or valves for removal of sludge.
- (d) Outlet. Sedimentation basin outlets shall consist of submerged weirs or orifices. The equivalent rate of flow over or through the outlet device shall not exceed 20,000 gallons per day per foot of equivalent weir length.
- (e) Overflow. Sedimentation basins shall be equipped with an overflow pipe or pipes to limit the maximum water level over the filters and to prevent flooding above the walls of filters and basins.

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;
 Readopted Eff. July 1, 2019.

15A NCAC 18C .0707 SOLIDS CONTACT OR UP-FLOW UNITS

- (a) Approval of Solids Contact or Up-Flow Units. Solids contact or up-flow clarification units shall be approved only if raw water characteristics are constant and shall not be approved for raw waters that have wide and rapid variations in turbidity or other qualities that adversely affect the treatment process.
- (b) Water Rise Rate. The rise rate shall not exceed 1.0 gallon per minute per square foot of clarification area.
- (c) Weir Loading. Weir loading shall not exceed 10 gallons per minute per foot of weir length. Horizontal flow to the collection trough shall not exceed 10 feet.
- (d) Speed Agitator Equipment. Mixing and flocculation shall be accomplished by means of adjustable, variable speed agitator equipment.
- (e) Sludge Withdrawal. Sludge withdrawal equipment shall include an intermittent sludge removal mechanism controlled by an adjustable automatic timer.
- (f) Basin Drain. The basin shall be provided with a bottom drain that is of sufficient size to empty the basin in two hours or less.

History Note: *Authority G.S. 130A-315; 130A-317; P.L. 93-523;*
 Eff. January 1, 1977;
 Readopted Eff. December 5, 1977;
 Amended Eff. July 1, 1994;
 Readopted Eff. July 1, 2019.

15A NCAC 18C .0708 GRAVITY FILTERS

- (a) Filtration Rates. The standard rate of filtration for a single media filter shall be two gallons per minute per square foot. Higher filtration rates up to four gallons per minute per square foot may be approved for dual media or multi-media filters. Filtration rates in excess of four gallons per minute per square foot may be approved subject to pilot plant or plant scale demonstrations conducted in accordance with Rule .0714 of this Section, and demonstrated equivalent treatment efficiency based on case-specific engineering evidence.

- (b) Wash Water Rate. The backwash rate of flow shall be designed to theoretically expand the filter media 50 percent.
- (c) Rate Control Devices. Rate control equipment shall be provided to control or regulate the filtration rate and the backwash rate. If declining rate filtration is to be used, orifice plates shall be installed on each filter effluent pipe to control maximum filtration rates.
- (d) Surface Washers. Filter beds shall be equipped with a revolving or fixed system of nozzles designed for agitation of the entire beds.
- (e) Gauges and Flow Indicators. Gauges or meters shall be installed to indicate the rate of filtration, the loss of head, and the backwash rate for every filter.
- (f) Filter Media:
 - (1) Filter Sand. Filter sand shall be clean silica sand having:
 - (A) an effective size of 0.35 mm to 0.55 mm;
 - (B) a uniformity coefficient of not more than 1.70;
 - (C) a dust content passing 150 mesh tyler of less than 0.5 percent; and
 - (D) a minimum depth of at least 24 inches.
 - (2) Anthracite Filter Media. If anthracite coal is used as a single filter media, it shall have an effective size of 0.35 mm to 0.55 mm and a uniformity coefficient of 1.70 or less. Minimum depth of the media shall be 24 inches.
 - (3) Dual Media or Multi-media Filters. Particle sizes in dual media and mixed media filter beds shall be within 0.15 mm to 1.2 mm. Influent water quality shall be considered in specifying particle sizes of mixed media beds. The minimum depth of the filter media shall be 24 inches.
- (g) Supporting Media and Underdrain System. The underdrain system and layers of gravel or other media supporting the filter media shall be designed to provide uniform filtration and uniform backwash throughout the filter media.
- (h) Wash Water Troughs Elevation. The elevation of the bottom of the wash water troughs for new installations shall be above the maximum level of the expanded media during washing at the normal design wash water rate. The elevation of the top of the wash water troughs shall provide a two-inch freeboard above the expanded media at the maximum rate of wash.
- (i) Turbidity Monitoring. Turbidimeters employing the nephelometric method, which measures the intensity of scattered light, shall be provided for the continuous determination of the turbidities of filtered water from each filter unit.
- (j) Sampling Tap. A tap shall be installed for sampling of the effluent from each filter.
- (k) Multiple Filter Units. Two or more filter units shall be provided such that the annual average daily demand can be satisfied at the approved filtration rate with one filter removed from service.
- (l) Structural Design. Filters shall have vertical walls with no protrusions or curvature. Floors of filter rooms shall be designed to prevent flooding or spillage into filters through overflow drainage and a minimum of four-inch curbs around the filters.
- (m) Filter to Waste. All filters shall have provisions for filtering to waste with backflow prevention.
- (n) Filter Backwash. Backwash capacity to ensure cleaning of the filters shall be provided.

*History Note: Authority G.S. 130A-315; 130A-317; P.L. 93-523;
 Eff. January 1, 1977;
 Readopted Eff. December 5, 1977;
 Amended Eff. July 1, 1994; January 1, 1978;
 Readopted Eff. July 1, 2019.*

15A NCAC 18C .0709 PREVENTION OF BACKFLOW AND BACK-SIPHONAGE

The following methods and devices for prevention of backflow or back-siphonage shall be provided for the conditions indicated:

- (1) Dry Chemical Feeders. Dry chemical feeders with submerged water inlets shall have a non-pressure type vacuum breaker installed on the atmospheric side of the last control valve.
- (2) Fluoride Chemical Feeders
 - (a) Sodium fluoride saturator tank make-up water lines shall have air gaps between the overflow rim of the tank and the water supply pipe of at least four inches.
 - (b) When using the positive displacement fluoride chemical solution feed pumps, if the point of application to the water supply is at atmospheric pressure and is below the maximum elevation of the solution in the fluoride solution tank, an air gap shall be installed in the fluoride discharge line at a point above the liquid level in the tank. If the point of application is a pressure line, then a pressure type vacuum breaker shall be used.

- (3) Filter Surface Wash Agitators. Either a non-pressure type vacuum breaker shall be installed on the atmospheric side of the last control valve of each agitator, or pressure type vacuum breaker or an approved backflow preventer shall be installed on the pipe line supplying only the agitators.

*History Note: Authority G.S. 130A-315; 130A-317; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.*

15A NCAC 18C .0710 OTHER WATER TREATMENT PLANTS

Water treatment plants which provide conventional filtration treatment, as defined in Rule .0102 of this Subchapter, but do not meet the minimum design criteria for process flow times established in this Rule, may be approved to treat high quality source waters under the following conditions:

- (1) A proposal shall be presented to the Department to justify deviation from minimum criteria. The proposal shall include an engineering report containing information and data to substantiate high source water quality characteristics and demonstrate water treatment plant effectiveness.
- (2) The flocculation process shall have a minimum of 20 minutes theoretical detention time.
- (3) The sedimentation compartment shall utilize tube settlers, plates or equivalent settling enhancement mechanisms and have a minimum of 30 minutes detention time.
- (4) The filter media shall be a minimum of 24 inches in depth and consist of dual or multi-media.
- (5) The source waters shall be derived from watersheds which are classified as WS-I, WS-II or WS-III and shall be protected from sources of pollution as determined by a sanitary survey in accordance with Rule .0202 of this Subchapter.
- (6) The following raw water quality standards shall apply:
 - (a) WS-I, WS-II or WS-III raw water quality standards established by the Environmental Management Commission shall be met.
 - (b) In addition to Sub-Item (6)(a) of this Rule, the following maximum concentration of turbidity, coliform, fecal coliform and color shall be allowed in the water plant influent water, based on sedimentation time provided by the water treatment plant. Off-stream pre-treatment to maintain these standards shall be provided as specified in Item (7) of this Rule.

<u>SED TIME</u>	<u>4 hrs.</u>	<u>2 hrs.</u>	<u>1 hr.</u>	<u>½ hrs.</u>
Turbidity (NTU)	150	75	50	25
Coliform/100 ml	3,000	2,000	1,000	500
Fecal coliform/100 ml	300	200	100	50
Color (CU)	75	60	40	20

Note: Uneven values are to be interpolated.

- (c) Maximum allowable fluctuations in turbidity, coliform, fecal coliform, color (up to the maximum of Sub-Item (6)(b) of this Rule, chemicals and other water quality characteristics shall be established by a pilot study conducted in accordance with Rule .0714 of this Section.
 - (d) The allowable raw water concentration of all other contaminants, for which drinking water standards are established in this Subchapter, shall be based on the removal capacity of the water plant as demonstrated in a pilot study conducted in accordance with Rule .0714 of this Section.
- (7) Off-stream pre-treatment/storage reservoirs shall be provided to maintain the raw water quality standards of Item (6) of this Rule, equalize fluctuations and provide an unpolluted storage reserve in the event of contaminant spills as follows:
 - (a) Off-stream pre-treatment/storage reservoirs shall not be required for source waters derived from uninhabited watersheds classified WS-I if it is demonstrated that the raw water quality standards and fluctuations of Item (6) of this Rule are maintained in the water treatment plant influent water.
 - (b) Off-stream pre-treatment/storage shall not be required for source waters derived from Class I, II or III reservoirs on WS-I, WS-II or WS-III watersheds if an engineering report demonstrates to the Department the source is not vulnerable to spills and that the water quality standards and fluctuations of Item (6) of this Rule can be maintained in the water plant influent water.

- (c) For all other source waters derived from WS-I, WS-II or WS-III watersheds, a minimum of five days off-stream pre-treatment/storage shall be provided. An engineering report as described in Item (1) of this Rule shall be submitted to demonstrate that five days storage is adequate or to determine the greater storage needed to maintain the raw water quality standards and fluctuations of Item (6) of this Rule in the water treatment plant influent water.
- (d) When terrain or space constraints make it infeasible to construct a pre-treatment/storage reservoir, a mechanical pre-treatment system may be approved when an engineering report demonstrates to the Department that the source is not vulnerable to contaminant spills and that the raw water quality standards and fluctuations of Item (6) of this Rule can be maintained in the water treatment plant influent water.

History Note: Authority G.S. 130A-315; 130A-317; P.L. 93-523;
 Eff. July 1, 1994;
 Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .0711 ALTERNATIVE FILTRATION TREATMENT TECHNOLOGIES

A public water system may propose an alternative filtration treatment technology as provided in Rule .2003 of this Subchapter. The Department shall approve alternative filtration treatment technologies when the following conditions have been met and equivalent treatment efficiency, based on case-specific engineering evidence, has been demonstrated.

- (1) The source waters shall be derived from WS-I, WS-II, or WS-III watersheds.
- (2) The raw water quality standards and fluctuations shall be as specified in Rule .0710(6) of this Section, except that the following maximum concentrations shall be allowed in the influent water to the water treatment plant: Turbidity - 20 NTU, coliform - 500/100 ml, fecal coliform - 50/100 ml, and color - 20 CU.
- (3) Off-stream pre-treatment or storage shall be provided as specified in Rule .0710 of this Section, except that the raw water quality standards of Item (2) of this Rule shall be maintained in the water treatment plant influent water.
- (4) If the proposed water treatment plant employs treatment techniques that are consistent with this Subchapter, a pilot study shall be conducted in accordance with Rule .0714 of this Section.
- (5) If the pilot study demonstrates that the proposed water treatment plant can produce water that complies with all requirements of this Subchapter, engineering plans and specifications for the proposed plant and appurtenances shall be presented to the Department for review and approval prior to construction or letting a construction contract.

History Note: Authority G.S. 130A-315; 130A-317; P.L. 93-523;
 Eff. July 1, 1994;
 Readopted Eff. July 1, 2019.

15A NCAC 18C .0712 DIRECT FILTRATION

Water treatment plants which use direct filtration may be approved to treat high quality source waters derived from uninhibited watersheds classified WS-I. A proposal, including an engineering report as described in Rule .0710 Item (1) of this Section shall be submitted to the Department.

- (1) The following raw water maximum contaminant concentrations shall be met: Turbidity - 5 NTU, coliform - 500/100 ml, fecal coliform - 50/100 ml, color - 15 CU. Fluctuations shall not exceed 5 percent per hour.
- (2) A minimum of 5 days off-stream storage shall be provided except in cases where the source waters are derived from in-stream impoundments and it is demonstrated that the raw water quality standards and fluctuations of Item (1) of this Rule are maintained at the entrance to the water treatment plant.
- (3) If the Department determines that the proposed water treatment plant provides treatment techniques that are consistent with this Subchapter and that the treatment is feasible for the source water, a pilot plant study shall be conducted in accordance with Rule .0714 of this Section.
- (4) If the pilot study demonstrates to the Department that the proposed plant can consistently produce water which complies with all requirements of this Subchapter, detailed engineering plans and specifications for the proposed plant and appurtenances shall be presented to the Department for review and approval prior to construction or letting a contract.

History Note: Authority G.S. 130A-315; 130A-317; P.L. 93-523;
Eff. July 1, 1994;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .0713 PRESSURE FILTERS

- (a) Pressure filters shall not be used in treatment of surface waters without prior coagulation and flocculation.
- (b) Pressure filters shall be approved for treatment of existing groundwater sources under the influence of surface water under the following conditions:
- (1) design standards for gravity filters shall meet the requirements set forth in Rule .0708 of this Section;
 - (2) overall plant design shall comply with Rule .0404 of this Subchapter;
 - (3) special design or operational features or modifications shall be provided when needed due to the water quality or the design of the proposed filter;
 - (4) if the proposed water treatment plant employs treatment techniques that are consistent with this Subchapter, a pilot plant study shall be conducted in accordance with Rule .0714 of this Section; and
 - (5) if the pilot study demonstrates that the proposed plant can produce water that complies with all requirements of this Subchapter, engineering plans and specifications for the proposed plant and appurtenances shall be presented to the Department for review and approval prior to construction or letting a construction contract.

History Note: Authority G.S. 130A-315; 130A-317; P.L. 93-523;
Eff. July 1, 1994;
Readopted Eff. July 1, 2019.

15A NCAC 18C .0714 PILOT PLANT STUDIES

- (a) A pilot plant study proposal shall be submitted to the Department for approval before the study is conducted. The proposal shall be approved if it meets all of the following conditions and includes all of the following information:
- (1) An engineering report shall describe the proposed study and shall include the information and data to justify the use of the particular plant to treat the source water.
 - (2) The proposed plant shall employ treatment techniques that are consistent with this Subchapter.
 - (3) The pilot plant shall be of the same design and operation as the proposed plant.
 - (4) A protocol for conducting the study shall be submitted that includes the duration, testing procedures, reporting procedures, plant scale, and other factors that affect the proposed plant operation.
 - (5) The study shall be conducted over a time sufficient to treat all worst-case source water conditions expected through the year.
- (b) Pilot plant finished water shall not be approved by the Department for introduction into a public water system unless case specific engineering evidence is presented to demonstrate that it will not adversely impact compliance with water quality requirements specified in this Subchapter.
- (c) A model plant may be proposed without on-site testing if the proposed plant or pilot plant has met the following conditions:
- (1) been tested under worst case conditions on similar water;
 - (2) achieved the required log inactivation and removal under Section .2000 of this Subchapter for Giardia, Cryptosporidium, and viruses; and
 - (3) achieved a maximum of 0.3 NTU turbidity levels 95 percent of the time in filtered effluent.
- (d) The pilot plant shall comply with the provisions of Section .2000 of this Subchapter.
- (e) If the proposal includes a change of treatment as defined in Rule .1507 Corrosion Control and Lead and Copper Monitoring of this Subchapter, the pilot study shall consider the effect of the proposed changes in compliance with lead, copper, and water quality parameters.

History Note: Authority G.S. 130A-315; 130A-317; P.L. 93-523;
Eff. July 1, 1994;
Amended Eff. October 1, 2009;
Readopted Eff. July 1, 2019.

15A NCAC 18C .0715 OTHER DESIGN STANDARDS

History Note: Authority G.S. 130A-315; 130A-317; P.L. 93-523;
 Eff. July 1, 1994;
 Amended Eff. April 1, 2014;
 Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015;
 Repealed Eff. July 1, 2019 (this rule was recodified to 15A NCAC 18C .0503).

SECTION .0800 - HYDROPNEUMATIC STORAGE TANKS RULES

.0801 - .0805 of Title 15A Subchapter 18C of the North Carolina Administrative Code (T15A.18C .0801 - .0805); has been transferred and recodified from Rules .2001 - .2005 Title 10 Subchapter 10D of the North Carolina Administrative Code (T10.10D .2001 - .2005), effective April 4, 1990.

15A NCAC 18C .0801 CAPACITIES: DETERMINING MINIMUM EFFECTIVE VOLUME

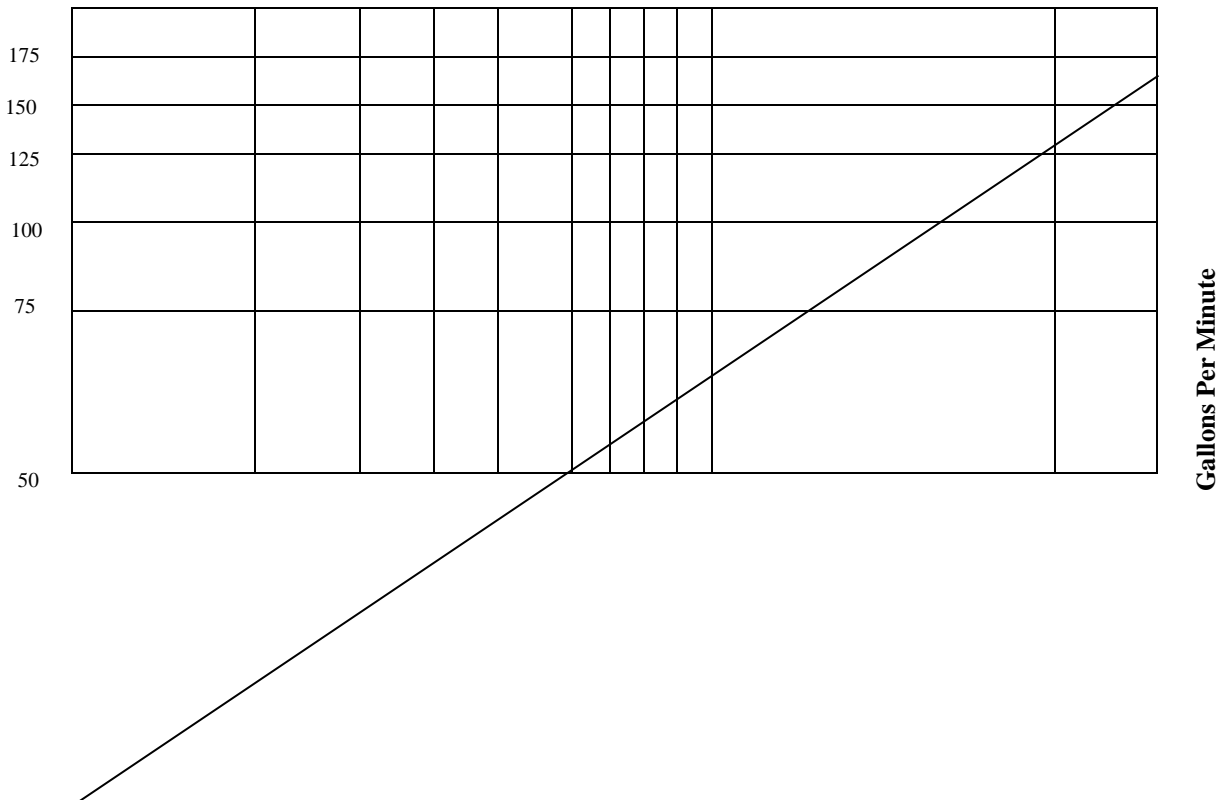
The minimum effective volume of pressure tanks, in gallons, shall equal the peak demand, in gallons per minute, minus the pumping capacity (gpm), multiplied by 20.

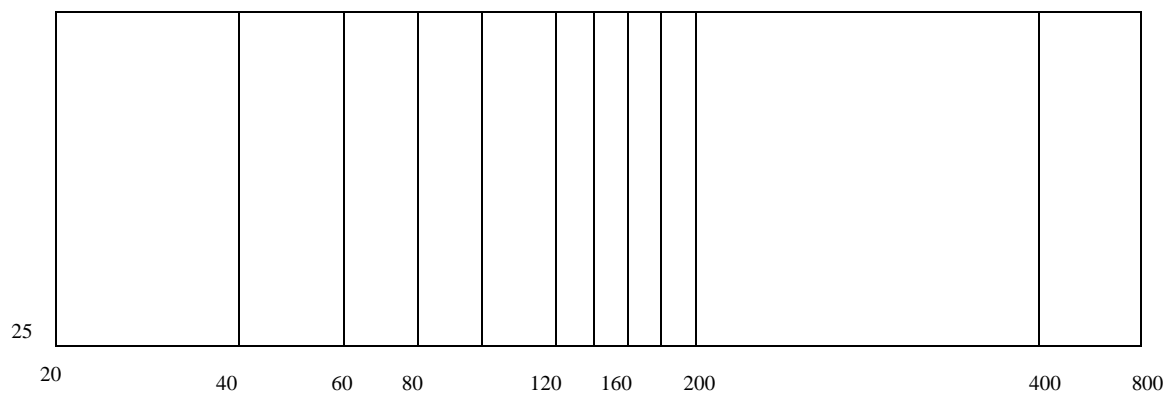
History Note: Authority G.S. 130A-315; 130A-317; P.L. 93-523;
 Eff. January 1, 1977;
 Readopted Eff. December 5, 1977;
 Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .0802 CAPACITIES: DETERMINING PEAK DEMAND

(a) The following charts shall be used to determine the peak demand for campground, residential community, and mobile home park water systems:

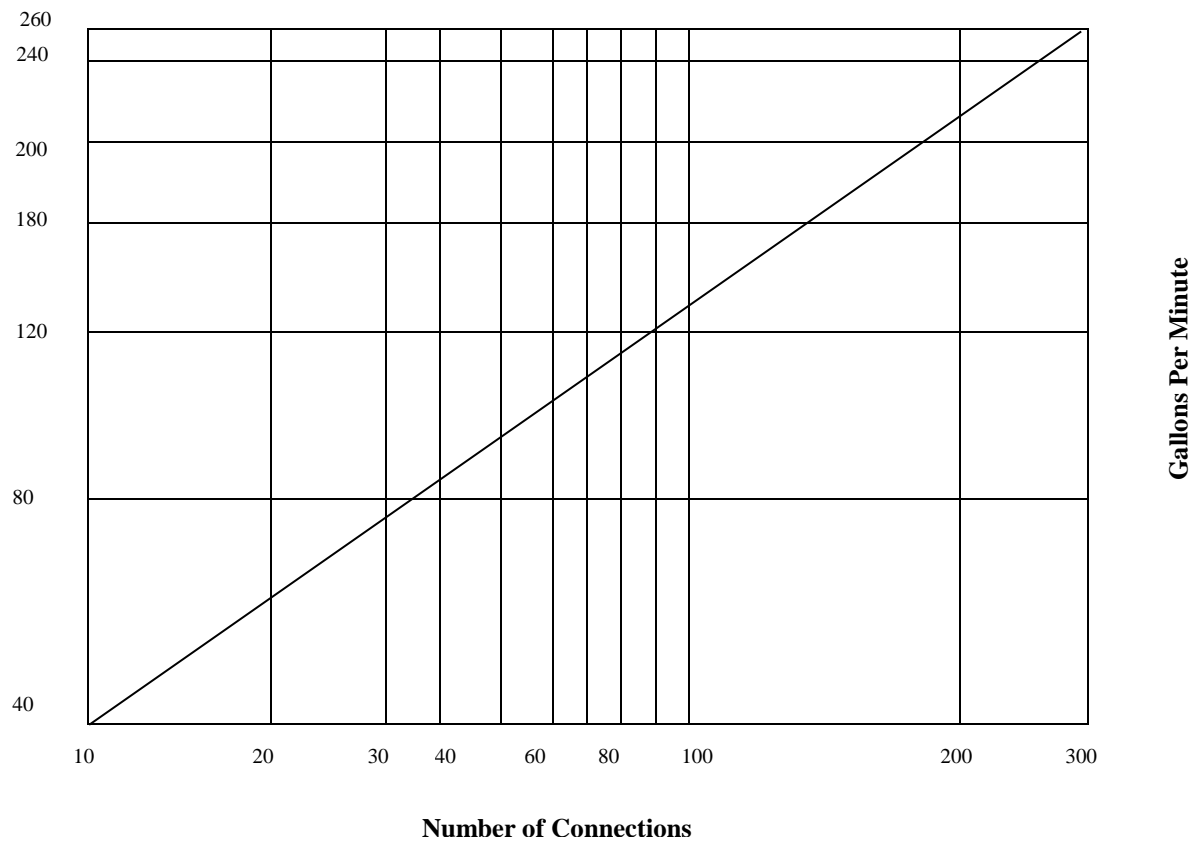
PEAK DEMAND FOR CAMPGROUND WATER SYSTEMS
 (Number of Connections vs Gallons per Minute)



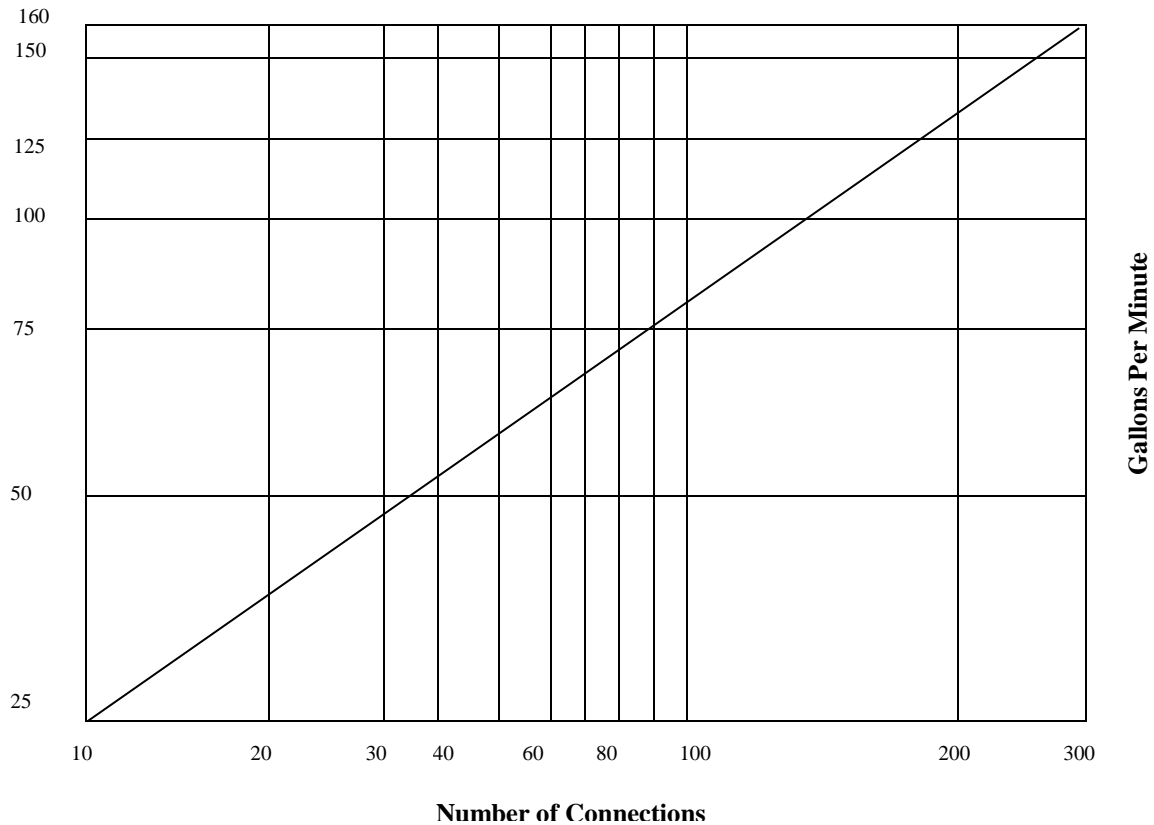


Number of Connections

PEAK DEMAND FOR RESIDENTIAL COMMUNITY WATER SYSTEMS
(Number of Connections vs Gallons per Minute)



PEAK DEMAND FOR MOBILE HOME PARK WATER SYSTEMS
(Number of Connections vs Gallons per Minute)



(b) The peak demand for non-transient, non-community water systems shall be determined based on the total demand weight of fixtures in accordance with the procedures of the North Carolina State Building Code, Volume II, Plumbing Section that are hereby incorporated by reference including any subsequent amendments and editions. Copies are available for public inspection as set forth in Rule .0102 of this Subchapter.

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; July 1, 1994; June 30, 1980;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .0803 CAPACITIES: DETERMINING TOTAL VOLUME

The total volume of a pressure tank shall be calculated by applying the principle of Boyle's Law as set forth in this Rule.

- (1) For a mobile home park, the total volume measured in gallons shall be not less than 25 times the number of connections or 500 gallons, whichever is greater.
- (2) For a residential community water system the total volume shall not be less than 40 times the number of connections or 500 gallons, whichever is greater.
- (3) For a campground, the total volume shall not be less than 10 times the number of connections or 500 gallons, whichever is greater.

History Note: Authority G.S. 130A-315; 130A-317; P.L. 93-523;
Eff. January 1, 1977;

*Readopted Eff. December 5, 1977;
Amended Eff. July 1, 1994; March 31, 1980;
Readopted Eff. July 1, 2019.*

15A NCAC 18C .0804 CAPACITIES: GROUND STORAGE PLUS HYDROPNEUMATIC TANKS

When ground level storage tanks and high-service pumps are to be used, hydropneumatic tanks shall be sized in relation to peak demand and the high-service pump capacity.

*History Note: Authority G.S. 130A-315; 130A-317; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Amended Eff. July 1, 1994;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.*

15A NCAC 18C .0805 CAPACITIES: ELEVATED STORAGE

(a) Where feasible, elevated storage capacity shall meet the requirements of the ISO Commercial Risk Services, Inc. Fire Suppression Rating Schedule that are hereby incorporated by reference including any subsequent amendments and editions. Copies are available for public inspection as set forth in Rule .0102 of this Subchapter.

(b) The elevated storage capacity for a municipality shall be sufficient to minimize the effect of fluctuating demand and provide a reserve for fire protection, but not be less than 75,000 gallons in capacity.

(c) The combined elevated and ground storage capacity of the finished water for community and non-transient, non-community water systems shall be a minimum of one-half day's supply of the average annual daily demand.

*History Note: Authority G.S. 130A-315; 130A-317; P.L. 93-523;
Eff. January 1, 1978;
Amended Eff. April 1, 2014; July 1, 1994;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.*

SECTION .0900 - DISTRIBUTION SYSTEMS

Rules .0901 - .0907 of Title 15A Subchapter 18C of the North Carolina Administrative Code (T15A.18C .0901 - .0907); has been transferred and recodified from Rules .2101 - .2107 Title 10 Subchapter 10D of the North Carolina Administrative Code (T10.10D .2101 - .2107), effective April 4, 1990.

15A NCAC 18C .0901 SIZE OF THE WATER MAINS

Water distribution mains shall be sized to provide a minimum pressure at all points within the distribution system of not less than 20 pounds per square inch (gauge) during periods of peak demand (fire flow), but in any case water mains shall not be less than two-inch standard nominal diameter. Fire hydrants shall not be installed on water mains of less than six inches diameter or on water mains or water systems not designed to carry fire protection flows. Systems not designed for fire flows shall have the capacity to maintain a pressure of at least 30 pounds per square inch (gauge) throughout the system during periods of peak flow.

*History Note: Authority G.S. 130A-315; 130A-317; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Amended Eff. March 31, 1980;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.*

15A NCAC 18C .0902 NUMBER OF RESIDENCES ON A WATER MAIN

(a) No more than 20, or the equivalent of 20 residences shall be connected to a two-inch diameter water line, unless the main is looped or otherwise supplied from two connections with mains of adequate capacities.

(b) A looped two-inch main shall serve no more than 40 residences, or the equivalent water demand of 40 residences. A two-inch diameter main shall not exceed 1000 feet in length.

History Note: Authority G.S. 130A-315; 130A-317; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Amended Eff. January 1, 1978;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .0903 DEAD-END WATER MAINS

Where installation of dead-end water mains cannot be avoided, a hydrant or a valve of adequate size for flushing shall be installed at the terminal end of the line. The flush valves shall have an above-ground discharge and shall be protected from contamination.

History Note: Authority G.S. 130A-315; 130A-317; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .0904 PIPE LAYING

(a) Trenching, pipe laying, and backfilling shall be accomplished in a manner to prevent damage to and misalignment of the pipe. Water mains shall be buried to a depth below the frost line or to a depth sufficient to provide a minimum of 30 inches cover, whichever is greater. In cases where it is impracticable to provide 30 inches of cover taking into consideration feasibility and cost, a deviation may be approved on a case-by-case basis, if supported by data from the design engineer including consideration of pipe material, cover material, land cover, land use, land slope, the depth of the frost line, and the location of other utilities.

(b) To allow for construction and repair, a minimum distance of 12 inches shall be maintained between the outside of the water main and the outside of other utilities.

(c) If an engineer demonstrates it is impractical to maintain the separation distances required by this Rule, taking into consideration feasibility, cost, and the factors set forth in this Paragraph, a deviation may be approved on a case-by-case basis if supported by data and alternative construction criteria submitted by the design engineer. Data and alternative construction criteria submitted by the design engineer to justify the deviation shall describe:

- (1) the rationale for determining that separation criteria described in Paragraphs (a) and (b) of this Rule are impracticable;
- (2) the extent of the deviation from separation criteria in Paragraphs (a) and (b) of this Rule;
- (3) a consideration of pipe materials, pressure ratings, type of joints for water main and non-potable water line, and soil conditions;
- (4) the ability to provide adequate work space to repair or replace pipe segments or other utility infrastructure without causing damage to or otherwise compromising the integrity of pipes; and
- (5) the rationale for determining that the deviation will not result in unreasonable risk to public health.

History Note: Authority G.S. 130A-315; 130A-317; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015;
Amended Eff. July 1, 2019.

15A NCAC 18C .0905 TESTING NEW WATER MAINS

New water mains shall be tested for leakage and any necessary repairs and re-testing shall be accomplished as specified in AWWA standards.

History Note: Authority G.S. 130A-315; 130A-317; P.L. 93-523;

Eff. January 1, 1977;

Readopted Eff. December 5, 1977;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .0906 RELATION OF WATER MAINS TO NON-POTABLE WATER LINES

(a) For the purposes of this Rule, sewer shall mean any existing or proposed gravity or force main used to convey sanitary or industrial process waste.

(b) Lateral Separation of Sewers and Water Mains. Water mains shall be laid at least 10 feet laterally from existing or proposed sewers, unless local conditions or barriers prevent a 10-foot lateral separation, in which case:

- (1) the water main shall be laid in a separate trench, with the elevation of the bottom of the water main at least 18 inches above the top of the sewer; or
- (2) the water main shall be laid in the same trench as the sewer, with the water main located at one side on a bench of undisturbed earth and with the elevation of the bottom of the water main at least 18 inches above the top of the sewer.

(c) Crossings. A water main that crosses a sewer shall be laid a minimum vertical distance of 18 inches from the outside of the water main and the outside of the sewer, either above or below the sewer, with preference to the water main located above the sewer. One full length of water pipe shall be located so that both joints will be as far from the sewer as possible.

(d) Water Mains and Storm Sewer Pipes. Pipes carrying storm drainage shall be separated from water lines in accordance with Rule .0904 of this Section.

(e) Water Mains and Reclaimed Water Distribution Lines. Water lines shall be located at least 10 feet horizontally from or at least 18 inches above water pipes carrying treated and disinfected wastewater in reclaimed water distribution lines. Crossings shall be made in accordance with Paragraph (c) of this Rule.

(f) Special Conditions. If an engineer demonstrates it is impracticable to maintain the separation distances required by this Rule, taking into consideration feasibility, cost, and the factors set forth in this Paragraph, the deviation may be approved on a case-by-case basis, if supported by data and alternative construction criteria provided by the design engineer. Data and alternative construction criteria submitted by the design engineer to justify the deviation must describe:

- (1) the rationale for determining that separation criteria described in this Rule are impracticable;
- (2) the extent of the deviation from separation criteria in this Rule;
- (3) a consideration of pipe materials, pressure ratings, type of joints for water main and non-potable water line, and soil conditions;
- (4) the ability to provide adequate work space to repair or replace pipe segments or other utility infrastructure without causing damage to or otherwise compromising the integrity of pipes; and
- (5) the rationale for determining that the deviation will not result in unreasonable risk to public health.

History Note: Authority G.S. 130A-315; 130A-317; P.L. 93-523;

Eff. January 1, 1977;

Readopted Eff. December 5, 1977;

Readopted Eff. July 1, 2019.

15A NCAC 18C .0907 VALVES

(a) Valves should be installed on all branches from feeder mains, and between mains and hydrants according to the following schedule:

- (1) three valves at x (crosses),
- (2) two valves at T's (tees), and
- (3) one valve on single hydrant branch.

(b) All valves installed in water distribution systems shall meet the appropriate AWWA Standards C 500-71 (adopted in 1971), C 504-74 (adopted in 1974), and C 507-73 (adopted in 1973) of the American Water Works Association, Inc., that are incorporated by reference including any subsequent amendments or editions. Copies are available for public inspection as set forth in Rule .0102 of this Subchapter. All valves must be installed in such a manner as to be readily accessible, preferably, the use of an appropriate valve box and cover.

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; March 31, 1980;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.*

SECTION .1000 - DISINFECTION OF WATER SUPPLY SYSTEMS

Rules .1001 - .1004 of Title 15A Subchapter 18C of the North Carolina Administrative Code (T15A.18C .1001 - .1004); has been transferred and recodified from Rules .2201 - .2204 Title 10 Subchapter 10D of the North Carolina Administrative Code (T10.10D .2201 - .2204), effective April 4, 1990.

15A NCAC 18C .1001 DISINFECTION OF NEW SYSTEMS

(a) All interior surfaces of new potable water supply systems, including wells, filters, storage tanks and distribution lines shall be thoroughly disinfected by means of hypochlorite or chlorine solutions, after which bacteriological test samples shall be collected.

(b) After disinfection the water supply shall not be placed into service until bacteriological test results of representative water samples analyzed in an approved laboratory are found to be satisfactory.

*History Note: Authority G.S. 130A-315; 130A-317; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.*

15A NCAC 18C .1002 DISINFECTION OF WELLS

(a) After construction, servicing, maintenance, or any other activity or event that might lead to contamination of the water, wells shall be disinfected in accordance with ANSI/AWWA C654-13, "Disinfection of Wells." Copies may be obtained for public inspection as set forth in Rule .0503 of this Subchapter.

(b) After disinfection, wells shall not be placed into service until bacteriological test results of representative water samples analyzed by a certified laboratory are found to be satisfactory.

(c) Records demonstrating compliance with ANSI/AWWA Standard C654-13 shall be available for three years for inspection by the Department.

*History Note: Authority G.S. 130A-315; 130A-317; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Amended Eff. July 1, 1994;
Readopted Eff. July 1, 2019.*

15A NCAC 18C .1003 DISINFECTION OF STORAGE TANKS AND DISTRIBUTION SYSTEMS

(a) Water distribution systems, including storage tanks and water mains, after flushing to remove sediment and other foreign matter, and after testing for leaks, shall be disinfected in accordance with ANSI/AWWA Standard C652-11; "Disinfection of Water Storage Facilities" or in accordance with ANSI/AWWA C651-14; "Disinfection of Water Mains." Copies may be obtained for public inspection as set forth in Rule .0503 of this Subchapter.

(b) After disinfection, water storage or distribution facilities shall not be placed into service until bacteriological test results of representative water samples analyzed by a certified laboratory are found to be satisfactory.

(c) Records demonstrating compliance with ANSI/AWWA Standards C652-11 or ANSI/AWWA Standard 651-14 shall be available for three years for inspection by the Department.

*History Note: Authority G.S. 130A-315; 130A-317; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Amended Eff. January 1, 1978;
Readopted Eff. July 1, 2019.*

15A NCAC 18C .1004 DISINFECTION OF WATER TREATMENT FACILITIES

- (a) New water treatment facilities and existing water treatment facilities taken out of service for cleaning, inspection, maintenance, painting, repair, or other activities or events that might lead to contamination of water shall be disinfected in accordance with ANSI/AWWA Standard C653-13, "Disinfection of Water Treatment Facilities." Copies may be obtained for public inspection as set forth in Rule .0503 of this Subchapter.
- (b) After disinfection the water treatment facilities shall not be placed into service until bacteriological test results of representative water samples analyzed by a certified laboratory are found to be satisfactory.
- (c) Records demonstrating compliance with ANSI/AWWA Standard C653-13 shall be available for three years for inspection by the Department.

History Note: Authority G.S. 130A-315; 130A-317; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Amended Eff. July 1, 1994;
Readopted Eff. July 1, 2019.

SECTION .1100 - PROTECTION OF UNFILTERED PUBLIC WATER SUPPLIES

Rules .1101 - .1108 of Title 15A Subchapter 18C of the North Carolina Administrative Code (T15A.18C .1101 - .1108); has been transferred and recodified from Rules .1201 - .1208 Title 10 Subchapter 10D of the North Carolina Administrative Code (T10.10D .1201 - .1208), effective April 4, 1990.

15A NCAC 18C .1101 WATERSHED AREA

No dwelling house, pasture, hog lot, cattle or horse barn, or other areas where domestic animals are confined or permitted, and no parks, camping grounds or other places of public assembly shall be permitted within the watershed area of an unfiltered public water system. The watershed area shall be posted in accordance with Rule .1107 of this Section.

History Note: Authority G.S. 130A-315; 130A-320; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Amended Eff. July 1, 1994; September 1, 1990; September 1, 1979;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .1102 AUTHORIZED PERSONS WITHIN WATERSHED AREA

No persons, other than a duly authorized representative of the person or company supplying the water from an unfiltered public water system or a representative of the local health department, or the Department, or a game warden, state forester or law enforcement officer, or a representative of the U.S. Park Service or U.S. Forest Service shall be permitted within the area of the watershed of an unfiltered public water system at any time and for any purpose unless the Department determines that the proposed activity does not adversely affect the quality of the water.

History Note: Authority G.S. 130A-315; 130A-320; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Amended Eff. July 1, 1994; September 1, 1990; September 1, 1979;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .1103 HUNTING: FISHING: OR HIKING

Hunting, fishing, or hiking shall not be permitted within the watershed area.

History Note: Authority G.S. 130A-315; 130A-320; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Amended Eff. September 1, 1990;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .1104 DISPOSAL OF CARCASSES

The carcass of any dead animal found within the watershed area of an unfiltered community water system shall be buried by the owner or person in charge of the animal and by the person owning or in charge of the land upon which the animal dies with a covering of at least three feet of earth, or the carcass shall be burned, or removed from the watershed and buried as required by G.S. 106-403. In no case shall dead animals be placed in the reservoir or the tributaries of an unfiltered community water system.

*History Note: Authority G.S. 130A-315; 130A-320; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Amended Eff. September 1, 1979;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.*

15A NCAC 18C .1105 PROHIBITED CONDUCT ON WATERSHED

No timbering, lumbering, construction, or reforestation operations shall be permitted on the watershed of an unfiltered public water system unless the Department determines that the project will provide for the sanitary and physical protection of the water supply during such operations. The applicant shall submit a project plan describing the nature and scope of the project and precautions for protection of the water supply.

*History Note: Authority G.S. 130A-315; 130A-320; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Amended Eff. July 1, 1994; September 1, 1990; September 1, 1979;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.*

15A NCAC 18C .1106 INSPECTION OF WATERSHEDS

The person or company supplying water from the watershed of an unfiltered source shall employ an adequate number of responsible inspectors and cause satisfactory inspection of the watershed to be made at least at quarterly intervals to assure that the watershed area is at all times maintained in a manner that will promote and insure the sanitary and physical protection of the supply. A copy of the watershed inspection report shall be submitted to the Public Water Supply Section, within ten days after completion of the inspection.

*History Note: Authority G.S. 130A-315; 130A-320; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Amended Eff. September 1, 1990;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.*

15A NCAC 18C .1107 WATERSHED BOUNDARY SIGNS

Signs advising the public of the watershed boundaries and prohibiting trespassing by all unauthorized persons shall be posted at the water works intake and along the boundaries and at entrances and accesses throughout the watershed area of an unfiltered public water system. It shall be the duty of the watershed inspectors and other water supply officials to see that these signs are posted and maintained.

*History Note: Authority G.S. 130A-315; 130A-320; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Amended Eff. July 1, 1994; September 1, 1979;*

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .1108 CONTINUOUS DISINFECTION OF WATER SUPPLY

The water supply shall be continuously disinfected by means of chlorination or by other methods approved by the Commission for Public Health. Equipment shall be provided to assure uninterrupted disinfection.

*History Note: Authority G.S. 130A-315; 130A-320; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.*

SECTION .1200 - PROTECTION OF FILTERED WATER SUPPLIES

15A NCAC 18C .1201 RECREATIONAL ACTIVITIES

- (a) No recreational activities shall be permitted on a class I or class II reservoir without a resolution by the commission or without approval by the Department. The Department may approve recreational events on a class I or class II reservoir which last one day or less upon a showing that the recreational event will not adversely affect the quality of the water to the point of rendering it unsuitable as a source for a public water system. All other recreational activities on a class I or class II reservoir shall be permitted only upon a resolution by the commission authorizing the activity.
- (b) Upon request for such a resolution, the Division shall make or cause to be made a thorough investigation of the quality of the water to determine the extent to which the proposed recreational activities would adversely affect the quality of the water. If, after such investigation, the Commission for Public Health is of the opinion that the proposed recreational activities will not adversely affect the quality of the water to the point of rendering it unsuitable as a source of public water system, the Commission for Public Health may adopt a resolution authorizing the proposed recreational activities.
- (c) Only those recreational activities specifically authorized in the resolution will be allowed. No recreational activities shall be permitted within 50 yards of any public water system intake.

*History Note: Authority G.S. 130A-315; 130A-320; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Amended Eff. October 1, 1985; September 1, 1979;
Transferred and Recodified from 10 NCAC 10D .1301 Eff. April 4, 1990;
Amended Eff. July 1, 1994; September 1, 1990;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.*

15A NCAC 18C .1202 PROTECTION OF WATER QUALITY

The issuance of a resolution by the Commission for Public Health for recreational activities on public water supply reservoirs shall be contingent upon the governing authority establishing provisions for adequate sanitation facilities, supervision and police control to insure the protection of the water quality.

*History Note: Authority G.S. 130A-315; 130A-320; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Transferred and Recodified from 10 NCAC 10D .1311 Eff. April 4, 1990;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.*

15A NCAC 18C .1203 MAINTENANCE OF PARKS

Parks or other places of resort for the use and entertainment of the public which may be established and maintained on a watershed shall be provided with sanitary facilities for the collection of garbage and disposal of sewage. Such facilities must not cause deterioration of water quality. Persons in charge of such facilities must maintain these facilities at all times in order to prevent the pollution of the public water system.

History Note: Authority G.S. 130A-315; 130A-320; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Amended Eff. September 1, 1979;
Transferred and Recodified from 10 NCAC 10D .1302 Eff. April 4, 1990;
Amended Eff. July 1, 1994; September 1, 1990;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .1204 FISHING

(a) Fishing shall not be permitted on any Class I or Class II public water supply reservoir without a resolution granting permission by the Commission for Public Health. In order to obtain permission, a written application shall be submitted by the owner of the water supply to the Commission for Public Health. Permission shall not be issued until an investigation has been made by an authorized representative of the Division of Water Resources and a determination made that fishing in the reservoir shall not adversely affect the water quality.

(b) The application requesting permission to fish in any reservoir shall be accompanied by sufficient evidence (such as ordinances adopted by the applicant) to insure that the following requirements shall be enforced by the applicant:

- (1) Fishing shall be permitted only from boats owned or controlled by the applicant. Boats will at all times be under the supervision and jurisdiction of a responsible representative of the applicant. Bank fishing may be permitted in restricted supervised areas with proper sanitation facilities when included as a specific, listed activity and approved by the Commission for Public Health.
- (2) A sufficient number of wardens and watershed inspectors shall be employed at all times to insure that no acts of urination, defecation, or other acts which would defile the water supply are committed by any person while fishing in the public water supply reservoir.
- (3) A dock shall be provided or controlled by the applicant for the purpose of docking fishing boats. No boat shall enter or leave the reservoir except from a ramp owned or controlled by the applicant.

History Note: Authority G.S. 130A-315; 130A-320; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Amended Eff. September 1, 1979;
Transferred and Recodified from 10 NCAC 10D .1303 Eff. April 4, 1990;
Amended Eff. April 1, 2014; September 1, 1990;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .1205 PERMISSION TO FISH

History Note: Authority G.S. 130A-315; 130A-320; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Transferred and Recodified from 10 NCAC 10D .1501 Eff. April 4, 1990;
Repealed Eff. September 1, 1990.

15A NCAC 18C .1206 ENFORCEMENT OF FISHING REQUIREMENTS

History Note: Authority G.S. 130A-315; 130A-320; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Transferred and Recodified from 10 NCAC 10D .1502 Eff. April 4, 1990;
Repealed Eff. September 1, 1990.

15A NCAC 18C .1207 ANIMALS IN RESERVOIR

The watering, washing or wallowing of any horses, mules, cattle, or domestic animals shall not be permitted in any class I or class II reservoir. The supplier of water may permit domestic animals within 50 feet of normal pool elevation if the animal is under direct supervision by a person and the activity is regulated by the supplier of water to ensure that water quality is not adversely affected.

History Note: Authority G.S. 130A-315; 130A-320; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Transferred and Recodified from 10 NCAC 10D .1304 Eff. April 4, 1990;
Amended Eff. July 1, 1994;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .1208 CONTROLLING THE DRAINAGE OF WASTES

Precautions shall be taken on the watershed of class I and class II reservoirs and water intakes located on unimpounded streams to control the drainage of wastes from animal and poultry pens or lots, into such sources.

History Note: Authority G.S. 130A-315; 130A-320; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Transferred and Recodified from 10 NCAC 10D .1305 Eff. April 4, 1990;
Amended Eff. September 1, 1990;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .1209 UNTREATED DOMESTIC SEWAGE OR INDUSTRIAL WASTES

No treated or untreated domestic sewage, treated or untreated industrial waste or by-products shall be stored on the watershed of or discharged into any public water supply reservoir or stream tributary to that reservoir whose waters are classified as WS-I. No untreated domestic sewage or industrial waste by-products shall be discharged into any public water supply reservoir or stream classified as WS-II, WS-III, WS-IV, or WS-V. No hazardous waste, industrial by-products, treated or untreated domestic sewage shall be stored in the watershed of a Class I or Class II water supply reservoir. No hazardous waste or industrial by-products shall be stored in the watershed of a WS-II, WS-III, WS-IV, or WS-V stream unless precautions are taken to prevent its being spilled into or otherwise entering the raw water supply.

History Note: Authority G.S. 130A-315; 130A-320; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Amended Eff. February 1, 1987;
Transferred and Recodified from 10 NCAC 10D .1306 Eff. April 4, 1990;
Amended Eff. July 1, 1994; September 1, 1990;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .1210 SEWAGE DISPOSAL

Any residence, place of business or public assembly, located on a watershed shall be provided with a sanitary means of sewage disposal.

History Note: Authority G.S. 130A-315; 130A-320;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Transferred and Recodified from 10 NCAC 10D .1309 Eff. April 4, 1990;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .1211 GROUND ABSORPTION SEWAGE COLLECTION: TREATMENT/DISP SYSTEMS

History Note: Authority G.S. 130A-315; 130A-320; P.L. 93-523;
Eff. February 1, 1987;
Amended Eff. December 1, 1988;
Transferred and Recodified from 10 NCAC 10D .1313 Eff. April 4, 1990;
Amended Eff. July 1, 1994; September 1, 1990;
Expired Eff. December 1, 2015 pursuant to G.S. 150B-21.3A.

15A NCAC 18C .1212 BURIAL OF CARCASSES

The carcass of any dead animal found within the watershed shall be buried by the owner or person in charge of the animal or the person owning or in charge of the land upon which the animal dies with a covering of at least three feet of earth or the carcass shall be burned or removed from the watershed and buried as required by G.S. 106-403. In no case shall dead animals be placed in the reservoir.

History Note: Authority G.S. 130A-315; 130A-320; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Transferred and Recodified 10 NCAC 10D .1307 Eff. April 4, 1990;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .1213 BURIAL GROUND

No burial ground shall be established on any watershed within 1,500 feet upstream from a public water supply intake on an unimpounded stream or within 300 feet of any class I or class II reservoir.

History Note: Authority G.S. 130A-315; 130A-320; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Transferred and Recodified from 10 NCAC 10D .1308 Eff. April 4, 1990;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .1214 DISPOSAL OF ANY SUBSTANCE

Any person who intends to dispose of or store any substance that may adversely affect the quality of the water, to the point of rendering the water unsuitable as a source for a public water system, shall notify the Division prior to disposal or storage. The notification shall be in writing and shall list any substances that will be disposed of or stored. No substances shall be disposed of or stored without the Division's approval. The owner of the water supply shall be responsible for maintaining surveillance of the reservoirs and watersheds to insure protection of the water quality and shall notify the Department of any activities that may endanger water quality.

History Note: Authority G.S. 130A-315; 130A-320; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Transferred and Recodified from 10 NCAC 10D .1310 Eff. April 4, 1990;
Amended Eff. September 1, 1990;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

SECTION .1300 - OPERATION OF PUBLIC WATER SUPPLIES

Rules .1301 - .1303 of Title 15A Subchapter 18C of the North Carolina Administrative Code (T15A.18C .1301 - .1303); has been transferred and recodified from Rules .1101 - .1103 Title 10 Subchapter 10D of the North Carolina Administrative Code (T10.10D .1101 - .1103), effective April 4, 1990.

15A NCAC 18C .1301 GENERAL REQUIREMENTS

(a) For the purposes of this Section,

- (1) A "facility" is defined as any individual operational unit or a combination of operational units that a public water system uses in the treatment or distribution of drinking water.
- (2) Any "operator" referenced in this Section shall hold a valid certificate issued by the North Carolina Water Treatment Facility Operators Certification Board. An "Operator in Responsible Charge (ORC)" designated for each facility shall hold a grade of certification corresponding to or higher than the classification of the facility.

(b) Treatment facility. The supplier of water shall have an Operator in Responsible Charge (ORC), as required by 15A NCAC 18D .0206. The ORC or certified treatment facility operator working under the direction of the ORC shall be familiar with the entire water system, including the chlorinators, piping and other appurtenances pertaining to the operation of the treatment plant and the distribution system.

(c) Distribution facility. The collection of distribution system samples and field measurements required on monthly operation reports, including residual disinfectant testing in the distribution system in accordance with Rule .1302(a)(2)(A) of this Section may be performed by a person under the ORC's direction, subject to the following provisions:

- (1) The standard operating procedures plan prepared in accordance with 15A NCAC 18D .0701(f) shall include procedures for sampling and for performing residual disinfectant tests and other field measurements.
- (2) In order to report low residual disinfectant test readings or other problems, the designee shall, at all times, be able to contact the ORC or certified operator working under the direction of the ORC, who shall take corrective action as needed to keep the system in compliance.

History Note: Authority G.S. 90A-29; 130A-315; P.L. 93-523; Eff. January 1, 1977; Readopted Eff. December 5, 1977; Amended Eff. October 1, 2009; July 1, 1994; September 1, 1990; June 30, 1980; September 1, 1979; Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .1302 TESTS, FORMS AND REPORTING

(a) Required tests. If a public water system uses disinfectants or other chemicals for the treatment of water, residual disinfectant tests and other applicable water quality tests required by this Subchapter shall be made during every oversight visit to the facility required by Rule .1303 of this Section. Residual disinfectant concentrations shall be maintained in accordance with 15A NCAC 18C .2002 and .2201 and shall be tested as follows:

- (1) Residual disinfectant tests at the entry point. For systems providing treatment, residual disinfectant concentrations shall be measured in the water entering the distribution system by the operator during every visit required by Rule .1303(a) of this Section.
- (2) Residual disinfectant tests in the distribution system shall be performed as follows:
 - (A) Residual disinfectant concentrations shall be measured weekly at locations that represent maximum residence time of the water in the distribution system or at other locations with high water age. These locations shall be designated on the sample siting plan required under 15A NCAC 18C .1534. The number of required weekly tests is shown in Table A below. Samples collected on the same day must be collected from different locations.

Table A: Measurement Requirements for Residual Disinfectant Concentrations and Chloramine Operational Parameters

Distribution System Classification according to 15A NCAC 18D .0205(b)	Minimum Number of Samples Per Week
D	1
C	3
A and B	5

- (B) Distribution systems classified as C or D in Table A may request the Department to reduce the requirements for measuring residual disinfectant concentrations in the distribution system at the

locations that represent maximum residence time or other locations with high water age as required in Part (a)(2)(A) of this Rule. The request shall be in writing and shall demonstrate to the Department that the residual disinfectant concentrations measured at the entry point in accordance with Subparagraph (a)(1) of this Rule are sufficient in providing the minimum residual disinfectant concentrations required under 15A NCAC 18C .2002 and .2201. The Department shall consider the presence of continuous monitoring, size and configuration of the distribution system, magnitude of disinfectant degradation and results of performance studies.

- (3) Chloramine Operational Parameters. When ammonia and chlorine are applied disinfectants, the system shall measure analytical parameters pertinent to the operation as follows:
 - (A) Water entering the distribution system. Parameters to be measured shall, at a minimum, include total chlorine, monochloramine, free ammonia, and pH and shall be performed daily, while the treatment facility is in operation.
 - (B) Water in the distribution system. Parameters to be measured shall, at a minimum, include total chlorine, monochloramine, free ammonia, and pH and shall be measured no less often than denoted in Table A.

(b) Forms, Reports and Records. A public water system shall report and retain records as follows:

- (1) Test results shall be documented and reported monthly on forms and in a format provided by the Department and shall be signed by the ORC. Copies of report forms may be obtained from the Public Water Supply Section. The monthly report shall be submitted by the 10th day of the following month to the Public Water Supply Section.
- (2) The forms and reports shall be in an electronic format provided by the Department for water systems owned or operated by local governments and all community water systems serving 1,000 or more service connections or 3,000 or more individuals, regardless of ownership, effective April 1, 2010. Community water systems serving less than 1,000 service connections and less than 3,000 individuals and all non-transient, non-community water systems shall report test results in an electronic format provided by the Department effective October 1, 2010. The Department may waive the requirement for electronic submission in accordance with G.S. 130A-329. Requests for waivers shall be submitted in writing to the Department no less than two months prior to the deadline.
- (3) Records documenting compliance with Section .1300 shall be retained on the premises of the water system for a minimum of three years.

*History Note: Authority G.S. 90A-29; 130A-315; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Amended Eff. October 1, 2009; July 1, 1994; September 1, 1990; February 1, 1987; June 30, 1980;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.*

15A NCAC 18C .1303 FACILITY OVERSIGHT

(a) Treatment Facility Oversight. At a minimum, the supplier of water shall ensure that during each oversight visit required by this Rule the water system's treatment facility receives a routine visual inspection from the source to the point where water enters the distribution system; equipment settings are adjusted and chemical feed tanks are filled as necessary; dates and quantities of chemicals added are recorded; and the physical and chemical tests required on plant monthly operation reports are performed. In addition, the supplier of water shall have an ORC, or a certified treatment facility operator working under the direction of the ORC, on site as frequently as necessary to ensure compliance with the requirements of this Section and Subchapter. At least one visit per week shall be performed by the ORC for the treatment facility or by an operator with a grade of certification corresponding to or higher than the classification of the facility. The supplier of water shall provide oversight at a public water system treatment facility while the facility is in operation, as follows:

- (1) Surface Water or Groundwater Under the Direct Influence (GWUDI) of Surface Water Treatment Facilities. Surface water or GWUDI systems shall provide an operator as required in 15A NCAC 18D .0206 and shall have the ORC or an operator with a grade of certification corresponding to or higher than the classification of the facility on-site at least 20 percent of the time the facility is in operation, as calculated on a weekly basis.
- (2) Ground Water Treatment Facilities. The requirements for ground water treatment facilities are as follows:

- (A) Ground water treatment facilities with any individual parameter rating value of 10 or higher as classified by 15A NCAC 18D .0203 shall be visited by an operator daily.
- (B) Ground water treatment facilities with all individual parameter rating values less than 10 as classified 15A NCAC 18D .0203 shall be visited by an operator as often as necessary to ensure compliance with the requirements of this Subchapter but no less often than denoted in Table B below. For the standard frequency of three times per week, no more than two consecutive days shall pass between operator oversight visits. For the standard frequency of two times per week, no more than three consecutive days shall pass between operator oversight visits.
- (3) Supplemental Treatment Facilities. The requirements for supplemental treatment facilities are as follows:
 - (A) A supplemental treatment facility, including booster chlorination, is a facility designed to treat water that has previously been treated to meet standards of the "North Carolina Drinking Water Act." Supplemental treatment facilities with any individual parameter rating value of 10 or higher as designated by 15A NCAC 18D .0203 shall be visited by an operator daily.
 - (B) Supplemental treatment facilities with all individual parameter rating values less than 10 as designated by 15A NCAC 18D .0203 shall be visited by an operator as often as necessary to ensure compliance with the requirements of this Subchapter but no less often than denoted in Table B below. For the standard frequency of three times per week, no more than two consecutive days shall pass between operator oversight visits. For the standard frequency of two times per week, no more than three consecutive days shall pass between operator oversight visits.

Table B: Standard Frequency of Oversight Visits for Ground Water and Supplemental Treatment Facilities

SYSTEM TYPE	Population size	standard frequency of oversight VISITS
Community	> 10,000	Daily
	> 3,300 to 9,999	Five times per week
	501 to 3,300	Three times per week
	500 or fewer	Two times per week
Non-transient, non-community	> 1,000	Three times per week
	1,000 or fewer	Two times per week
Transient, non-community	Any population size	Once per week, unless an ORC is not required by 15A NCAC 18D .0206

(b) Distribution Facility Oversight. Distribution facilities have no specified standard frequency of oversight visits under this Section. The distribution facility shall be visited by the operator as frequently as necessary to operate the facility, provide emergency response and ensure compliance with the requirements of this Section and Subchapter.

(c) Increased Frequency of Oversight. The requirements for increasing the frequency of oversight visits are:

- (1) A system that fails to maintain any operational parameter or has any failure of the treatment or distribution facility that would cause a violation of water quality or treatment standards of Section .1500 of this Subchapter shall be visited by the operator daily until the system has returned to compliance, as determined by the Department. Daily visits shall be required for all systems failing to maintain minimum residual disinfectant concentrations under Rules .2002 or .2201 of this Subchapter or maximum residual disinfectant levels under Rule .2008 of this Subchapter until compliant disinfection levels are restored, regardless of the standard frequency of oversight visits for that system.
- (2) The Department may require additional operator oversight visits for a system that has a violation of this Subchapter, an equipment malfunction, a customer complaint, an emergency or other situation that may affect the ability of the system to comply with the requirements of this Subchapter. In determining the frequency and duration of increased oversight visits, the Department shall consider the following:
 - (A) nature of the malfunction, complaint, emergency or other situation;
 - (B) degree of risk to the public health or welfare;
 - (C) size and type of population exposed;
 - (D) type of treatment and chemicals used by the water system;
 - (E) type, size, and configuration of the distribution system; and
 - (F) potential or actual damage to property or the environment.

(d) Reduced Frequency of Oversight. The Department may grant written approval to reduce the standard frequency of operator oversight visits of this Subchapter to not less than once per week if a system can document compliance with this Subchapter and any of the following:

- (1) Equivalent public health protection is provided through use of remotely controlled continuous monitoring and recording technology. The recorded data must be reviewed at a minimum of five days a week. This technology must be capable of contacting the operator 24 hours a day, seven days a week in case of operational failure, including a loss of signal.
- (2) Equivalent public health protection is provided by operator visits less frequent than those specified under Part (a)(2)(B) of this Rule based on a facility's overall contribution to the daily flow of the water system and the system's proposed alternative plan and schedule.
- (3) Equivalent public health protection is provided through use of process control devices and standard operating procedures to ensure that no chemical misfeeds can occur and include all of the following, at a minimum:
 - (A) wiring of chemical pumps to the well pumps such that they must operate simultaneously;
 - (B) devices to regulate chemical feeds such that overfeeding and underfeeding of chemicals is prevented;
 - (C) anti-siphoning devices installed to prevent siphonage of chemicals into the water system;
 - (D) demonstration that adequate chemical storage and supply is available to ensure continuous feed between visits; and
 - (E) equipment is calibrated in accordance with manufacturers' recommendations but in no case less than once per year.

History Note: Authority G.S. 90A-29; 130A-315; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Amended Eff. October 1, 2009; July 1, 1994; September 1, 1990; June 30, 1980; September 1, 1979;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .1304 WATER SYSTEM OPERATION AND MAINTENANCE

- (a) Water systems shall be operated and maintained in accordance with applicable approved engineering plans and specifications, Water System Management Plan and Operation and Maintenance Plan.
- (b) Water systems shall be operated and maintained in accordance with 15A NCAC 18D, Rules Governing Water Treatment Facility Operators, Rule .0206 and G.S. 90A-29.

History Note: Authority G.S. 90A-29; 130A-315; P.L. 93-523;
Temporary Adoption Eff. October 1, 1999;
Eff. August 1, 2000;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .1305 SOURCE WATER PROTECTION PLANNING

- (a) In compliance with G.S. 130A-320, every supplier of water operating a public water system treating and furnishing water from a surface water source shall create and implement a Source Water Protection Plan. For purposes of this Rule, the Source Water Protection Plan required by G.S. 130A-320 shall be referred to as a Source Water Resiliency and Response Plan (SWRRP).
- (b) The SWRRP shall include a list of potential contaminant sources (PCSs) that have potential to reach surface waters, both provided by the Department and supplemented by the water system if additional PCSs are known to exist by the supplier of water. The listed PCSs will be located in the following areas as defined in Classifications and Water Quality Standards Applicable to Surface Waters and Wetlands of North Carolina, 15A NCAC 02B .0200, which is hereby incorporated by reference, including subsequent amendments and editions:
 - (1) within the entire watershed for waters classified as WS-I;
 - (2) within the critical area and 1,000 feet from perennial streambanks within the protected area for waters classified as WS-II and WS-III;

- (3) within the critical area and 1,000 feet from perennial streambanks within the protected area for waters classified as WS-IV;
- (4) within ½ mile from the normal pool elevation in which the intake is located, or to the ridge line of the watershed, whichever comes first, for a reservoir within waters classified as WS-V; and
- (5) within ½ mile, measured as a straight line, upstream from and draining to the intake located directly in the stream or river, or to the ridge line of the watershed, whichever comes first, for a direct-stream intake within waters classified as WS-V.

(c) Any community water system subject to this Rule shall certify completion and implementation of a SWRRP by December 31, 2022. The SWRRP shall contain the following elements:

- (1) identification and contact information of personnel responsible for emergency management, including water system, local, State, and federal emergency response personnel;
- (2) an evaluation of a water system's ability to take the following actions:
 - (A) close its water intake(s) in the event of contamination, including a determination of the duration of time the water intake(s) can remain closed while maintaining positive water pressure within the distribution system;
 - (B) isolate or divert contaminated water from its surface water intake(s);
 - (C) reduce demand by implementing conservation measures during a contamination event. Water Shortage Response Plans may be referenced to fulfill this requirement for water systems required to prepare a Water Shortage Response Plan under 15A NCAC 02E .0607, which is hereby incorporated by reference, including subsequent amendments and editions; and
 - (D) meet demand via alternate sources of supply in the event of contamination or loss of its primary water source.
- (3) identification of foreseeable natural and human-caused emergency events, including water shortages and outages;
- (4) a description of the emergency response strategies for each identified shortage or outage event and each potential contamination event associated with PCSs identified and listed in Paragraph (b) of this Rule;
- (5) standard operating procedures to close intakes and switch to an alternate intake during a contamination event, including procedures that outline exercises designed to practice closure and switching of the intake(s);
- (6) a description of public notification procedures; and
- (7) identification and evaluation of all facilities and equipment that upon failure would result in a water outage or violations of this Subchapter.

(d) For community water systems that are subject to this Rule and also required to complete a Risk and Resilience Assessment and an Emergency Response Plan under Section 2013 of America's Water Infrastructure Act of 2018 (AWIA), the system's Risk and Resilience Assessment and Emergency Response Plan created to comply with AWIA may be referred to as a SWRRP and used to satisfy the requirements of this Rule, if the PCS list was compiled in accordance with Paragraph (b) of this Rule. The schedule for certifying completion and implementation of the SWRRP pursuant to this Paragraph shall be as follows:

- (1) by September 30, 2020 for community water systems serving more than 100,000 people;
- (2) by June 30, 2021 for community water systems serving 50,000 to 99,999 people; and
- (3) by December 30, 2021 for community water systems serving 3,301 to 49,999 people.

(e) Non-transient, non-community water systems subject to this Rule shall certify completion and implementation of a SWRRP by December 31, 2022. The SWRRP shall contain the following elements:

- (1) identification and contact information of personnel responsible for emergency management, including water system, local, State, and federal emergency response personnel; and
- (2) an evaluation of a water system's ability to take the following actions:
 - (A) close its water intake(s) in the event of contamination, including a determination of the duration of time the water intake(s) can remain closed while maintaining positive water pressure within the distribution system;
 - (B) isolate or divert contaminated water from its surface water intake(s);
 - (C) reduce demand by implementing conservation measures during a contamination event; and
 - (D) meet demand via alternate sources of supply in the event of contamination or loss of its primary water source.

- (f) Any public water system that begins treating and furnishing water from a surface water source on or after December 31, 2022 shall create and implement a SWRRP that satisfies the requirements of this Rule prior to the commencement of its operations.
- (g) Any public water system required to create and implement a SWRRP in accordance with this Rule shall review and update its SWRRP at five-year intervals from its creation deadline, as specified in Paragraph (c), (d), (e), or (f) of this Rule.
- (h) The SWRRP and any associated documentation used in its creation and implementation shall be available for review by Department staff upon request.
- (i) The supplier of water shall certify that a SWRRP has been created and implemented, and that the water system's governing body has been advised of the SWRRP creation and implementation. The certification shall be submitted to the Department by the deadline specified in Paragraphs (c), (d), (e), or (f) of this Rule.
- (j) The supplier of water shall certify that a SWRRP has been revised and that the water system's governing body has been advised of the revision. The certification shall be submitted to the Department by the revision deadline specified in Paragraph (g) of this Rule.

History Note: Authority G.S. 130A-315; 130A-320(c);
Eff. January 1, 2019;
Amended Eff. April 1, 2020.

SECTION .1400 - FLUORIDATION OF PUBLIC WATER SUPPLIES

Rules .1401 - .1409 of Title 15A Subchapter 18C of the North Carolina Administrative Code (T15A.18C .1401 - .1409); has been transferred and recodified from Rules .0601 - .0609 Title 10 Subchapter 10D of the North Carolina Administrative Code (T10.10D .0601 - .0609), effective April 4, 1990.

15A NCAC 18C .1401 POLICY

Upon receipt of an application from a community water system to fluoridate its water supply, the Department will approve the application provided the rules for fluoridation pursuant to this Section are followed.

History Note: Authority G.S. 130A-316;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. September 1, 1990; September 1, 1979;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .1402 FORMAL APPLICATION

- (a) Fluoride shall not be added to a community water system until a formal application has been submitted to and written approval is granted by the Secretary of the Department.
- (b) Such approval will be considered upon written application and after adequate investigation has been made to determine if the policy adopted by the Division has been satisfied and the facilities, their accuracy and the proposed method of control are satisfactory and meet the requirements hereafter stated.
- (c) The application shall include a resolution by the unit of local government or the governing body operating the community water system. The resolution shall state that the local board of health has approved the proposed fluoridation procedure.

History Note: Authority G.S. 130A-316;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. July 1, 1993; September 1, 1990; September 1, 1979;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .1403 RESOLUTION

History Note: Authority G.S. 130A-316;
Eff. February 1, 1976;

*Readopted Eff. December 5, 1977;
Repealed Eff. July 1, 1990 in accordance with G.S. 150B-59(c).*

15A NCAC 18C .1404 FEEDING EQUIPMENT

Accurate feeding equipment shall be provided for applying fluoride. Either gravimetric or volumetric dry-feed equipment or positive displacement liquid-feed equipment with accuracy within five percent shall be required.

*History Note: Authority G.S. 130A-316;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. September 1, 1990;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.*

15A NCAC 18C .1405 PROTECTION OF OPERATORS

- (a) Special precautions shall be taken to protect the operators from inhaling fluoride dust when handling this chemical and while charging the hoppers of the feeders.
- (b) Dry feeders shall be equipped with dust collectors consisting of bag filters operating under positive air pressure and vented to the outside air.
- (c) Each operator who handles fluoride shall be provided with his individual toxic dust respirator to be used only when handling the chemical.
- (d) When liquid or solution feed equipment is used, special precautions against siphonage and improper chemical mixing must be provided after consultation with and approval by the Department.

*History Note: Authority G.S. 130A-316;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. September 1, 1990;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.*

15A NCAC 18C .1406 CONTROL OF FLUORIDE PROCESS

- (a) Fluoride Levels. Fluoride levels shall not exceed the MCL set forth in Rule .1510 of this Subchapter. A supplier of water that is adding fluoride to the treated water shall maintain the following fluoride levels:
 - (1) an operational control range for fluoride of 0.6 mg/l to 1.0 mg/l shall be established;
 - (2) the monthly average of the daily measurements at the entry point to the distribution system shall be within the operational control range; and
 - (3) 80 percent of the daily measurements at the entry point to the distribution system shall be within the operational control range.
- (b) A water treatment plant operator certified pursuant to 15A NCAC 18D shall conduct the necessary chemical analyses and supervise application of the fluoride.
- (c) Sample Location and Frequency.
 - (1) Daily Monitoring. A supplier of water shall measure the fluoride concentration at least once per day at each entry point to the distribution system with fluoridated water.
 - (2) Split Samples. One entry point sample collected pursuant to Subparagraph (c)(1) of this Rule shall be split equally on a monthly basis. One portion shall be analyzed by water system personnel and the other portion analyzed by the North Carolina State Laboratory for Public Health or another laboratory certified to analyze drinking water samples for fluoride by the North Carolina State Laboratory of Public Health. A supplier of water that has all fluoride samples under this Rule analyzed by a laboratory certified to analyze drinking water samples for fluoride by the North Carolina State Laboratory for Public Health shall not be required to conduct split sampling.
 - (3) Distribution System Monitoring. The supplier of water of a public water system that has multiple entry points that are either not all fluoridated or the fluoride level at an entry point to the distribution system is not within the range set forth in Subparagraph (a)(1) of this Rule shall conduct sampling as follows:
 - (A) measure the fluoride concentration in the distribution system at least two times per month;

- (B) one sample per month shall be a split sample and analyzed in accordance with Subparagraph (c)(2) of this Rule;
 - (C) sample sites shall be rotated throughout the distribution system at monitoring locations approved for coliform compliance sampling; and
 - (D) sample results shall be available for review by the Department upon request.
 - (4) Annual Raw Water Sample. A supplier of water shall measure the fluoride concentration of the raw water at least annually by a laboratory certified to analyze fluoride in drinking water by the North Carolina State Laboratory of Public Health.
 - (5) Discrepancies. A supplier of water shall compare the results of the split samples and shall consult with the North Carolina State Laboratory of Public Health to investigate and resolve all discrepancies greater than 15 percent within 30 days of receipt.
- (d) Analysis Methods. The fluoride content of water shall be determined in accordance with methods set forth in Rule .1508 of this Subchapter.
- (e) Monthly Reporting. Records of all fluoride analyses performed in accordance with Subparagraph (c)(1) of this Rule, shall be recorded on forms approved by the Department and submitted to the Department monthly. The forms shall specify the sample dates, times, locations, and results. Fluoride results performed by certified laboratories in accordance with Subparagraph (c)(1) of this Rule, shall be reported by the certified laboratory electronically in a format prescribed by the Department.
- (f) Reporting Exceedances. Any fluoride result above the MCL set forth in Rule .1510 of this Subchapter shall be reported to the Department as soon as possible, but in all cases within 24 hours after receipt of the analysis.
- (g) Fluoride Products. All fluoridation products used by a public water system shall meet the requirements of Rule .1537 of this Subchapter.
- (h) Discontinuation of Fluoridation. Prior to the discontinuation of fluoride addition, a supplier of water shall provide to the Department and the Department of Health and Human Services, Oral Health Section, copies of documentation by the unit of local government or the governing body operating the community water system that:
- (1) the resolution provided in the formal application to add fluoride has been rescinded or replaced; and
 - (2) the local board of health has been notified.

History Note: Authority G.S. 90A-29; 130A-316;
 Eff. February 1, 1976;
 Readopted Eff. December 5, 1977;
 Amended Eff. April 1, 2014; July 1, 1994; September 1, 1990; December 17, 1979;
 Readopted Eff. July 1, 2019.

15A NCAC 18C .1407 APPROVAL MAY BE RESCINDED

Failure to thoroughly and effectively carry out the requirements governing the application of fluoride, or for other good cause, shall be considered sufficient cause to rescind the approval of the Department and to withdraw the authorization granted for the permission to add fluoride to a community water system.

History Note: Authority G.S. 130A-316;
 Eff. February 1, 1976;
 Readopted Eff. December 5, 1977;
 Amended Eff. September 1, 1990; September 1, 1979;
 Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .1408 SEVERABILITY

History Note: Authority G.S. 130A-316;
 Eff. February 1, 1976;
 Readopted Eff. December 5, 1977;
 Repealed Eff. July 1, 1990 in accordance with G.S. 150B-59(c).

15A NCAC 18C .1409 REFERENCE RULES

History Note: Authority G.S. 130A-316;
Eff. February 1, 1976;
Amended Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Amended Eff. December 17, 1979;
Repealed Eff. September 1, 1990.

SECTION .1500 - WATER QUALITY STANDARDS

15A NCAC 18C .1501 PURPOSE

History Note: Authority G.S. 130A-315; P.L. 93-523; 40 C.F.R. 141;
Eff. September 1, 1979;
Transferred and Recodified from 10 NCAC 10D .1610 Eff. April 4, 1990;
Repealed Eff. September 1, 1990.

15A NCAC 18C .1502 MONITORING OF CONSECUTIVE PUBLIC WATER SYSTEMS

(a) When a public water system supplies water to one or more other public water systems the Department may modify the monitoring requirements imposed by this Section to the extent that the interconnection of the systems justifies treating them as a single system for monitoring purposes. Any modified monitoring shall be conducted pursuant to a schedule specified by the Department and concurred in by the Administrator of the U.S. Environmental Protection Agency.

(b) All public water systems which purchase water for resale and which do not provide any treatment except booster chlorination will be required to perform bacteriological monitoring in accordance with Rule .1534 of this Section.

(c) The Department may exempt a public water system that obtains treated water from another public water system serving more than 10,000 persons from conducting compliance monitoring for the organic chemicals under 15A NCAC 18C .1518(a), provided that the system from which the water is obtained has conducted the analyses required under 15A NCAC 18C .1518(a). Exempted public water systems which disinfect are required to monitor under 15A NCAC 18C .1516.

History Note: Authority G.S. 130A-315; P.L. 93-523; 40 C.F.R. 141;
Eff. September 1, 1979;
Amended Eff. June 1, 1988;
Transferred and Recodified from 10 NCAC 10D .1628 Eff. April 4, 1990;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .1503 MICROBIOLOGICAL CONTAMINANT SAMPLING AND ANALYSIS

15A NCAC 18C .1504 MAXIMUM MICROBIOLOGICAL CONTAMINANT LEVELS

History Note: Authority G.S. 130A-315; P.L. 93-523; 40 C.F.R. 141;
Eff. September 1, 1979;
Amended Eff. March 1, 1989; December 1, 1988; March 31, 1981; December 19, 1979;
15A NCAC 18C .1503 was Transferred and Recodified from 10 NCAC 10D .1622
Eff. April 4, 1990;
15A NCAC 18C .1504 was Transferred and Recodified from 10 NCAC 10D .1613
Eff. April 4, 1990;
Amended Eff. September 1, 1990;
Repealed Eff. January 1, 1991.

15A NCAC 18C .1505 TURBIDITY SAMPLING AND ANALYSIS

The requirements of this Rule shall apply only to public water systems that use water obtained in whole or in part from surface sources. The provisions of 40 C.F.R. 141.22 are hereby incorporated by reference including any subsequent amendments and editions. Copies are available for public inspection as set forth in Rule .0102 of this Subchapter. Any dates set forth in the federal rule shall be applicable.

History Note: Authority G.S. 130A-315; P.L. 93-523; 40 C.F.R. 141;

Eff. September 1, 1979;
Amended Eff. March 31, 1981; December 19, 1979;
Transferred and Recodified from 10 NCAC 10D .1623 Eff. April 4, 1990;
Amended Eff. April 1, 2014; August 1, 2002; January 1, 1991; September 1, 1990;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .1506 MAXIMUM CONTAMINANT LEVELS FOR TURBIDITY

The requirements of this Rule shall apply to public water systems that use water obtained in whole or in part from surface water sources. The provisions of 40 C.F.R. 141.13 are hereby incorporated by reference including any subsequent amendments and editions. Copies are available for public inspection as set forth in Rule .0102 of this Subchapter. Any dates set forth in the federal rule shall be applicable.

History Note: Authority G.S. 130A-315; P.L. 93-523; 40 C.F.R. 141;
Eff. September 1, 1979;
Transferred and Recodified from 10 NCAC 10D .1614 Eff. April 4, 1990;
Amended Eff. April 1, 2014; August 1, 2002; January 1, 1991; September 1, 1990;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .1507 CORROSION CONTROL AND LEAD AND COPPER MONITORING

(a) Control and adjustment of pH shall be provided for community water systems having water with a pH below 6.5. This control and adjustment shall be approved by the Department pursuant to the rules in Section .0300 of this Subchapter. If the community water system is also required to install corrosion control treatment to comply with (c) of this Rule, it shall meet the minimum pH level required pursuant to Paragraph (c) of this Rule.

(b) The provisions of 40 C.F.R. 141.42 are incorporated by reference, including subsequent amendments and editions. Copies may be obtained as set forth in Rule .0102(b) of this Subchapter.

(c) The provisions of 40 C.F.R. 141, Subpart I - Control of Lead and Copper are incorporated by reference, including subsequent amendments and editions. Copies may be obtained as set forth in Rule .0102(b) of this Subchapter.

History Note: Authority G.S. 130A-315; P.L. 93-523; 40 C.F.R. 141;
Eff. September 1, 1979;
Amended Eff. October 1, 1982; February 27, 1982;
Transferred and Recodified from 10 NCAC 10D .1621 Eff. April 4, 1990;
Amended Eff. April 1, 2014; July 1, 1994; October 1, 1992; December 1, 1991;
Readopted Eff. July 1, 2019.

15A NCAC 18C .1508 INORGANIC CHEMICAL SAMPLING AND ANALYSIS

The provisions of 40 C.F.R. 141.23 are incorporated by reference, including subsequent amendments and editions. Copies may be obtained as set forth in Rule .0102(b) of this Subchapter. In addition, two or more water systems that are adjacent, that are owned or operated by the same supplier of water, and that together serve 15 or more service connections or 25 or more persons shall submit samples every three years from each section of the water system that is supplied from a separate source.

History Note: Authority G.S. 130A-315; P.L. 93-523; 40 C.F.R. 141;
Eff. September 1, 1979;
Amended Eff. March 1, 1989; February 1, 1987; October 1, 1986; April 1, 1983;
Transferred and Recodified from 10 NCAC 10D .1625 Eff. April 4, 1990;
Amended Eff. April 1, 2014; July 1, 1994; April 1, 1992; December 1, 1991;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015;
Amended Eff. July 1, 2019.

15A NCAC 18C .1509 SPECIAL MONITORING FOR SODIUM

The provisions of 40 C.F.R. 141.41 are incorporated by reference, including subsequent amendments and editions. Copies may be obtained as set forth in Rule .0102(a) and (b) of this Subchapter.

History Note: Authority G.S. 130A-315; P.L. 93-523; 40 C.F.R. 141; Eff. February 27, 1982; Transferred and Recodified from 10 NCAC 10D .1636 Eff. April 4, 1990; Amended Eff. April 1, 2014; July 1, 1994; September 1, 1990; Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015; Amended Eff. July 1, 2019.

15A NCAC 18C .1510 MAXIMUM CONTAMINANT LEVELS FOR INORGANIC CHEMICALS

(a) The provisions of 40 C.F.R. 141.11 are hereby incorporated by reference including any subsequent amendments and editions, except the maximum contaminant level for arsenic shall be regulated as set forth in Paragraph (c) of this Rule. Copies are available for public inspection as set forth in Rule .0102 of this Subchapter.

(b) The provisions of 40 C.F.R. 141.62 are hereby incorporated by reference including any subsequent amendments and editions. Copies are available for public inspection as set forth in Rule .0102 of this Subchapter.

(c) Effective January 1, 2002, the maximum contaminant level for arsenic applies to community and non-transient non-community water systems are as follows:

- (1) The maximum contaminant level for arsenic is 0.010 milligrams per liter, until such time as the USEPA revises the standard to a level lower than 0.010 milligrams per liter at which time the more stringent level shall apply.
- (2) Sampling, analytical requirements, and compliance calculations for arsenic shall be conducted as specified for contaminants in Rule .1508 of this Subchapter.
- (3) Certified laboratories must report quantifiable results down to at least 0.005 milligrams per liter.

History Note: Authority G.S. 130A-315; P.L. 93-523; 40 C.F.R. 141; Eff. September 1, 1979; Amended Eff. October 1, 1986; October 1, 1982; April 1, 1982; March 31, 1981; Transferred and Recodified from 10 NCAC 10D .1616 Eff. April 4, 1990; Amended Eff. April 1, 1992; Temporary Amendment Eff. January 1, 2002; Amended Eff. April 1, 2014; April 1, 2003; Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .1511 CONCENTRATION OF IRON

The requirements of this Rule shall apply only to community water systems. A community water system that has an iron concentration in excess of 0.30 mg/l shall provide treatment to control the water quality. Analysis of samples shall be made on an as needed basis determined by the Department and shall include the addition of a new well or other raw water source, an approval of a new community water system, an approval of an existing system not previously approved, or problems and complaints of water quality normally associated with iron concentration.

History Note: Authority G.S. 130A-315; P.L. 93-523; 40 C.F.R. 141; Eff. September 1, 1979; Transferred and Recodified from 10 NCAC 10D .1619 Eff. April 4, 1990; Amended Eff. July 1, 1994; Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015; Amended Eff. July 1, 2019.

15A NCAC 18C .1512 CONCENTRATION OF MANGANESE

The requirements of this Rule shall apply only to community water systems. A community water system that has a manganese concentration in excess of 0.05 mg/l shall provide treatment to control the water quality. Analysis of samples shall be made on an as needed basis determined by the Department and shall include the addition of a new well or other raw water source, an approval of a new community water system, an approval of an existing system not previously approved, or problems and complaints of water quality normally associated with manganese concentration.

History Note: Authority G.S. 130A-315; P.L. 93-523; 40 C.F.R. 141;
Eff. September 1, 1979;
Amended Eff. September 9, 1980;
Transferred and Recodified from 10 NCAC 10D .1620 Eff. April 4, 1990;
Amended Eff. July 1, 1994;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015;
Amended Eff. November 1, 2020; July 1, 2019.

15A NCAC 18C .1513 TOTAL TRIHALOMETHANES SAMPLING AND ANALYSIS: 10,000 OR MORE

History Note: Authority G.S. 130A-315; P.L. 93-523; 40 CFR 141;
Eff. September 30, 1980;
Amended Eff. April 1, 1983;
Transferred and Recodified from 10 NCAC 10D .1635 Eff. April 4, 1990;
Amended Eff. August 1, 2000; August 1, 1990;
Expired Eff. December 1, 2015 pursuant to G.S. 150B-21.3A.

15A NCAC 18C .1514 TREATMENT TECHNIQUES FOR TOTAL TRIHALOMETHANES

History Note: Authority G.S. 130A-315; P. L. 93-523; 40 C.F.R. 141;
Eff. October 1, 1983;
Transferred and Recodified from 10 NCAC 10D .1637 Eff. April 4, 1990;
Amended Eff. August 1, 1990;
Expired Eff. December 1, 2015 pursuant to G.S. 150B-21.3A.

15A NCAC 18C .1515 ORGANIC CHEMICALS OTHER THAN TTHM, SAMPLING AND ANALYSIS

- (a) The requirements of this Rule shall apply to community and non-transient non-community water systems. The provisions of 40 C.F.R. 141.24 are incorporated by reference, including subsequent amendments and editions. Copies may be obtained as set forth in Rule .0102(b) of this Subchapter.
- (b) If the result of an analysis made pursuant to Paragraph (a) of this Rule indicates that the level of any contaminant regulated under this Subchapter exceeds the maximum contaminant level, the supplier of water shall report to the Department within 48 hours of receipt of the analytical result.

History Note: Authority G.S. 130A-315; P.L. 93-523; 40 C.F.R. 141;
Eff. September 1, 1979;
Amended Eff. November 1, 1989; December 1, 1988; June 1, 1988; October 1, 1982;
Transferred and Recodified from 10 NCAC 10D .1624 Eff. April 4, 1990;
Amended Eff. April 1, 2014; August 1, 2002; April 1, 1992; December 1, 1991; September 1, 1990;
Readopted Eff. July 1, 2019.

15A NCAC 18C .1516 SPECIAL MONITORING FOR UNREGULATED CONTAMINANTS

The provisions of 40 C.F.R. 141.40 are incorporated by reference including subsequent amendments and editions. Copies are available for public inspection as set forth in Rule .0102(b) of this Subchapter.

History Note: Authority G.S. 130A-313; 130A-315; P.L. 93-523; 40 C.F.R. 141;
Eff. June 1, 1988;
Amended Eff. November 1, 1989;
Transferred and Recodified from 10 NCAC 10D .1638 Eff. April 4, 1990;
Amended Eff. April 1, 2014; July 1, 1994; April 1, 1992; December 1, 1991; August 1, 1990;
Readopted Eff. July 1, 2019.

15A NCAC 18C .1517 MAXIMUM CONTAMINANT LEVELS FOR ORGANIC CHEMICALS

History Note: Authority G.S. 130A-315; P.L. 93-523; 40 C.F.R. 141;
Eff. September 1, 1979;
Amended Eff. September 30, 1980;
Transferred and Recodified from 10 NCAC 10D .1615 Eff. April 4, 1990;
Amended Eff. April 1, 2014; April 1, 1992; August 1, 1990;
Expired Eff. December 1, 2015 pursuant to G.S. 150B-21.3A.

15A NCAC 18C .1518 MAXIMUM CONTAMINANT LEVELS FOR ORGANIC CONTAMINANTS

The provisions of 40 C.F.R. 141.61 are hereby incorporated by reference including any subsequent amendments and editions. Copies are available for public inspection as set forth in Rule .0102 of this Subchapter.

History Note: Authority G.S. 130A-315; P.L. 93-523; 40 C.F.R. 141;
Eff. June 1, 1988;
Transferred and Recodified from 10 NCAC 10D .1639 Eff. April 4, 1990;
Amended Eff. April 1, 2014; April 1, 1992;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .1519 MONITORING FREQUENCY FOR RADIOACTIVITY

The requirements of this Rule shall apply to community water systems and community adjacent water systems, as defined in G.S. 130A-315(b2). The provisions of 40 C.F.R. 141.26 are incorporated by reference, including subsequent amendments and editions. Copies may be obtained as set forth in Rule .0102(b) of this Subchapter.

History Note: Authority G.S. 130A-313; 130A-315; P.L. 93-523; 40 C.F.R. 141;
Eff. September 1, 1979;
Amended Eff. March 1, 1989; September 9, 1980; December 19, 1979;
Transferred and Recodified from 10 NCAC 10D .1627 Eff. April 4, 1990;
Amended Eff. April 1, 2014; August 1, 2002; July 1, 1994;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015;
Amended Eff. July 1, 2019.

15A NCAC 18C .1520 MAXIMUM CONTAMINANT LEVELS FOR RADIONUCLIDES

The provisions of 40 C.F.R. 141.66 are hereby incorporated by reference including any subsequent amendments and editions. Copies are available for public inspection as set forth in Rule .0102 of this Subchapter.

History Note: Authority G.S. 130A-315; P.L. 93-523; 40 C.F.R. 141;
Eff. September 1, 1979;
Transferred and Recodified from 10 NCAC 10D .1617 Eff. April 4, 1990;
Amended Eff. April 1, 2014; August 1, 2002; July 1, 1994;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .1521 MAXIMUM CONTAMINANT LEVEL GOALS FOR RADIONUCLIDES

The provisions of 40 C.F.R. 141.55 are hereby incorporated by reference including any subsequent amendments and editions. Copies are available for public inspection as set forth in Rule .0102 of this Subchapter.

History Note: Authority G.S. 130A-315; P.L. 93-523; 40 C.F.R. 141;
Eff. September 1, 1979;
Transferred and Recodified from 10 NCAC 10D .1618 Eff. April 4, 1990;
Amended Eff. April 1, 2014; August 1, 2002; July 1, 1994;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .1522 ANALYTICAL METHODS FOR RADIOACTIVITY

The provisions of 40 C.F.R. 141.25 are hereby incorporated by reference including any subsequent amendments and editions. Copies are available for public inspection as set forth in Rule .0102 of this Subchapter.

History Note: Authority G.S. 130A-315; P.L. 93-523; 40 C.F.R. 141;
Eff. September 1, 1979;
Amended Eff. March 31, 1981; March 31, 1980;
Transferred and Recodified from 10 NCAC 10D .1626 Eff. April 4, 1990;
Amended Eff. April 1, 2014; August 1, 2002; September 1, 1990;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .1523 PUBLIC NOTIFICATION REQUIREMENTS

(a) The provisions of 40 C.F.R. 141, Subpart Q – Public Notification of Drinking Water Violations are incorporated by reference, including subsequent amendments and editions. As authorized by 40 C.F.R. 141.205(c)(2), the Department has determined that multi-lingual notice shall be given if 30 percent or more of the consumers served by the system are non-English speaking. Copies may be obtained as set forth in Rule .0102(b) of this Subchapter.

(b) Special notification for distribution system samples. The requirements of this Paragraph shall be in addition to the public notice requirements set forth in Paragraph (a) of this Rule and to the reporting requirements contained in Rule .1525 of this Subchapter. If a distribution sample that is required to be reported to the Division is taken from the plumbing of a school or daycare, place of residence, or location supplying permanent or temporary housing, the supplier of water shall notify the billing customer at the sampled address if any individual water sample exceeds an action level, maximum contaminant level, or maximum residual disinfectant level established in this Subchapter or if any individual sample is positive for E. coli or any other fecal indicator, as follows:

- (1) For a contaminant listed as Tier 1 in Appendix A to 40 C.F.R. 141, Subpart Q, notice shall be provided within 24 hours of receipt of analytical results. If the initial contact is by telephone, written notice by mail or direct delivery shall also be provided within 48 hours of analytical results. The written notice shall include the analytical results and appropriate health effects language as required by Appendix B to 40 C.F.R. 141, Subpart Q.
- (2) For a contaminant listed as Tier 2 or Tier 3 in Appendix A to 40 C.F.R. 141, Subpart Q, notice shall be provided within 48 hours of receipt of analytical results. Written notice shall be provided by mail or direct delivery and shall include the analytical results and appropriate health effects language as required by Appendix B to 40 C.F.R. 141, Subpart Q.
- (3) The supplier of water shall submit a copy of the written notice and certification of delivery to the Department within 10 days of completing notification.

History Note: Authority G.S. 130A-315; P.L. 93-523; 40 C.F.R. 141;
Eff. January 1, 1990;
Transferred and Recodified from 10 NCAC 10D .1642 Eff. April 4, 1990;
Amended Eff. April 1, 2014; October 1, 2006; August 1, 2002; April 1, 1992; December 1, 1991; January 1, 1991; October 1, 1990;
Readopted Eff. July 1, 2019.

15A NCAC 18C .1524 REPORTING FOR UNREGULATED CONTAMINANT MONITORING RESULTS

The provisions of 40 C.F.R. 141.35 are incorporated by reference, including subsequent amendments and editions. Copies may be obtained as set forth in Rule .0102(b) of this Subchapter.

History Note: Authority G.S. 130A-315; P.L. 93-523; 40 C.F.R. 141;
Eff. June 1, 1988;
Amended Eff. November 1, 1989;
Transferred and Recodified from 10 NCAC 10D .1640 Eff. April 4, 1990;
Readopted Eff. July 1, 2019.

15A NCAC 18C .1525 REPORTING REQUIREMENTS

(a) The requirements of this Rule shall apply to all public water systems. The provisions of 40 C.F.R. 141.31 are incorporated by reference, including subsequent amendments and editions. Copies may be obtained as set forth in Rule .0102(b) of this Subchapter. Any dates set forth in the federal rule shall be applicable.

(b) If a certified laboratory analyzes a compliance sample for a supplier of water, the certified laboratory shall report the results to both the Department and to the supplier of water or his or her designated representative within the periods set forth in 40 C.F.R. 141.31, except that electronic reporting conducted in accordance with 40 C.F.R. 141.31(a) shall be completed within seven days of completion of the analysis. The laboratory reporting to the Department shall include analytical results for any maximum contaminant level exceedance within the timeframes applicable to the system owner. Reporting shall be in a format, including electronic reporting, established by the Department and shall be filled out completely. If a certified laboratory fails to report compliance sample results in accordance with this Paragraph, the supplier of water shall report results to the Department as required by this Rule.

History Note: Authority G.S. 130A-315; 130A-324; 130A-329; 40 C.F.R 141;
Eff. September 1, 1979;
Amended Eff. February 1, 1987; October 1, 1984; March 31, 1981; March 31, 1980;
Transferred and Recodified from 10 NCAC 10D .1631 Eff. April 4, 1990;
Amended Eff. April 1, 2014; August 1, 2002; January 1, 1991;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015;
Amended Eff. July 1, 2019.

15A NCAC 18C .1526 RECORD MAINTENANCE

The provisions of 40 C.F.R. 141.33 are hereby incorporated by reference including any subsequent amendments and editions. Copies are available for public inspection as set forth in Rule .0102 of this Subchapter.

History Note: Authority G.S. 130A-315; P.L. 93-523; 40 C.F.R. 141;
Eff. September 1, 1979;
Transferred and Recodified from 10 NCAC 10D .1632 Eff. April 4, 1990;
Amended Eff. April 1, 2014; August 1, 2002;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .1527 CERTIFIED LABORATORIES

(a) The provisions of 40 C.F.R. 141.28 are incorporated by reference, including subsequent amendments and editions, with the following exceptions:

- (1) laboratories analyzing samples pursuant to this Subchapter shall be certified for that analytical method by the State Laboratory of Public Health in the Department of Health and Human Services; and
- (2) measurements for alkalinity; bromide; fluoride calcium; daily chlorite samples at the entrance to the distribution system; conductivity; orthophosphate; pH; residual disinfectant concentrations for chlorine, chloramines, and chlorine dioxide; magnesium; silica; Specific Ultraviolet Absorbance (SUVA); temperature; Total Organic Carbon (TOC); and turbidity may be performed by any person who holds a valid certificate issued by the North Carolina Water Treatment Facility Operators Board of Certification (NCWTFOBOC). Measurements may also be performed by a person who has been instructed in the measurement procedure by a person who holds a valid certificate issued by the NCWTFOBOC or by a certified laboratory.

(b) Copies may be obtained as set forth in Rule .0102(b) of this Subchapter.

History Note: Authority G.S. 130A-315; P.L. 93-523; 40 C.F.R. 141;
Eff. September 1, 1979;
Amended Eff. March 31, 1981;
Transferred and Recodified from 10 NCAC 10D .1629 Eff. April 4, 1990;
Amended Eff. April 1, 1992; September 1, 1990;
Readopted Eff. July 1, 2019.

15A NCAC 18C .1528 ALTERNATE ANALYTICAL TECHNIQUES

The provisions of 40 C.F.R. 141.27 are incorporated by reference, including subsequent amendments and editions. Copies may be obtained as set forth in Rule .0102(b) of this Subchapter.

History Note: Authority G.S. 130A-315; P.L. 93-523; 40 C.F.R. 141;
Eff. September 1, 1979;
Amended Eff. March 31, 1981;
Transferred and Recodified from 10 NCAC 10D .1630 Eff. April 4, 1990;
Readopted Eff. July 1, 2019.

15A NCAC 18C .1529 POINT-OF-ENTRY, BOTTLED WATER, AND OTHER TREATMENT DEVICES

(a) The provisions of 40 C.F.R. 141 Subpart J – Use of Non-Centralized Treatment Devices are incorporated by reference, including subsequent amendments and editions. Copies may be obtained as set forth in Rule .0102(b) of this Subchapter.
(b) Public water systems shall not use bottled water or point-of-use devices to achieve compliance with a maximum contaminant level. Bottled water or point-of-use devices may be used on a temporary basis until compliance with the maximum contaminant level is achieved.

History Note: Authority G.S. 130A-315; P.L. 93-523; 40 C.F.R. 141;
Eff. June 1, 1988;
Transferred and Recodified from 10 NCAC 10D .1641 Eff. April 4, 1990;
Amended Eff. September 1, 1990;
Readopted Eff. July 1, 2019.

15A NCAC 18C .1530 CONSTRUCTION

This Section shall be construed as enabling the State of North Carolina to undertake primary responsibility for the enforcement of the federal act.

History Note: Authority G.S. 130A-315; P.L. 93-523; 40 C.F.R. 141;
Eff. September 1, 1979;
Transferred and Recodified from 10 NCAC 10D .1611 Eff. April 4, 1990;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .1531 SITING REQUIREMENTS

(a) Any person constructing or modifying a public water system shall to the extent practicable, avoid locating all or part of a new or expanded facility at a site which:

- (1) is subject to a significant risk from earthquakes, floods, fires or other disasters which could cause a breakdown of the public water system or a portion thereof; or
- (2) except for intake structures, is within the floodplain of a 100-year flood or is lower than any recorded high tide where appropriate records exist.

(b) Additional requirements concerning the siting of raw water intakes shall be found in 15A NCAC 18C .0602.

History Note: Authority G.S. 130A-315; P.L. 93-523; 40 C.F.R. 141;
Eff. September 1, 1979;
Amended Eff. March 31, 1980;
Transferred and Recodified from 10 NCAC 10D .1612 Eff. April 4, 1990;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .1532 VARIANCES AND EXEMPTIONS

The provisions of 40 C.F.R. 141.4 are incorporated by reference, including subsequent amendments and editions. Copies may be obtained as set forth in Rule .0102(b) of this Subchapter.

History Note: Authority G.S. 130A-315; P.L. 93-523; 40 C.F.R. 141;
Eff. September 1, 1979;

*Transferred and Recodified from 10 NCAC 10D .1634 Eff. April 4, 1990;
Amended Eff. January 1, 1991;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015;
Amended Eff. July 1, 2019.*

15A NCAC 18C .1533 TOTAL TRIHALOMETHANES SAMPLING AND ANALYSIS: LESS THAN 10,000

*History Note: Authority G.S. 130A-315;
Eff. August 1, 1990;
Amended Eff. July 1, 1994;
Expired Eff. December 1, 2015 pursuant to G.S. 150B-21.3A.*

15A NCAC 18C .1534 COLIFORM SAMPLING

(a) The provisions of 40 C.F.R. 141.21 are hereby incorporated by reference including any subsequent amendments and editions. Copies are available for public inspection as set forth in Rule .0102 of this Subchapter. The provisions are incorporated with the following exceptions:

- (1) the provision of 40 C.F.R. 141.21(a)(2) concerning the reduction of monitoring frequency for community water systems serving 25 to 1,000 persons is not adopted;
- (2) the provision of 40 C.F.R. 141.21(b)(3) concerning collection of large volume repeat samples in containers of any size is not adopted; and
- (3) the provision of 40 C.F.R. 141.21(c)(2) concerning waiver of the 24-hour limit for re-sampling is not adopted.

(b) An adjacent water system shall submit samples monthly from each section of the water system supplied from a separate source. The minimum number of samples each month per section is based on the population served by the section and shall be determined by the table in 40 C.F.R. 141.21(a)(2).

*History Note: Authority G.S. 130A-315; P.L. 93-523; 40 C.F.R. 141.21;
Eff. January 1, 1991;
Amended Eff. April 1, 2014; February 1, 1992;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.*

15A NCAC 18C .1535 MAXIMUM CONTAMINANT LEVELS FOR COLIFORM BACTERIA

(a) The provisions of 40 C.F.R. 141.63 are incorporated by reference, including subsequent amendments and editions. Copies may be obtained as set forth in Rule .0102(b) of this Subchapter.

(b) The provisions of 40 C.F.R. 141.52 are incorporated by reference, including subsequent amendments and editions. Copies may be obtained as set forth in Rule .0102(b) of this Subchapter.

*History Note: Authority G.S. 130A-315; P.L. 93-523; 40 C.F.R. 141.52; 40 C.F.R. 141.63;
Eff. January 1, 1991;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015;
Amended Eff. July 1, 2019.*

15A NCAC 18C .1536 TREATMENT TECHNIQUES

The provisions of 40 C.F.R. 141. Subpart K are hereby incorporated by reference including any subsequent amendments and editions. Copies are available for public inspection as set forth in Rule .0102 of this Subchapter.

*History Note: Authority G.S. 130A-315; P.L. 93-523; 40 C.F.R. 141;
Eff. April 1, 1992;
Amended Eff. April 1, 2014;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.*

15A NCAC 18C .1537 DRINKING WATER TREATMENT CHEMICALS AND SYSTEM COMPONENTS

(a) The standards established by the American National Standards Institute/NSF International, codified as ANSI/NSF Standard 60 and ANSI/NSF Standard 61, are incorporated by reference including subsequent amendments and editions. ANSI/NSF Standard 60 applies to drinking water treatment chemicals. ANSI/NSF Standard 61 applies to drinking water system components. Copies may be obtained for public inspection as set forth in Rule .0503 of this Subchapter.

(b) A water supply product used in a public water system shall meet the standards incorporated by reference in Paragraph (a) of this Rule. A product certified by an organization having a third-party certification program accredited by the American National Standards Institute to test and certify such products may be used in a public water system.

(c) A supplier of water shall maintain a list of all water supply products used in a public water system for inspection by the Department. Prior to using a product not previously listed, a supplier of water shall either determine the product is certified as required by Paragraph (b) of this Rule or notify the Department of the type, name, and manufacturer of a product.

(d) A supplier of water shall not introduce or permit the introduction of a water supply product into a public water system that does not meet the requirements of this Rule.

*History Note: Authority G.S. 130A-315; P.L. 93-523;
Eff. July 1, 1994;
Amended Eff. April 1, 2014;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015;
Amended Eff. July 1, 2019.*

15A NCAC 18C .1538 CONSUMER CONFIDENCE REPORT

The provisions of 40 C.F.R. 141, Subpart O - Consumer Confidence Reports are incorporated by reference, including subsequent amendments and editions. Copies may be obtained as set forth in Rule .0102(b) of this Subchapter.

*History Note: Authority G.S. 130A-313; 130A-315; P.L. 93-523; 40 C.F.R. 141;
Eff. August 1, 2000;
Amended Eff. April 1, 2014;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015;
Amended Eff. July 1, 2019.*

15A NCAC 18C .1539 REVISED TOTAL COLIFORM RULE

The provisions of 40 C.F.R. 141, Subpart Y - Revised Total Coliform Rule are hereby incorporated by reference including any subsequent amendments and editions. Copies are available for public inspection as set forth in Rule .0102(a) and (b) of this Subchapter.

*History Note: Authority G.S. 130A-315;
Eff. July 1, 2015.*

SECTION .1600 - VARIANCES AND EXEMPTIONS

15A NCAC 18C .1601 REQUIREMENTS FOR A VARIANCE

(a) The Secretary may grant one or more variances to any public water system within the state from any requirement respecting a maximum contaminant level of an applicable rule of 15A NCAC 18C Section .1500 upon a finding that:

- (1) Because of characteristics of the raw water sources which are reasonably available to the system, the system cannot meet the requirements respecting the maximum contaminant levels of such drinking water regulations despite application of the best technology, treatment techniques, or other means, which the Secretary, with the concurrence of the administrator, finds are generally available (taking costs into consideration); and
- (2) The granting of a variance will not result in an unreasonable risk to the health of persons served by the system.

(b) The Secretary may grant one or more variances to any public water system within the state from any requirement of a specified treatment technique of an applicable rule of 15A NCAC 18C Section .1500 upon finding that the public water

system applying for the variance has demonstrated that such treatment technique is not necessary to protect the health of persons because of the nature of the raw water source of such systems.

History Note: Authority G.S. 130A-315; 130A-321; P.L. 93-523; 40 C.F.R. 142; Eff. September 1, 1979;
Amended Eff. December 19, 1979;
Transferred and Recodified from 10 NCAC 10D .2501 Eff. April 4, 1990;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .1602 VARIANCE REQUEST

A supplier of water may request a variance for a public water system by submitting a written request to the Secretary. Suppliers of water may submit a joint request for variances when they seek similar variances under similar circumstances. A request for a variance or variances shall include the following information:

- (1) the nature and duration of variance requested;
- (2) relevant analytical results of water quality sampling of the system, including results of relevant tests conducted pursuant to the rules of 15A NCAC 18C Section .1500;
- (3) for any request made under .1601(a) of this Section:
 - (a) explanation in full and evidence of the best available treatment technology and techniques;
 - (b) economic and legal factors relevant to ability to comply;
 - (c) analytical results of raw water quality relevant to ability to comply;
 - (d) a proposed compliance schedule, including the date each step toward compliance will be achieved; Such schedule shall include as a minimum the following dates:
 - (i) date by which arrangement for alternative raw water source or improvement of existing raw water source will be completed,
 - (ii) date of initiation of the connection of the alternative raw water source or improvement of existing raw water source,
 - (iii) date by which final compliance is to be achieved;
 - (e) a plan for the provision of safe drinking water in the case of an excessive rise in the contaminant level for which the variance is requested;
 - (f) a plan for interim control measures during the effective period of variance;
- (4) for any request made under .1601(b) of this Section, a statement that the system will perform monitoring and other reasonable requirements prescribed by the Secretary as a condition to the variance;
- (5) other information, if any, believed to be pertinent by the applicant;
- (6) such other information as the Secretary may require.

History Note: Authority G.S. 130A-315; 130A-321; P.L. 93-523; 40 C.F.R. 142; Eff. September 1, 1979;
Transferred and Recodified from 10 NCAC 10D .2502 Eff. April 4, 1990;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .1603 CONSIDERATION OF A VARIANCE REQUEST

(a) The Secretary shall act on any variance request submitted pursuant to .1602 of this Section within 90 days of receipt of the request.

(b) In consideration of whether the public water system is unable to comply with a contaminant level required by 15A NCAC 18C Section .1500 because of the nature of the raw water source, the Secretary shall consider such factors as the following:

- (1) the availability and effectiveness of treatment methods for the contaminant for which the variance is requested;
- (2) cost and other economic considerations such as implementing treatment, improving the quality of the source water or using an alternate source.

(c) In consideration of whether a public water system should be granted a variance to a required treatment technique because such treatment is unnecessary to protect the public health, the Secretary shall consider such factors as the following:

- (1) quality of the water source including water quality data and pertinent sources of pollution,
- (2) source protection measures employed by the public water system.

History Note: Authority G.S. 130A-315; 130A-321; P.L. 93-523; 40 C.F.R. 142; Eff. September 1, 1979; Transferred and Recodified from 10 NCAC 10D .2503 Eff. April 4, 1990; Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .1604 DISPOSITION OF A VARIANCE REQUEST

(a) If the Secretary decides to deny the application for a variance, the applicant shall be notified of the intention to issue a denial. Such notice shall include a statement of reasons for the proposed denial. Within 30 days after the receipt of such notice, the applicant may request a hearing for the purpose of contesting the proposed denial. Such hearing shall be conducted in the manner set forth in G.S. 150B-22 through 150B-37. If no hearing is requested by the applicant within the 30 day period, the application shall be denied.

(b) If the Secretary proposes to grant a variance request submitted pursuant to .1602 of this Section, the applicant shall be notified of the decision in writing. Such notice shall identify the variance, the facility covered, and shall specify the period of time for which the variance will be effective:

- (1) For the type of variance specified in .1601(a) of this Section, such notice shall provide that the variance will be terminated when the system comes into compliance with the applicable regulation, and may be terminated upon a finding by the Secretary that the system has failed to comply with any requirements of a final schedule issued pursuant to .1605 of this Section.
- (2) For the type of variance specified in .1601(b) of this Section, such notice shall provide that the variance may be terminated at any time upon a finding that the nature of the raw water source is such that the specified treatment technique for which the variance was granted is necessary to protect the health of persons or upon a finding that the public water system has failed to comply with monitoring and other requirements prescribed by the Secretary as a condition to the granting of the variance.

(c) For a variance specified in .1601(a)(1) of this Section, the Department shall propose a schedule for:

- (1) compliance (including increments of progress) by the public water system with each contaminant level requirement covered by the variance, and
- (2) implementation by the public water system of such control measures as the Department may require for each contaminant covered by the variance.

(d) The proposed schedule for compliance shall specify dates by which steps towards compliance are to be taken, including at the minimum, where applicable:

- (1) date by which arrangement for an alternative raw water source or improvement of existing raw water source will be completed,
- (2) date of initiation of the connection for the alternative raw water source or improvement of the existing raw water source,
- (3) date by which final compliance is to be achieved.

(e) The proposed schedule may, if the public water system has no access to an alternative raw water source, and can effect or anticipate no adequate improvement of the existing raw water source, specify an indefinite time period for compliance until a new and effective treatment technology is developed at which time a new compliance schedule shall be prescribed by the Secretary.

(f) The proposed schedule for implementation of interim control measures during the period of variance shall specify interim treatment techniques, methods and equipment, and dates by which steps toward meeting the interim control measures are to be met.

(g) The schedule shall be prescribed by the secretary within one year after the granting of the variance, subsequent to provision of opportunity for hearing pursuant to .1605 of this Section.

History Note: Authority G.S. 130A-315; 130A-321; P.L. 93-523; 40 C.F.R. 142; Eff. September 1, 1979; Transferred and Recodified from 10 NCAC 10D .2504 Eff. April 4, 1990; Amended Eff. September 1, 1991; Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .1605 PUBLIC HEARINGS ON VARIANCES AND SCHEDULES

(a) Before a variance or a schedule proposed by the Secretary pursuant to Rule.1604 of this Section may take effect, the Secretary shall provide notice and opportunity for public hearing on the variance or schedule. Such notice may cover the granting of more than one variance, and a hearing held pursuant to such notice shall include each of the variances covered by that notice.

(b) Public notice of an opportunity for hearing on a variance or schedule shall be circulated in a manner designed to inform interested and potentially interested persons of the proposed variance or schedule and shall include the following minimum requirements:

- (1) posting of a notice in the principal post office of each municipality or area served by the public water system, and publishing of a notice in a newspaper or newspapers of general circulation in the area served by the public water system;
- (2) mailing of a notice to the Public Water Supply Section, Division of Water Resources and to other appropriate state or local agencies at the Department's discretion; and
- (3) such notice shall include a summary of the proposed variance or schedule and shall inform interested persons that they may request a public hearing on the proposed variance or schedule.

(c) Requests for hearing may be submitted by any interested person. Frivolous or insubstantial requests for hearing may be denied by the Secretary. Requests shall be submitted to the Secretary within 30 days after issuance of the public notice provided for in Paragraph (b) of this Rule. Such requests shall include the following information:

- (1) the name, address and telephone number of the individual, organization or other entity requesting a hearing;
- (2) a brief statement of the interest of the individual, organization or other entity making the request in the proposed variance or schedule and of information that the requestor intends to submit at such hearing; and
- (3) the signature of the individual making the request or if the request is made on behalf of an organization or other entity, the signature of a responsible official of the organization or other entity.

(d) Any hearing held pursuant to a request submitted by an individual, organization or other entity or on the Secretary's own motion shall be conducted in the manner set forth in G.S. 150B-22 through 150B-37.

History Note: Authority G.S. 130A-315; 130A-321; P.L. 93-523; 40 C.F.R. 142; Eff. September 1, 1979; Transferred and Recodified from 10 NCAC 10D .2505 Eff. April 4, 1990; Amended Eff. April 1, 2014; September 1, 1991; Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .1606 VARIANCES FOR FLUORIDE

(a) The following shall be the best technology, treatment techniques or other means generally available for achieving compliance with the maximum contaminant level for fluoride:

- (1) Activated alumina absorption, centrally applied,
- (2) Reverse osmosis, centrally applied.

(b) The Division shall require a community water system to install and/or use any treatment method identified in (a) of this Rule as a condition for granting a variance unless it is determined that such a treatment method is not available and effective for fluoride control for the system. A treatment method shall not be available and effective for a water system if the method would not be technically appropriate and technically feasible. If upon application for a variance it is determined that no treatment method is available and effective then the water system shall be entitled to a variance. A determination of availability and effectiveness of treatment methods shall be based upon studies by the water system and other relevant information. A finding shall be made by the Division whether the information supports a decision that a treatment method is not available and effective before requiring installation and use of the treatment method.

(c) The Division shall issue a compliance schedule that may require the water system to examine the following treatment methods to determine the probability that any method will significantly reduce the level of fluoride and to determine whether any method is technically feasible and economically reasonable and that the fluoride reduction obtained will be commensurate with the costs incurred with installation and use of the treatment methods:

- (1) Modification of lime softening;
- (2) Alum coagulation;
- (3) Electrodialysis;
- (4) Anion exchange resins;
- (5) Well field management;
- (6) Alternate source; and

(7) Regionalization.

(d) If the Division determines that a treatment method identified in (c) of this Rule or any other treatment method is technically feasible, economically reasonable, and will achieve fluoride reductions commensurate with the costs incurred with the installation and use of such treatment method for the system, the Division shall require the system to install and/or use that treatment method in connection with a compliance schedule. The determination shall be based upon studies by the system and other relevant information.

History Note: Authority G.S. 130A-315; 130A-321; P.L. 93-523; 40 C.F.R. 142; Eff. October 1, 1986; Transferred and Recodified from 10 NCAC 10D .2512 Eff. April 4, 1990; Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .1607 VARIANCES AND EXEMPTIONS FOR CHEMICALS, LEAD AND COPPER, AND RADIONUCLIDES

(a) The provisions of 40 C.F.R. 142.62 are hereby incorporated by reference including any subsequent amendments and editions. Copies are available for public inspection as set forth in Rule .0102 of this Subchapter.

(b) The provisions of 40 C.F.R. 142.65 are hereby incorporated by reference including any subsequent amendments and editions. Copies are available for public inspection as set forth in Rule .0102 of this Subchapter.

History Note: Authority G.S. 130A-315; P.L. 93-523; 40 C.F.R. 142; Eff. June 1, 1988; Transferred and Recodified from 10 NCAC 10D .2514 Eff. April 4, 1990; Amended Eff. April 1, 2014; August 1, 2002; October 1, 1992; Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .1608 REQUIREMENTS FOR AN EXEMPTION

The Secretary may exempt any public water system in the state from any requirement respecting a maximum contaminant level or any treatment technique requirement, or from both, of an applicable rule of this Subchapter upon a finding that:

- (1) Due to compelling factors (which may include economic factors), the public water system is unable to comply with such contaminant level or treatment technique requirement;
- (2) The public water system was in operation on the effective date of federal promulgation of such contaminant level or treatment technique requirement; and
- (3) The granting of the exemption will not result in an unreasonable risk to health.

History Note: Authority G.S. 130A-315; 130A-321; P.L. 93-523; 40 C.F.R. 142; Eff. September 1, 1979; Amended Eff. December 19, 1979; Transferred and Recodified from 10 NCAC 10D .2506 Eff. April 4, 1990; Amended Eff. July 1, 1993; Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .1609 EXEMPTION REQUEST

A supplier of water may request an exemption for a public water system by submitting a written request to the Secretary. Suppliers of water may submit a joint request for exemptions when they seek similar exemptions under similar circumstances.

Any request for an exemption or exemptions shall include the following information:

- (1) the nature and duration of exemption requested;
- (2) relevant analytical results of water quality sampling of the system, including results of relevant tests conducted pursuant to the requirements of the drinking water regulations;
- (3) explanation of the compelling factors such as time or economic factors which prevent such system from achieving compliance;
- (4) other information, if any, believed by the applicant to be pertinent to the application;
- (5) a proposed compliance schedule, including the date when each step toward compliance will be achieved;

- (6) such other information as the Secretary may require.

History Note: Authority G.S. 130A-315; 130A-321; P.L. 93-523; 40 C.F.R. 142; Eff. September 1, 1979;
Transferred and Recodified from 10 NCAC 10D .2507 Eff. April 4, 1990;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .1610 CONSIDERATION OF AN EXEMPTION REQUEST

(a) The Secretary shall act on any exemption request submitted pursuant to .1609 of this Section within 90 days of receipt of the request.

(b) In consideration of whether the public water system is unable to comply due to compelling factors, the Secretary shall consider such factors as the following:

- (1) construction, installation, or modification of treatment equipment or systems;
- (2) the time needed to put into operation a new treatment facility to replace an existing system which is not in compliance;
- (3) economic feasibility of compliance.

History Note: Authority G.S. 130A-315; 130A-321; P.L. 93-523; 40 C.F.R. 142; Eff. September 1, 1979;
Transferred and Recodified from 10 NCAC 10D .2508 Eff. April 4, 1990;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .1611 DISPOSITION OF AN EXEMPTION REQUEST

(a) If the Secretary decides to deny the application for an exemption, the applicant shall be notified of the intention to issue a denial. Such notice shall include a statement of reasons for the proposed denial. Within 30 days after the receipt of such notice, the applicant may request a hearing for the purpose of contesting the proposed denial. Such hearing shall be conducted in the manner set forth in G.S. 150B-22 through 150B-37. If no hearing is requested by the applicant within the 30 day period, the application shall be denied.

(b) If the Secretary grants an exemption request submitted pursuant to .1609 of this Section, the applicant shall be notified of the decision in writing. Such notice shall identify the facility covered and shall specify the termination date of the exemption. Such notice shall provide that the exemption will be terminated when the system comes into compliance with the applicable rule, and may be terminated upon a finding by the Secretary that the system has failed to comply with any requirements of a final schedule issued pursuant to .1613 of this Section.

(c) The Secretary shall propose a schedule for:

- (1) compliance (including increments of progress) by the public water system with each contaminant level requirement and treatment technique requirement covered by the exemption, and
- (2) implementation by the public water system of such control measures as the Secretary may require for each contaminant covered by the exemption.

(d) The schedule shall be prescribed by the secretary within one year after the granting of the exemption, subsequent to provision of opportunity for hearing pursuant to .1612 of this Section.

History Note: Authority G.S. 130A-315; 130A-321; P.L. 93-523; 40 C.F.R. 142; Eff. September 1, 1979;
Transferred and Recodified from 10 NCAC 10D .2509 Eff. April 4, 1990;
Amended Eff. September 1, 1991;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .1612 PUBLIC HEARINGS ON EXEMPTION SCHEDULES

(a) Before a schedule proposed by the Secretary pursuant to Rule.1611 of this Section may take effect, the Secretary shall provide notice and opportunity for public hearing on the schedule. Such notice may cover the proposal of more than one such schedule and a hearing held pursuant to such notice shall include each of the schedules covered by the notice.

(b) Public notice of an opportunity for hearing on an exemption schedule shall be circulated in a manner designed to inform interested and potentially interested persons of the proposed schedule, and shall include the following minimum requirements:

- (1) posting of a notice in the principal post office of each municipality or area served by the public water system, and publishing a notice in the newspaper or newspapers of general circulation in the area served by the public water system;
- (2) mailing of a notice to the Public Water Supply Section, Division of Water Resources and to other appropriate state or local agencies at the Secretary's discretion; and
- (3) such notices shall include a summary of the proposed schedule and shall inform interested persons that they may request a public hearing on the proposed schedule.

(c) Requests for hearing may be submitted by any interested person. Frivolous or insubstantial requests for hearing may be denied by the Secretary. Requests shall be submitted to the Secretary within 30 days after issuance of the public notices provided for in Paragraph (b) of this Rule. Such requests shall include the following information:

- (1) the name, address and telephone number of the individual, organization or other entity requesting a hearing;
- (2) a brief statement of the interest of the individual, organization or other entity making the request in the proposed schedule and of information that the requestor intends to submit at such hearing; and
- (3) the signature of the individual making the request, or, if the request is made on behalf of an organization or other entity, the signature of a responsible official of the organization or other entity.

(d) Any hearing held pursuant to a request submitted by an individual, organization or other entity or on the Secretary's own motion shall be conducted in the manner set forth in G.S. 150B-22 through 150B-37.

History Note: Authority G.S. 130A-315; 130A-321; P.L. 93-523; 40 C.F.R. 142; Eff. September 1, 1979; Transferred and Recodified from 10 NCAC 10D .2510 Eff. April 4, 1990; Amended Eff. April 1, 2014; December 1, 1991; Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .1613 FINAL SCHEDULE

(a) Within a reasonable time after the termination of a hearing conducted in the manner set forth in G.S. 150B-22 through 150B-37, the Secretary shall, based upon consideration of the hearing record as a whole, revise the proposed schedule as necessary and prescribe the final schedule for compliance and interim measures for the public water system granted an exemption under .1609 of this Section.

(b) Such schedule shall require compliance by the public water system with each contaminant level and treatment technique requirement prescribed by:

- (1) regulations in 15A NCAC 18C Section .1500 adopted on or before September 1, 1979, by no later than January 1, 1981; and
- (2) amendments to 15A NCAC 18C adopted after September 1, 1979, by no later than seven years after the effective date of the revised National Primary Drinking Water Regulations.

(c) If the public water system has entered into an enforceable agreement to become a part of a regional public water system, as determined by the Secretary, such schedule shall require compliance by the public water system with each contaminant level and treatment technique requirement prescribed by:

- (1) regulations in 15A NCAC 18C Section .1500 adopted on or before September 1, 1979, by no later than January 1, 1983; and
- (2) amendments to 15A NCAC 18C Section .1500 adopted after September 1, 1979, by no later than nine years after the effective date of the revised National Primary Drinking Water Regulations.

History Note: Authority G.S. 130A-315; 130A-321; P.L. 93-523; 40 C.F.R. 142; Eff. September 1, 1979; Amended Eff. December 19, 1979; Transferred and Recodified from 10 NCAC 10D .2511 Eff. April 4, 1990; Amended Eff. September 1, 1991; Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .1614 BOTTLED WATER AND POINT-OF-USE DEVICES

The provisions of 40 C.F.R. 142.57 are hereby incorporated by reference including any subsequent amendments and editions. Copies are available for public inspection as set forth in Rule .0102 of this Subchapter.

History Note: Authority G.S. 130A-315; P.L. 93-523; 40 C.F.R. 142;
Eff. June 1, 1988;
Transferred and Recodified from 10 NCAC 10D .2513 Eff. April 4, 1990;
Amended Eff. April 1, 2014; October 1, 1992; December 1, 1988;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

SECTION .1700 – WATER SUPPLY SYSTEM GRANTS

15A NCAC 18C .1701	PURPOSE
15A NCAC 18C .1702	GRANT COMMITMENTS FROM CURRENT ALLOCATION
15A NCAC 18C .1703	COUNTY ALLOCATIONS COMMITTED BEFORE STATEWIDE ALLOCATION
15A NCAC 18C .1704	REFERENCE RULE

History Note: Authority S.L. 1971, Ch. 909, as amended by S.L. 1973, Ch. 232; S.L. 1977, Ch. 677;
Eff. June 30, 1978;
Repealed Eff. April 1, 2014.

SECTION .1800 - LOCAL PLAN APPROVAL

Rules .1801 - .1805 of Title 15A Subchapter 18C of the North Carolina Administrative Code (T15A.18C .1801 - .1805); has been transferred and recodified from Rules .2601 - .2605 Title 10 Subchapter 10D of the North Carolina Administrative Code (T10.10D .2601 - .2605), effective April 4, 1990.

15A NCAC 18C .1801 LOCAL APPROVAL PROGRAM

This Section implements G.S. 130A-317(d) which authorizes the certification of local programs for approval of the construction or alteration of the distribution system of a community water system. For purposes of this Section, distribution system means the network of pipes, valves, hydrants and related appurtenances but does not include pumps, storage tanks, treatment devices, wells or other facilities.

History Note: Authority G.S. 130A-317; 1985 S.L., c. 697, s. 3;
Eff. January 1, 1986;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .1802 APPLICATION FOR CERTIFICATION

Application for certification shall be made to the Public Water Supply Section, Division of Water Resources, 1634 Mail Service Center, Raleigh North Carolina 27699-1634. Application shall be submitted in triplicate and shall designate the office or agency which will administer the program.

History Note: Authority G.S. 130A-317; S.L. 1985-697, s. 3;
Eff. January 1, 1986;
Amended Eff. April 1, 2014; December 1, 1991;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .1803 CERTIFICATION

The Department shall certify a local approval program which satisfies the requirements of G.S. 130A-317(d). The requirements of G.S. 130A-317(d)(4) are satisfied when a local approval program provides by ordinance or local law for enforcement provisions equivalent to G.S. 130A-18 and G.S. 130A-25. The requirements of G.S. 130A-317(d)(5) are satisfied when a local approval program has a minimum staff and other resources of: a designer who is a professional engineer

registered in this state and whose duty is to devote the time necessary for an effective local approval program; a technical staff, budget, equipment and facilities sufficient to support a design engineering office; and an organizational structure sufficient to carry out this purpose.

History Note: Authority G.S. 130A-317; 1985 S.L., c. 697, s. 3;
Eff. January 1, 1986;
Amended Eff. February 1, 1987;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .1804 NOTICE

- (a) A local approval program shall submit an annual notice to the Department, identifying each approval of construction or alteration of the distribution system of a community water system. The local approval program shall retain a copy of the application and approved engineering plans and shall provide a copy to the Department upon request.
- (b) The local approval program shall provide notice to the department within 10 days of any change in staff, budget, or other resources that may affect the program's ability to carry out the plan review program.
- (c) Upon completion of the construction or alteration of the distribution system, the applicant shall submit a statement to the local approval program, signed by a registered professional engineer, stating that construction was completed in accordance with approved plans and specifications and revised only in accordance with 15A NCAC 18C .0306. The statement shall be based upon observations during and upon completion of construction by the engineer or a representative of the engineer's office who is supervised by the engineer. The local approval program shall provide a copy of the statement to the Department upon request.

History Note: Authority G.S. 130A-317; 1985 S.L., c. 697, s. 3;
Eff. January 1, 1986;
Amended Eff. December 1, 1988;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015;
Amended Eff. July 1, 2019.

15A NCAC 18C .1805 DEPARTMENTAL ENFORCEMENT

If the Department determines that a community water system is violating local approval requirements and the local approval program has not enforced its requirements, the Department may, after written notice, to the local program, enforce the requirements in accordance with provisions of G.S. 130A-17 through 130A-28.

History Note: Authority G.S. 130A-317; 1985 S.L., c. 697, s. 3;
Eff. January 1, 1986;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

SECTION .1900 - ADMINISTRATIVE PENALTIES

Rules .1901 - .1913 of Title 15A Subchapter 18C of the North Carolina Administrative Code (T15A.18C .1901 - .1913); has been transferred and recodified from Rules .2401 - .2413 Title 10 Subchapter 10D of the North Carolina Administrative Code (T10.10D .2401 - .2413), effective April 4, 1990.

15A NCAC 18C .1901 DEFINITIONS

As used in the following rules, the term:

- (1) "Delegate" means any person to whom the Department has delegated authority in writing to act in its stead in relation to civil penalties;
- (2) "Hearing officer" means the presiding officer in a contested case hearing;
- (3) "Respondent" means the person against whom a penalty has been assessed.

History Note: Authority G.S. 130A-22(f);
Eff. September 1, 1979;

*Amended Eff. May 1, 1987;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.*

15A NCAC 18C .1902 ADMINISTRATIVE PENALTIES

The following rules provide the procedures and standards governing the assessment, remission, mitigation and appeal of administrative penalties imposed by the Department or its delegates under G.S. 130A-22(b) for violations of the North Carolina Drinking Water Act, Article 10 of Chapter 130A and 15A NCAC 18C.

*History Note: Authority G.S. 130A-22(f);
Eff. September 1, 1979;
Amended Eff. April 1, 2014; October 1, 1984;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.*

15A NCAC 18C .1903 WHO MAY ASSESS PENALTIES

Administrative penalties may be assessed by the Department or its delegate.

*History Note: Authority G.S. 130A-22(f);
Eff. September 1, 1979;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.*

15A NCAC 18C .1904 WHEN PENALTIES MAY BE ASSESSED

Administrative penalties may be assessed against any person for violations as described in G.S. 130A-325.

*History Note: Authority G.S. 130A-22(f);
Eff. September 1, 1979;
Amended Eff. October 1, 1984;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.*

15A NCAC 18C .1905 AMOUNT OF PENALTY ASSESSMENT

- (a) An administrative penalty may not exceed the amount which may be assessed for violations as prescribed in G.S. 130A-22(b).
- (b) Each day of a continuing violation shall constitute a separate violation.
- (c) Each violation of a specific provision of Article 10 of Chapter 130A, the rules issued thereunder, and any order pursuant thereto, shall be a separate violation.

*History Note: Authority G.S. 130A-22(f);
Eff. September 1, 1979;
Amended Eff. October 1, 1984;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.*

15A NCAC 18C .1906 CONSIDERATIONS IN ASSESSING ADMINISTRATIVE PENALTIES

In determining the amount of the assessment, the Department or its delegates shall consider the following criteria and shall cite the provisions that are applicable:

- (1) nature of the violation and the degree and extent of the harm, including the following:
 - (a) for a violation of the North Carolina Drinking Water Act, Article 10 of Chapter 130A, and the rules in this Subchapter:
 - (i) type of violation,
 - (ii) type of contaminant involved,
 - (iii) duration,
 - (iv) cause (whether resulting from a negligent, reckless or intentional act, or omission),

- (v) potential effect on public health and the environment,
 - (vi) effectiveness of responsive measures taken by the violator,
 - (vii) damage to private property, and
 - (viii) size of the water system and population exposed;
- (b) for a violation of an order issued under the North Carolina Drinking Water Act, Article 10 of Chapter 130A:
 - (i) subject matter of order,
 - (ii) duration,
 - (iii) cause (whether resulting from a negligent, reckless or intentional act, or omission),
 - (iv) type of violation, if any,
 - (v) potential effect on public health and the environment, and
 - (vi) effectiveness of responsive measures taken by violator;
- (c) for refusing to allow an authorized representative of the Commission for Public Health, any local board of health, or the Department a right of entry as provided for in G.S. 130A-17:
 - (i) type of other violation, if any,
 - (ii) duration of refusal, and
 - (iii) potential effect on public health and the environment;
- (d) for failure to give adequate public notice as required by G.S. 130A-324:
 - (i) inadequacy of type of notice,
 - (ii) misleading in nature,
 - (iii) delay in providing notice, and
 - (iv) potential effect on public health from failure to give adequate notice;
- (2) cost of rectifying any damage; and
- (3) the violator's previous record in complying or not complying with the North Carolina Drinking Water Act, Article 10 of Chapter 130A and the rules in this Subchapter.

History Note: Authority G.S. 130A-22(f); 130A-17; 130A-324;
 Eff. September 1, 1979;
 Amended Eff. April 1, 2014; October 1, 1984;
 Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .1907 PROCEDURE FOR ASSESSMENT

- (a) Depending on the violation involved, the Department or its delegates may issue a notice of penalty assessment immediately or grant the violator a period of time within which to cease the violation.
- (b) For all violations for which a penalty is assessed, a notice of such action shall be sent to the respondent by registered or certified mail. The notice shall describe the nature of the violation with reasonable particularity, the amount of the penalty for each violation, that each day of a continuing violation constitutes a separate violation, advise that the penalty is now due or that it will become due at the end of a specified time, and advise the respondent of his rights of appeal.
- (c) The Department or its delegates may modify a penalty upon finding that additional or different facts should have been considered in determining the amount of the assessment.

History Note: Authority G.S. 130A-22(f);
 Eff. September 1, 1979;
 Amended Eff. May 1, 1987;
 Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .1908 IMMINENT HAZARD

If violation of the rules or law presents an imminent hazard to the public health as determined by the Secretary, an order may be issued pursuant to G.S. 130A-322.

History Note: Authority G.S. 130A-22(f);
 Eff. September 1, 1979;
 Amended Eff. October 1, 1984;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .1909 PAYMENTS: HEARING

- (a) Within 30 days after receipt of notification of a penalty assessment, the respondent must tender payment, or submit in writing a request for an administrative hearing. All appeals shall be made in accordance with G.S. 150B.
- (b) Payment may be tendered in conjunction with a hearing request and in such case, the payment will be accepted as conditional upon final action.
- (c) This Rule shall not preclude informal conferences concerning the penalty assessed.
- (d) Whenever an administrative hearing is scheduled, to avoid undue costs and delay, the respondent will be required to state all the issues in dispute and the Department will be required to hold only one administrative hearing.
- (e) The Department will acknowledge the receipt of all payments.

*History Note: Authority G.S. 130A-22(f);
Eff. September 1, 1979;
Amended Eff. May 1, 1987;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.*

15A NCAC 18C .1910 STAY OF PENALTY ASSESSMENT

When an administrative hearing is requested for a purpose other than remission or mitigation of the penalty assessed, the penalty will be stayed as of the date of said request until service of the final decision or other settlement of the matter.

*History Note: Authority G.S. 130A-22(f);
Eff. September 1, 1979;
Amended Eff. May 1, 1987;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.*

15A NCAC 18C .1911 WAIVER OF ADMINISTRATIVE HEARING

A respondent waives his right to a hearing when he:

- (1) submits a written waiver to the Department or its delegates of his right to an administrative hearing,
- (2) fails to request a hearing within 30 days of receipt of notice of penalty assessment as provided for in Rule .1909 of this Subchapter, or
- (3) fails to attend a scheduled administrative hearing.

*History Note: Authority G.S. 130A-22(f);
Eff. September 1, 1979;
Amended Eff. May 1, 1987;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.*

15A NCAC 18C .1912 REFERRAL

If any administrative penalty as finally assessed is not paid within 60 days after receipt of notice of penalty assessment where no administrative hearing was requested or within 60 days after service of a written copy of the decision as provided for in G.S. 150B-36 where an administrative hearing was requested, the Secretary shall request the Attorney General to commence an action to recover the amount of the assessment.

*History Note: Authority G.S. 130A-22(f);
Eff. September 1, 1979;
Amended Eff. September 1, 1991;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.*

15A NCAC 18C .1913 RIGHT OF ENTRY AND INSPECTION

- (a) Any supplier of water or other person subject to drinking water regulations shall, at any time, allow the Secretary, or a designated representative, upon presenting appropriate credentials and a written notice of inspection, to enter any establishment, facility or other property of such supplier or other person to determine whether such supplier or other person has acted or is acting in compliance with the requirements of the North Carolina Drinking Water Act (G.S. 130A-311 through 130A-328) or the rules of 15A NCAC 18C. Such inspection may include inspection, at reasonable times, of records, files, papers, processes, controls and facilities, or testing of any feature of a public water system, including its raw water source.
- (b) If entry is refused, then the Secretary or designated representative may obtain an administrative search warrant pursuant to the requirements of G.S. 15-27.2.

History Note: Authority G.S. 130A-22(f);
Eff. December 19, 1979;
Amended Eff. October 1, 1984;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

SECTION .2000 - FILTRATION AND DISINFECTION

15A NCAC 18C .2001 GENERAL REQUIREMENTS

The provisions of 40 C.F.R. 141.70 are incorporated by reference, including subsequent amendments and editions. Copies may be obtained as set forth in Rule .0102(b) of this Subchapter.

History Note: Authority G.S. 130A-315; P.L. 93-523; 40 C.F.R. 141.70;
Eff. January 1, 1991;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015;
Amended Eff. July 1, 2019.

15A NCAC 18C .2002 DISINFECTION

(a) The provisions of 40 C.F.R. 141.72 are incorporated by reference, including subsequent amendments and editions. Copies may be obtained as set forth in Rule .0102(b) of this Subchapter. These provisions are adopted with the following exceptions:

- (1) Water entering the distribution system. In 40 C.F.R. 141.72 (a)(2), (a)(3), and (b)(2), "0.2 mg/l" of residual disinfectant concentration shall be replaced with "0.2 mg/l measured as free chlorine when chlorine is the only applied disinfectant and 1.0 mg/l measured as total chlorine when ammonia and chlorine are applied disinfectants."
- (2) Water in the distribution system at coliform sampling sites. In 40 C.F.R. 141.72(a)(4) and (b)(3), "undetectable" shall be replaced with "less than 0.2 mg/l measured as free chlorine when chlorine is the only applied disinfectant and less than 1.0 mg/l measured as total chlorine when ammonia and chlorine are applied disinfectants."

(b) Water in the distribution system at maximum residence time sites. For samples collected at maximum residence time sites or at other locations with high water age as required by Rule .1302(a)(2) of this Subchapter, residual disinfectant concentrations shall be at detectable levels as set forth and calculated in 40 C.F.R. 141.72(a)(4) and (b)(3).

(c) All surface water treatment facilities shall include chemical disinfection for a minimum 0.5 log Giardia inactivation.

History Note: Authority G.S. 130A-315; P.L. 93-523; 40 C.F.R. 141.72;
Eff. January 1, 1991;
Amended Eff. April 1, 2014; October 1, 2009;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015;
Amended Eff. July 1, 2019.

15A NCAC 18C .2003 FILTER BACKWASH RECYCLING RULE

(a) The requirements of this Rule shall apply to a public water system that uses a surface water source or a groundwater source under the direct influence of surface water. The provisions of 40 C.F.R. 141.73 are hereby incorporated by reference including any subsequent amendments and editions. Copies are available for public inspection as set forth in Rule .0102 of this Subchapter. Any dates set forth in the federal rule shall be applicable.

(b) The requirements of this Rule shall apply to a public water system that uses a surface water source or a groundwater source under the direct influence of surface water; uses direct or conventional filtration processes; and recycles spent filter backwash water, sludge thickener supernatant, or liquids from dewatering processes. The provisions of 40 C.F.R. 141.76 are hereby incorporated by reference including any subsequent amendments and editions. Copies are available for public inspection as set forth in Rule .0102 of this Subchapter. Any dates set forth in the federal rule shall be applicable.

History Note: Authority G.S. 130A-315; P.L. 93-523; 40 C.F.R. 141.73; 40 C.F.R. 141.76;
Eff. January 1, 1991;
Amended Eff. April 1, 2014; August 1, 2002;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .2004 ANALYTICAL AND MONITORING REQUIREMENTS

The provisions of 40 C.F.R. 141.74 are hereby adopted by reference in accordance with G.S. 150B-21.6 including subsequent amendments and editions. Copies are available for public inspection as set forth in Rule .0102 of this Subchapter. These provisions are adopted with the following exceptions:

- (1) The residual disinfectant concentration of the water entering the distribution system shall be monitored continuously, and the lowest value shall be recorded each day, except that if there is a failure in the continuous monitoring equipment, grab sampling every four hours may be conducted in lieu of continuously monitoring, but for no more than five working days following the failure of the equipment. Systems serving 3,300 or fewer persons may take grab samples in lieu of providing continuous monitoring on an ongoing basis at the frequency of every four hours that water is being treated.
- (2) In 40 C.F.R. 141.74, "0.2 mg/l" of residual disinfectant concentration shall be replaced with "0.2 mg/l measured as free chlorine when chlorine is the singular applied disinfectant and 1.0 mg/l measured as total chlorine when ammonia and chlorine are applied disinfectants."

History Note: Authority G.S. 130A-315; P.L. 93-523; 40 C.F.R. 141.74;
Eff. January 1, 1991;
Amended Eff. April 1, 2014; October 1, 2009;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .2005 CRITERIA FOR AVOIDING FILTRATION

The provisions of 40 C.F.R. 141.71 are incorporated by reference, including subsequent amendments and editions. Copies may be obtained as set forth in Rule .0102(b) of this Subchapter.

History Note: Authority G.S. 130A-315; P.L. 93-523; 40 C.F.R. 141.71;
Eff. January 1, 1991;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015;
Amended Eff. July 1, 2019.

15A NCAC 18C .2006 REPORTING AND RECORD KEEPING REQUIREMENTS

The provisions of 40 C.F.R. 141.75 are hereby adopted by reference in accordance with G.S. 150B-21.6 including subsequent amendments and editions. Copies are available for public inspection as set forth in Rule .0102 of this Subchapter. These provisions are adopted with the following exception: In 40 C.F.R. 141.75, "0.2 mg/l" of residual disinfectant concentration shall be replaced with "0.2 mg/l measured as free chlorine when chlorine is the singular applied disinfectant and 1.0 mg/l measured as total chlorine when ammonia and chlorine are applied disinfectants."

History Note: Authority G.S. 130A-315; P.L. 93-523; 40 C.F.R. 141.75;
Eff. January 1, 1991;
Amended Eff. April 1, 2014; October 1, 2009;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .2007 ENHANCED FILTRATION AND DISINFECTION

(a) Public water systems shall respond to the Department in writing to significant deficiencies outlined in sanitary survey reports no later than 45 days after receipt of the report, indicating how and on what schedule the system will address significant deficiencies noted in the survey.

(b) Public water systems shall take necessary steps to address significant deficiencies identified in sanitary survey reports if such deficiencies are within the control of the public water system and its governing body.

(c) Sanitary survey means an onsite review by the Department of the water source (identifying sources of contamination using results of source water assessments where available), facilities, equipment, operation, maintenance, and monitoring compliance of a public water system to evaluate the adequacy of the system, its sources and operations and the distribution of safe drinking water.

(d) Significant deficiency means a defect in a system's design, operation, or maintenance, as well as any failures or malfunctions of its treatment, storage, or distribution system, that is causing or has the potential to cause the introduction of contamination into water delivered to customers.

(e) When a public water system is required to conduct a comprehensive performance evaluation (CPE) pursuant to this Subchapter, the CPE shall include:

- (1) assessment of water treatment plant performance;
- (2) evaluation of major unit processes;
- (3) identification and prioritization of performance limiting factors;
- (4) assessment of the applicability of comprehensive technical assistance; and
- (5) a written CPE report.

The public water system shall participate in a comprehensive technical assistance (CTA) activity when the Department determines, based on the CPE results, there is a potential for improved water treatment performance and the public water system is able to receive and implement technical assistance. During the CTA phase, the public water system shall use the CPE results to identify and systematically address factors limiting performance of its water treatment plant; further, the public water system shall implement process control priority-setting techniques, and maintain long-term involvement in training staff and administrators.

(f) The provisions of 40 C.F.R. 141, Subpart P - Enhanced Filtration and Disinfection - (Systems Serving 10,000 or More People), and Subpart T - Enhanced Filtration and Disinfection - (Systems Serving Fewer than 10,000 People) and the provisions of 40 C.F.R. 141, Subpart W- Enhanced Treatment for Cryptosporidium are hereby incorporated by reference including any subsequent amendments and editions. Copies are available for public inspection as set forth in Rule .0102 of this Subchapter.

*History Note: Authority G.S. 130A-315; P.L. 93-523; 40 C.F.R. 141
Eff. August 1, 2000;
Amended Eff. April 1, 2014; October 1, 2009; November 1, 2005;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.*

15A NCAC 18C .2008 DISINFECTANTS AND DISINFECTION BYPRODUCTS

(a) The provisions of 40 C.F.R. 141.53 are incorporated by reference, including subsequent amendments and editions. Copies may be obtained as set forth in Rule .0102(b) of this Subchapter.

(b) The provisions of 40 C.F.R. 141.54 are incorporated by reference, including subsequent amendments and editions. Copies may be obtained as set forth in Rule .0102(b) of this Subchapter.

(c) The provisions of 40 C.F.R. 141.64 are incorporated by reference, including subsequent amendments and editions. Copies may be obtained as set forth in Rule .0102(b) of this Subchapter.

(d) The provisions of 40 C.F.R. 141.65 are incorporated by reference, including subsequent amendments and editions. Copies may be obtained as set forth in Rule .0102(b) of this Subchapter.

(e) The provisions of 40 C.F.R. 141, Subpart L- Disinfectant Residuals, Disinfection Byproducts, and Disinfection Byproduct Precursors, and the provisions of 40 C.F.R. 141, Subparts U-Initial Distribution System Evaluations and Subpart V - Stage 2 Disinfection Byproducts Requirements are incorporated by reference, including subsequent amendments and editions. Copies may be obtained as set forth in Rule .0102(b) of this Subchapter.

*History Note: Authority G.S. 130A-313; 130A-315; P.L. 93-525; 40 C.F.R. 141;
Eff. August 1, 2000;
Amended Eff. April 1, 2014; October 1, 2009; August 1, 2002;*

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015;
Amended Eff. July 1, 2019.

SECTION .2100 - OPERATING PERMITS

15A NCAC 18C .2101 PERMITS

- (a) Operating permits are required for all community water systems as of January 1, 1992.
- (b) Permits shall be valid from January 1 through December 31 of each year.
- (c) Community water systems which are constructed or which begin operation after January 1, 1992 shall obtain a permit prior to providing water to any connections. The permit shall be effective on the date that water service to the first customer begins and shall be valid until December 31 of each year issued. The annual fee shall be prorated on a monthly basis for permits obtained after January 1 of each year.

History Note: Authority G.S. 130A-328;
Temporary Adoption Eff. January 22, 1992 for a Period of 180 Days to Expire on July 19, 1992;
Eff. April 1, 1992;
Amended Eff. July 1, 1993;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .2102 APPLICATION FOR PERMIT

- (a) An application for the issuance or renewal of an operating permit for a community water system shall be made on forms provided by the Department. An application shall include the following information:
 - (1) name and identification number of the community water system;
 - (2) name, address, and social security number or tax identification number of the supplier of water;
 - (3) name, address, and certification number of the certified operator in responsible charge of the community water system;
 - (4) name of each certified laboratory which provides analyses of water samples; and
 - (5) population served by the community water system.
- (b) The fee for issuance or renewal of an operating permit is set forth in G.S. 130A-328.
- (c) Payment shall be made by check, payable to the Department of Environment and Natural Resources and shall accompany the application.
- (d) Applications for operating permits shall not be processed prior to the receipt of the required fees.
- (e) An operating permit shall be renewed annually.
- (f) The supplier of water who holds a current operating permit shall inform the Department of any change of address or transfer of ownership within 30 days of the change.

History Note: Authority G.S. 130A-328;
Temporary Adoption Eff. January 22, 1992 for a Period of 180 Days to Expire on July 19, 1992;
Eff. April 1, 1992;
Amended Eff. April 1, 2014; July 1, 1993;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .2103 INITIAL PERMIT PERIOD

History Note: Authority G.S. 130A-328;
Temporary Adoption Eff. January 22, 1992 for a Period of 180 Days to Expire on July 19, 1992;
Eff. April 1, 1992;
Expired Eff. December 1, 2015 pursuant to G.S. 150B-21.3A.

15A NCAC 18C .2104 RENEWAL FEES

Payment for permit renewal shall be due 60 days prior to the expiration of the prior year's permit. Failure to pay the fee by the permit expiration date shall result in assessment of an administrative penalty pursuant to G.S. 130A-22(b) equal to one-half of

the fee set forth in G.S. 130A-328. Failure to pay the fee and the administrative penalty within 45 days after permit expiration shall result in an additional administrative penalty of ten dollars (\$10.00) per day for each day that the fee and the penalty are not paid.

History Note: Authority G.S. 130A-328;
Temporary Adoption Eff. January 22, 1992 for a Period of 180 Days to Expire on July 19, 1992;
Eff. April 1, 1992;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .2105 REVOCATION

- (a) The Department may revoke or suspend an operating permit when it is found that a supplier of water has:
- (1) Failed to pay the annual fee;
 - (2) Failed to submit a complete permit application or provided fraudulent or misleading information in a permit application; or
 - (3) Failed to comply with rules governing community water systems set forth in 15A NCAC 18C.
- (b) Action to revoke or suspend an operating permit shall not preclude the Department from seeking other remedies authorized by Part 2, Article 1 of Chapter 130A of the General Statutes.

History Note: Authority G.S. 130A-328;
Temporary Adoption Eff. January 22, 1992 for a Period of 180 Days to Expire on July 19, 1992;
Eff. April 1, 1992;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

SECTION .2200 - GROUND WATER SYSTEMS

15 A NCAC 18C .2201 APPLICABILITY AND RESIDUAL DISINFECTANT CONCENTRATIONS

- (a) Applicability. The provisions of this Section apply to all ground water systems. A ground water system is defined as any public water system that uses ground water including a consecutive system receiving finished ground water. A ground water system does not include public water systems that combine all of their ground water with surface water or with ground water under the direct influence of surface water prior to treatment under Subpart H.
- (b) Disinfection. Systems providing chemical disinfection in accordance with 15A NCAC 18C .0402(j) shall measure residual disinfectant concentrations. The locations and concentrations shall be as follows:
- (1) Water entering the distribution system. The residual disinfectant concentration shall not be less than 0.2 mg/l measured as free chlorine when chlorine is the singular applied disinfectant and shall not be less than 1.0 mg/l measured as total chlorine when ammonia and chlorine are applied disinfectants for more than two consecutive daily visits for systems that are collecting grab samples and not more than four hours for systems that perform continuous monitoring.
 - (2) Water in the distribution system at Coliform Sampling Sites. The residual disinfectant concentration shall not be less than 0.2 mg/l measured as free chlorine when chlorine is the singular applied disinfectant and shall not be less than 1.0 mg/l measured as total chlorine when ammonia and chlorine are applied disinfectants.
 - (3) Water in the distribution system at Maximum Residence Time Sites. Systems shall measure residual disinfectant concentrations at maximum residence time sites or at other locations with high water age. The residual disinfectant concentrations at these locations shall be at detectable levels as set forth and calculated in 40 C.F.R. 141.72(a)(4) and (b)(3).

History Note: Authority G.S. 130A-315; P.L. 93-523;
Eff. October 1, 2009;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

15A NCAC 18C .2202 GROUND WATER RULE

The provisions of 40 C.F.R. 141, Subpart S – Ground Water Rule are hereby incorporated by reference including any subsequent amendments and editions. Copies are available for public inspection as set forth in Rule .0102 of this Subchapter.

The provisions are incorporated with the following exceptions:

- (1) Fecal indicator for source water monitoring. When systems are required to conduct triggered source water monitoring or assessment source water monitoring under 40 C.F.R. 141.402 (a) and (b) respectively, any of the following three fecal indicators can be used: E. coli, enterococci, or coliphage.
- (2) Corrective Action Alternatives. Ground water systems that are required to implement corrective action in accordance with 40 C.F.R. 141.403(a)(6) must determine that alternatives (a)(6)(i), (a)(6)(ii), and (a)(6)(iii) are not feasible before implementing alternative (a)(6)(iv). The rationale for selection of alternative (a)(6)(iv) must be documented in accordance with Rule .0307(b)(10) of this Subchapter.
- (3) Assessment Source Water Monitoring. The Department shall use information from the Public Water Supply Section's database and from its Source Water Assessment Program to identify sources subject to assessment source water monitoring. Systems notified by the Department must commence assessment source water monitoring for the sources identified. The system shall conduct assessment source water monitoring for any source that receives physical or chemical treatment and possesses any one of the following characteristics:
 - (a) Any source subject to the requirements of G.S. 130A-317(b) and rules in this Subchapter for which the public water system did not receive approval from the Department for construction or alteration.
 - (b) Source is deemed by the Source Water Assessment Program to have a Higher Inherent Vulnerability Rating and the system has historical total or fecal coliform MCL violations during the compliance periods between January 1, 2005 and December 31, 2008.
 - (c) Source is deemed by the Source Water Assessment Program to have a Higher Inherent Vulnerability Rating and the system has total or fecal coliform monitoring violations cited for more than 25 percent of the compliance periods between January 1, 2005 and December 31, 2008.
 - (4) Any system shall perform assessment source water monitoring as directed by the Department in response to deficiencies identified by a sanitary survey that are related to source or treatment. Assessment source water monitoring shall be conducted in accordance with the requirements specified in 40 C.F.R. 141.402(b)(1) through (6) using any of the following three fecal indicators: E. coli, enterococci, or coliphage.

History Note: Authority G.S. 130A-315; 130A-317; P.L. 93-523; 40 C.F.R. 141 Subpart S;
Eff. October 1, 2009;
Amended Eff. April 1, 2014;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. November 23, 2015.

SUBCHAPTER 18D - WATER TREATMENT FACILITY OPERATORS

SECTION .0100 - GENERAL POLICIES

Rules .0101 - .0105 of Title 15A Subchapter 18D of the North Carolina Administrative Code (T15A.18D .0101 - .0105); has been transferred and recodified from Rules .0101 - .0105 Title 10 Subchapter 10E of the North Carolina Administrative Code (T10.10E .0101 - .0105), effective April 4, 1990.

15A NCAC 18D .0101 PURPOSE

History Note: Authority G.S. 90A-20; 90-21(c);
Eff. February 1, 1976;
Readopted Eff. March 1, 1979;
Repealed Eff. September 1, 1990.

15A NCAC 18D .0102 ORGANIZATION

History Note: Authority G.S. 90A-21;
Eff. February 1, 1976;
Readopted Eff. March 1, 1979;
Repealed Eff. September 1, 2004.

15A NCAC 18D .0103 MEETINGS OF THE BOARD

- (a) The Board shall meet at least twice each year for the purpose of examining applications.
- (b) Additional meetings shall be held at such other times, and at such places as deemed necessary for the conduct of board business.

History Note: Authority G.S. 90A-21(c);
Eff. February 1, 1976;
Readopted Eff. March 1, 1979;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 26, 2015.

15A NCAC 18D .0104 QUORUM

History Note: Authority G.S. 90A-21(c);
Eff. February 1, 1976;
Readopted Eff. March 1, 1979;
Repealed Eff. September 1, 1990.

15A NCAC 18D .0105 DEFINITIONS

The following definitions shall apply throughout this Subchapter:

- (1) "Acceptable Experience"
 - (a) For all surface grade certifications, the term shall mean at least 50 percent of the duties consist of active on-site performance of operational duties, including on-site water facility laboratory duties, at a surface water treatment facility. This experience shall be based on the use of mathematics, equipment, materials, maintenance, installation and repair techniques, cross-connection control, and other skills necessary for maintaining and operating a surface water treatment facility. The remaining duties shall be in related fields, such as wastewater facility operation, a water or wastewater laboratory, water pumping stations, water system design and engineering, wells, distribution systems, or cross-connection control. The experience of Public Water Supply Section personnel shall be acceptable if at least 50 percent of their job duties include inspection or on-site technical assistance of public water systems.
 - (b) For all well grade certifications, the term shall mean at least 50 percent of the duties consist of active on-site performance of operational duties for public water systems with chemical treatment having one or more wells. This experience shall be based on the use of mathematics, equipment, materials, maintenance, installation and repair techniques, cross-connection control, and other skills necessary for maintaining and operating a treated well water system. The remaining duties shall be in related fields, such as wastewater facility operation, a water or wastewater laboratory, water pumping stations, water system design and engineering, surface facilities, distribution systems, or cross-connection control. The experience of Public Water Supply Section personnel shall be acceptable if at least 50 percent of their job duties include inspection or on-site technical assistance of public water systems.
 - (c) For all distribution grade certifications, the term shall mean at least 50 percent of the duties consist of active on-site performance of operational duties for distribution systems within public water systems. This experience shall be based on the use of mathematics, equipment, materials, maintenance, installation and repair techniques, cross-connection control, and other skills necessary for maintaining and operating a water distribution system. The remaining duties shall be in related fields, such as wastewater facility operation, a water or wastewater laboratory, water pumping stations, water system design and engineering, surface facilities, wells, or cross-

connection control. The experience of Public Water Supply Section personnel shall be acceptable if at least 50 percent of their job duties include inspection or on-site technical assistance of public water systems.

- (d) For all cross-connection control grade certifications, the term shall mean the duties consist of on-site performance of cross-connection control duties for a public water system. This experience shall be based on the use of mathematics, equipment, materials, maintenance, installation and repair techniques, back flow prevention, and other skills necessary for maintaining and operating a cross-connection control program for a public water system. The remaining duties shall be in related fields, such as wastewater facility operation, a water or wastewater laboratory, water pumping stations, water system design and engineering, surface facilities, or wells. The experience of Public Water Supply Section personnel shall be acceptable if at least 50 percent of their job duties include inspection or on-site technical assistance of public water systems.
- (2) "Certified Operator" means any holder of a certificate issued by the Board in accordance with the provisions of G.S. 90A-25.
- (3) "College Graduate" means a graduate of a four-year institution accredited by an agency recognized by the United States Department of Education and awarding degrees on the bachelor level.
- (4) "Fire Protection System" means dry or wet sprinkler systems or fire hydrant connections to the water distribution system.
- (5) "Owner" means the person, unit of local government, firm, corporation, association, partnership, or non-profit corporation formed to operate a public water supply facility.
- (6) "Satisfactorily Completed" means the attendance of at least 80 percent of the training required for examination eligibility and 100 percent of the training required for professional growth hours.
- (7) "Secretary" means the Secretary of the Department of Environmental Quality.
- (8) "Service Connection" means a water tap made to provide a water connection to a water distribution system.

*History Note: Authority G.S. 90A-21(c);
Eff. February 1, 1976;
Readopted Eff. March 1, 1979;
Amended Eff. May 1, 2006; August 1, 2002; August 1, 1998; August 3, 1992; January 1, 1992; September 1, 1990; June 1, 1988;
Readopted Eff. September 1, 2018.*

SECTION .0200 – QUALIFICATION OF APPLICANTS AND CLASSIFICATION OF FACILITIES

15A NCAC 18D .0201 GRADES OF CERTIFICATION

(a) Applicants for certification shall be at least 18 years old, possess a high school diploma or general educational development equivalent (GED), and meet the following educational and experience requirements:

- (1) GRADE C-SURFACE applicants shall have six months of acceptable experience at a surface water facility and have satisfactorily completed a C-Surface school approved by the Board.
- (2) GRADE B-SURFACE applicants shall:
 - (A) be a college graduate with a bachelor's degree in the physical or natural sciences or be a graduate of a two-year technical program with a diploma in water and wastewater technology, have six months of acceptable experience at a surface water facility, and have satisfactorily completed a B-Surface school approved by the Board; or
 - (B) have one year of acceptable experience at a surface water facility while holding a Grade C-Surface certificate and have satisfactorily completed a B-Surface school approved by the Board.
- (3) GRADE A-SURFACE applicants shall have one year of acceptable experience at a surface water facility while holding a Grade B-Surface certificate and have satisfactorily completed an A-Surface school approved by the Board.
- (4) GRADE D-WELL applicants shall have three months of acceptable experience at a well water facility and have satisfactorily completed a C-Well or D-Well school approved by the Board.
- (5) GRADE C-WELL applicants shall:
 - (A) be a college graduate with a bachelor's degree in the physical or natural sciences or be a graduate of a two-year technical program with a diploma in water and wastewater technology, have three

- months of acceptable experience at a well water facility, and have satisfactorily completed a C-Well school approved by the Board;
 - (B) have six months of acceptable experience at a well water facility and have satisfactorily completed a C-WELL school approved by the Board; or
 - (C) hold either a Grade A-Surface certification or a Grade A-Distribution certificate and have satisfactorily completed a C-Well school approved by the Board.
- (6) GRADE B-WELL applicants shall:
- (A) be a college graduate with a bachelor's degree in the physical or natural sciences or be a graduate of a two-year technical program with a diploma in water and wastewater technology, have six months of acceptable experience at a well water facility, and have satisfactorily completed a B-WELL school approved by the Board; or
 - (B) have one year of acceptable experience at a well water facility while holding a Grade C-Well certificate and have satisfactorily completed a B-WELL school approved by the Board.
- (7) GRADE A-WELL applicants shall have one year of acceptable experience at a well water facility while holding a Grade B-Well certificate and have satisfactorily completed an A-WELL school approved by the Board.
- (8) GRADE D-DISTRIBUTION applicants shall have three months of acceptable experience at a distribution system and have satisfactorily completed a C-Distribution or D-Distribution school approved by the Board.
- (9) GRADE C-DISTRIBUTION applicants shall hold a certificate of completion of trench shoring training from a school approved by the Board and shall:
- (A) be a college graduate with a bachelor's degree in the physical or natural sciences or be a graduate of a two-year technical program with a diploma in water and wastewater technology, have three months of acceptable experience at a Class C or higher distribution system, and have satisfactorily completed a C-Distribution school approved by the Board; or
 - (B) have six months of acceptable experience at a Class D or higher distribution system and have satisfactorily completed a C-Distribution school approved by the Board.
- (10) GRADE B-DISTRIBUTION applicants shall:
- (A) be a college graduate with a bachelor's degree in the physical or natural sciences or be a graduate of a two-year technical program with a diploma in water and wastewater technology, have six months of acceptable experience at a Class B or higher distribution system, have satisfactorily completed a B-Distribution school approved by the Board, and shall hold a certificate of completion of trench shoring training from a school approved by the Board; or
 - (B) have one year of acceptable experience at a Class C or higher distribution system while holding a Grade C-Distribution certificate and have satisfactorily completed a B-Distribution school approved by the Board.
- (11) GRADE A-DISTRIBUTION applicants shall have one year of acceptable experience at a Class B or higher distribution system while holding a Grade B-Distribution certificate and have satisfactorily completed an A-Distribution school approved by the Board.
- (12) GRADE CROSS-CONNECTION CONTROL applicants shall:
- (A) be a college graduate with a bachelor's degree in the physical or natural sciences or be a graduate of a two-year technical program with a degree in water and wastewater or civil engineering technology, and have satisfactorily completed a cross-connection control school approved by the Board;
 - (B) have six months of acceptable experience at Class D-Distribution or higher system or have one year experience in the operations of cross connection control devices, and have satisfactorily completed a cross-connection control school approved by the Board; or
 - (C) be a plumbing contractor licensed by the State of North Carolina and have satisfactorily completed a cross-connection control school approved by the Board.
- (13) APPRENTICE applicants shall have met the education requirement and satisfactorily completed a Grade B, Grade C, Grade D, or cross-connection control school approved by the Board and shall have correctly answered at least 70 percent of the questions on an examination designed for the class of certification for which the applicant is applying. The apprentice certification may be renewed annually for a maximum of five years, pursuant to the continuing education and renewal requirements of this Subchapter. An apprentice shall not act as a certified operator or an Operator in Responsible Charge for a facility. An apprentice is eligible for Grade B, Grade C, Grade D, or cross-connection control certification after

meeting the applicable experience requirements as set forth in this Rule and making application to the Board.

(b) Applications for certification of an operator certified in a state other than North Carolina shall be submitted to the Board for review. The application for out-of-state, civilian applications includes information regarding the applicant's current employment, the type of licenses granted in the state of origin, the years of water treatment experience, and a listing of water treatment plant experience. The application for applicants with military experience includes a listing of water treatment plant experience and an attached copy of the applicant's Verification of Military Experience and Training (VMET). The information supplied shall assist the Board in determining whether the requirements under which the out-of-state certification was obtained are equivalent to those required by the Water Treatment Facility Operators Board of Certification.

History Note: Authority G.S. 90A-21(c); 90A-22; 90A-23; 90A-24; 90A-25(b);
Eff. February 1, 1976;
Amended Eff. September 1, 1977;
Readopted Eff. March 1, 1979;
Amended Eff. February 1, 2012; May 1, 2006; September 1, 2004; August 1, 2000; August 1, 1998; May 3, 1993; August 3, 1992; July 1, 1991; December 31, 1988;
Readopted Eff. September 1, 2018.

15A NCAC 18D .0202 EXAMINATIONS

In addition to the educational and experience requirements in .0201 of this Section, the applicant must successfully pass an examination designed for the class of certification for which the applicant is applying. If an applicant fails an examination three times, the applicant shall retake the appropriate school designated in Rule .0201 of this Section.

History Note: Authority G.S. 90A-21(c); 90A-23; 90A-24;
Eff. February 1, 1976;
Readopted Eff. March 1, 1979;
Amended Eff. May 1, 2006;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 26, 2015.

15A NCAC 18D .0203 RATING VALUES TO DETERMINE VARIOUS CLASSES OF CERTIFICATION

The designation of public water system treatment classifications shall be based on the following rating values:

PARAMETER		RATING VALUE
(1)	Surface Water Source	
	(a) flowing stream	5
	(b) flowing stream with impoundment	7
	(c) raw water treatment	3
(2)	Ground Water Source	
	(a) first five wells	5
	(b) add 1 point per 5 wells or fraction thereof over 5	1
(3)	Coagulation	
	(a) aluminum sulfate, ferric chloride	10
	(b) polymer	5
(4)	Mixing	
	(a) baffle	2
	(b) mechanical	4
	(c) air	3
(5)	Oxidation (pre-treatment)	
	(a) Cl_2O_2	5
	(b) ozone	5
	(c) KMnO_4	3
	(d) Cl_2	3
(6)	Carbon Treatment	2
(7)	Aeration	
	(a) mechanical draft	3
	(b) coke tray or splash tray	2

	(c)	diffused	3	
	(d)	packed tower (VOC reduction)	10	
(8)		pH Adjustment (primary)		
	(a)	caustic (NaOH)	10	
	(b)	lime or soda ash	3	
	(c)	acid		10
(9)		Sedimentation		
	(a)	standard rate	5	
	(b)	tube settlers	3	
	(c)	upflow	8	
	(d)	pulsators and plates	5	
(10)		Contact Tank	1	
(11)		Filtration		
	(a)	pressure		
		(i) sand or anthracite	8	
		(ii) synthetic media (birm)	8	
		(iii) granular activated carbon (GAC)	9	
	(b)	gravity		
		(i) sand	10	
		(ii) anthracite (mixed) or GAC	12	
		(iii) with surface wash or air scour	2	
	(c)	membrane	10	
(12)		Ion Exchange		
	(a)	softener, Na cycle	5	
	(b)	softener, H cycle	7	
	(c)	Fe and Mn (greensand)	9	
	(d)	mixed bed or split stream	9	
(13)		Lime Softening		
	(a)	spiractors	10	
	(b)	clarifier with coagulation	12	
	(c)	fuel burner (recarbonation)	5	
(14)		Phosphate (sequestering agent)	5	
(15)		Stabilization		
	(a)	acid feed	10	
	(b)	phosphate	2	
	(c)	caustic (NaOH)	10	
	(d)	lime or soda ash	3	
	(e)	contact units	5	
(16)		Reverse Osmosis, Electrodialysis	15	
(17)		Disinfection		
	(a)	gas Cl ₂	10	
	(b)	hypochlorite solution	7	
	(c)	Cl ₂ O ₂ (sodium chlorite and Cl ₂)	13	
	(d)	ozone	13	
	(e)	ammonia and Cl ₂	12	
	(f)	ultraviolet light (uv)	5	
(18)		Fluoridation		
	(a)	saturator	8	
	(b)	dry feed	8	
	(c)	solution (acid)	10	
(19)		Pumping		
	(a)	raw		3
	(b)	intermediate	1	
	(c)	finished	3	
	(d)	system booster	2	

(20)	Storage		
(a)	raw		1
(b)	treated ground level tank	1	
(c)	elevated in system (each extra tank 1 point)	2	
(d)	hydropneumatic	2	
(21)	Population Served 1 point per 1,000 persons served	50 max	
(22)	Plant Capacity 1 point per 1 MGD capacity	25 max	
(23)	On-Site Quality Control		
(a)	bacteriological		
(i)	MPN/MF	5	
(ii)	HPC	2	
(iii)	MMO-MUG (Colilert)	2	
(b)	pH		
(i)	meter	2	
(ii)	test kit	1	
(c)	fluoride		
(i)	meter	3	
(ii)	colorimetric	3	
(d)	chlorine		
(i)	titrator	3	
(ii)	colorimeter/spec.	2	
(iii)	test kit	1	
(e)	iron		1
(f)	hardness	1	
(g)	alkalinity	1	
(h)	turbidity	1	
(i)	manganese	1	
(j)	others (1 point each)	1	
(k)	A.A. Spec, or G.C. Unit	5 each	

History Note: Authority G.S. 90A-21(c); 90A-22;
Eff. February 1, 1976;
Readopted Eff. March 1, 1979;
Amended Eff. August 1, 2000; August 3, 1992; January 1, 1992; September 1, 1990;
Readopted Eff. September 1, 2018.

15A NCAC 18D .0204 PUMPAGE CHART

History Note: Authority G.S. 90A-21(c), -22;
Eff. February 1, 1976;
Readopted Eff. March 1, 1979;
Amended Eff. June 30, 1980;
Repealed Eff. September 1, 1990.

15A NCAC 18D .0205 PUBLIC WATER SYSTEM TREATMENT, DISTRIBUTION, AND CROSS-CONNECTION CONTROL CLASSIFICATIONS

(a) Public water system treatment facilities, except for Class D-Well systems, shall be classified based on the sources of water and the number of points assigned to the facilities pursuant to Rule .0203 of this Section, as follows:

Class C	1-50 points
Class B	51-110 points
Class A	over 110 points

Non-community public water systems with hypochlorite solution as the only treatment applied to the water shall be classified as Class D-Well.

(b) The classification of distribution systems shall apply to all community and non-transient non-community public water systems. The distribution system class level shall be the greater of the treatment plant class level from Paragraph (a) of this Rule or the following class level based on the number of service connections and existence of a fire protection system:

- (1) Class D-DISTRIBUTION is any system with 100 or fewer service connections with no fire protection system;
- (2) Class C-DISTRIBUTION is any system with more than 100 service connections but not exceeding 1,000 service connections with no fire protection system;
- (3) Class B-DISTRIBUTION is any system with more than 1,000 service connections but not exceeding 3,300 service connections or any system not exceeding 1,000 service connections with a fire protection system; and
- (4) Class A-DISTRIBUTION is any system with more than 3,300 service connections.

(c) The classification CROSS-CONNECTION CONTROL shall be applied to any distribution system that is required to have installed five or more testable backflow prevention assemblies in accordance with 15A NCAC 18C .0406(b), which is hereby incorporated by reference, including subsequent amendments and editions.

*History Note: Authority G.S. 90A-21(c); 90A-22;
Eff. February 1, 1976;
Amended Eff. September 1, 1977;
Readopted Eff. March 1, 1979;
Amended Eff. November 1, 2006; August 1, 2002; August 1, 2000; August 3, 1992; September 1, 1990;
December 31, 1980; January 1, 1980;
Readopted Eff. September 1, 2018.*

15A NCAC 18D .0206 CERTIFIED OPERATOR REQUIRED

(a) All public water systems shall have a certified operator in responsible charge for each water treatment facility that:

- (1) alters the physical, chemical, or microbiological characteristics of the water;
- (2) has approved plans for such alterations; or
- (3) has equipment installed for such alterations.

The owner shall notify the Board in writing within 10 days of a vacancy that results in noncompliance with this Rule.

(b) There shall be an operator holding at least a Grade C-Surface certification assigned to be on duty on the premises when a surface water treatment facility is treating water. Implementation of this requirement shall be subject to the following provisions:

- (1) upon vacancy of a position resulting in noncompliance with this requirement, the owner shall notify the Board within 24 hours or at the start of the next business day of the vacancy; and
- (2) upon the vacancy, the owner shall fill the position with a certified Grade C-Surface operator or an operator with a temporary Grade C-Surface certification within 90 days.

(c) There shall be an operator in responsible charge for the distribution portion of community and non-transient non-community public water systems. This operator shall possess a valid distribution certificate issued by the Board with the grade equivalent to or exceeding the water system's distribution classification. A system serving 100 or fewer service connections shall be exempt from this requirement if it has an operator in responsible charge as required in Paragraph (a) of this Rule. A system that is classified as D-distribution only may use a Board-certified distribution, well, or surface operator to meet the operator in responsible charge requirements of this Rule

(d) There shall be an operator in responsible charge for the cross-connection control facilities of any public water system required by 15A NCAC 18C .0406(b) to have five or more testable backflow prevention assemblies. The operator shall possess a valid Cross-Connection Control certificate issued by the Board.

(e) All operators of community and non-transient non-community public water systems shall follow the standard operating procedures established by the operator in responsible charge. Decisions about water quality or quantity that affect public health that have not been addressed in the standard operating procedures shall be referred to the operator in responsible charge or to the certified operator on duty.

(f) No operator in responsible charge shall be required for transient non-community public water systems with either or both ultraviolet light (uv) disinfection or softening (if not required by 15A NCAC 18C) as the only treatment applied to water.

*History Note: Authority G.S. 90A-20; 90A-28; 90A-29; 90A-32;
Eff. July 1, 1991;*

Amended Eff. November 1, 2006; August 1, 2004; August 1, 2002; August 1, 2000; May 1, 1994; May 3, 1993;
Readopted Eff. December 1, 2018.

SECTION .0300 - APPLICATIONS AND FEES

Rules .0301 - .0304 of Title 15A Subchapter 18D of the North Carolina Administrative Code (T15A.18D .0301 - .0304); has been transferred and recodified from Rules .0301 - .0304 Title 10 Subchapter 10E of the North Carolina Administrative Code (T10.10E .0301 - .0304). Rules .0305 - .0306 of Title 15A Subchapter 18D of the North Carolina Administrative Code (T15A.18D .0305 - .0306); has been transferred and recodified from Rules .0306 - .0307 Title 10 Subchapter 10E of the North Carolina Administrative Code (T10.10E .0306 - .0307), effective April 4, 1990.

15A NCAC 18D .0301 APPLICATION FOR EXAM

- (a) All applicants for exams shall file an application on a form available from: Chairman, North Carolina Water Treatment Facility Operators Certification Board, 1635 Mail Service Center, Raleigh, North Carolina 27699-1635.
- (b) Applications for certification must be submitted to the Board at least 30 days prior to the date of the examination.
- (c) The applicant shall certify that the information given is correct to the best of his/her knowledge. In addition, the applicant's supervisor shall certify that he/she has reviewed the application and recommends that the applicant be considered for certification by the Board.
- (d) Applicants shall take the examination at the place and date specified by the Board.

History Note: Authority G.S. 90A-21(c); 90A-24;
Eff. February 1, 1976;
Amended Eff. September 1, 1977;
Readopted Eff. March 1, 1979;
Amended Eff. May 1, 2006; August 1, 2004; February 1, 2002; August 3, 1992; September 1, 1990;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 26, 2015.

15A NCAC 18D .0302 APPLICATION FOR RECIPROCITY

History Note: Authority G.S. 90A-21(c); 90A-24;
Eff. February 1, 1976;
Readopted Eff. March 1, 1979;
Amended Eff. August 1, 2004; February 1, 2002; September 1, 1990;
Repealed Eff. May 1, 2006.

15A NCAC 18D .0303 APPLICATION FOR TEMPORARY CERTIFICATE

All applicants for a temporary certificate shall file an application on a form available from: Chairman, North Carolina Water Treatment Facility Operators Certification Board, 1635 Mail Service Center, Raleigh, North Carolina 27699-1635.

History Note: Authority G.S. 90A-21(c); 90A-24;
Eff. February 1, 1976;
Readopted Eff. March 1, 1979;
Amended Eff. August 1, 2004; February 1, 2002; September 1, 1990;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 26, 2015.

15A NCAC 18D .0304 FEE SCHEDULE

- (a) The cost of examination and certification shall be fifty dollars (\$50.00). The cost of upgrading an apprentice to Grade C, D, or CC certification shall be fifty dollars (\$50.00).
- (b) The cost of a temporary certificate shall be fifty dollars (\$50.00).
- (c) The examination and certification fee must be paid to the Board when the application is submitted.
- (d) The cost of the annual certification renewal shall be thirty dollars (\$30.00). Renewal fees shall be due December 31 of each calendar year and shall be delinquent on the first day of February. Delinquent certifications shall be charged an additional fee of thirty dollars (\$30.00).
- (e) The operator shall notify the Board, in writing, within 30 days of any change in his or her address.

History Note: Authority G.S. 90A-27;
Eff. February 1, 1976;
Amended Eff. July 1, 1977;
Readopted Eff. March 1, 1979;
Amended Eff. February 1, 2012; September 22, 2004; August 1, 2000; August 3, 1992; December 1, 1990; December 1, 1989; June 30, 1981;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 26, 2015.

15A NCAC 18D .0305 WAITING PERIOD

History Note: Authority G.S. 90A-24;
Eff. February 1, 1976;
Amended Eff. July 1, 1977;
Readopted Eff. March 1, 1979;
Repealed Eff. August 1, 2000.

15A NCAC 18D .0306 REVOCATION OF CERTIFICATE

History Note: Authority G.S. 90A-26;
Eff. February 1, 1976;
Readopted Eff. March 1, 1979;
Repealed Eff. September 1, 1990.

15A NCAC 18D .0307 EXPIRATION AND REVOCATION OF CERTIFICATE

- (a) If an operator fails to pay the renewal fee or meet the continuing education requirements of Rule .0308(a) of this Section, the operator's certificate shall expire.
- (b) If an operator in responsible charge fails to meet the requirements of 15A NCAC 18D .0701, his or her operator's certificate may be revoked pursuant to G.S. 90A-26.
- (c) An individual who has had certification revoked by the Board may petition the Board for any certification sought if:
- (1) two years have elapsed since the effective date of the revocation; and
 - (2) the individual has completed a school approved by the Board and passed an exam corresponding to the certification being sought.

History Note: Authority G.S. 90A-25.1; 90A-26;
Eff. August 3, 1992;
Amended Eff. November 1, 2008; August 1, 2004; August 1, 2002; August 1, 2000; August 1, 1998;
Readopted Eff. September 1, 2018.

15A NCAC 18D .0308 PROFESSIONAL GROWTH HOURS

- (a) All certified operators shall complete six professional growth hours of Board-approved training each year following the year of initial certification. Board-approved training shall contain subject matter relevant to water treatment facility operators and includes the following categories: rules and regulations, equipment, operation and maintenance, record keeping, new treatment technologies, water treatment processes, courses taught as part of certification school curriculum, and management of water treatment facilities. Submitting proof of professional growth hours shall be the responsibility of the operator. Failure to complete the six professional growth hours shall result in expiration of the operator's certificates.
- (b) Training providers shall seek Board approval prior to offering events that provide professional growth hours. Training providers shall submit an attendance roster to the Board within ten business days after completion of the training event. The roster shall contain each attendee's full name and certification ID number. The organization providing the training shall give each participant a certificate or other proof of completion that includes the name of the provider, the provider's address, and contact person with telephone number. The proof of completion shall identify the name of the participant, the number of professional growth hours completed, the course name, the course number assigned by the Board, the instructor's name, and the date of the training. For in-house training, an instructor from outside of the organization shall provide the training.
- (c) The Board shall mail renewal notices to operators prior to the renewal date and shall state whether the Board has a record of their professional growth hours for the preceding year. If the Board does not have a record of professional growth for an

operator, the operator shall provide proof of the required six professional growth hours of training prior to renewal of any certification issued by the Board. Failure to receive a renewal notice shall not relieve a certified operator of the responsibility to renew the certificate by the renewal due date.

History Note: Authority G.S. 90A-25.1; 90A-26;
Eff. August 1, 1998;
Amended Eff. December 1, 2008; August 1, 2004; August 1, 2000;
Readopted Eff. September 1, 2018.

15A NCAC 18D .0309 CERTIFICATION REINSTATEMENT

(a) An operator whose certification has expired may seek reinstatement within two years of expiration by paying any renewal fees in arrears, including late fees, and either providing proof of six contact hours of professional growth training for each calendar year as required in Rule .0308 of this Section or passing another examination of that grade.

(b) An operator whose certificate has been expired for less than two years must pay any renewal fees in arrears and late fees before seeking an upgrade from the certificate type that has expired.

(c) Any person whose certification has been expired for more than two years may apply to the Board for reinstatement of the certificate type that was expired.

History Note: Authority G.S. 90A-25.1; 90A-26;
Eff. August 1, 1998;
Amended Eff. May 1, 2006; August 1, 2004; August 1, 2000;
Readopted Eff. September 1, 2018.

SECTION .0400 - ISSUANCE OF CERTIFICATE

Rules .0401 - .0405 of Title 15A Subchapter 18D of the North Carolina Administrative Code (T15A.18D .0401 - .0405); has been transferred and recodified from Rules .0401 - .0405 Title 10 Subchapter 10E of the North Carolina Administrative Code (T10.10E .0401 - .0405), effective April 4, 1990.

15A NCAC 18D .0401 NOTIFICATION OF CLASSIFICATION

Each town, city or private water utility having a water treatment facility shall be notified of the classification of the treatment facility as determined by the Board in cooperation with the Secretary. This classification shall determine the grade of certificate required by the operator in responsible charge of the water treatment facility.

History Note: Authority G.S. 90A-21(c); 90A-22; 90A-25;
Eff. February 1, 1976;
Readopted Eff. March 1, 1979;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 26, 2015.

15A NCAC 18D .0402 INFORMATION NEEDED BY BOARD

History Note: Authority G.S. 90A-21(c); 90A-22;
Eff. February 1, 1976;
Readopted Eff. March 1, 1979;
Repealed Eff. September 1, 1990.

15A NCAC 18D .0403 ISSUANCE OF GRADE CERTIFICATE

History Note: Authority G.S. 90A-21(c); 90A-23; 90A-25;
Eff. February 1, 1976;
Readopted Eff. March 1, 1979;
Amended Eff. August 1, 2004; August 1, 2000; August 3, 1992; January 1, 1992; March 1, 1991;
September 1, 1990;
Expired Eff. August 1, 2015 pursuant to G.S. 150B-21.3A.

15A NCAC 18D .0404 TEMPORARY CERTIFICATE

- (a) A temporary certificate may be issued by the Board when it is found that the supply of certified operators, or persons with training necessary to obtain certification, is inadequate. It shall be demonstrated to the Board that the person applying for the temporary certificate is competent and able to fulfill the appropriate duties according to the requirements of 15A NCAC 18C.
- (b) Application for such temporary certificate shall be made on a form approved by the Board and must supply the information needed by the Board in order to protect the public health while such temporary certificates are in force.
- (c) A temporary certificate is applicable only for the system for which the operator is employed at time of issuance.

History Note: Authority G.S. 90A-21(c); 90A-23; 90A-25;
Eff. February 1, 1976;
Readopted Eff. March 1, 1979;
Amended Eff. January 1, 1992;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 26, 2015.

15A NCAC 18D .0405 RECIPROCAL CERTIFICATES

History Note: Authority G.S. 90A-21(c); 90A-25(b);
Eff. February 1, 1976;
Readopted Eff. March 1, 1979;
Amended Eff. August 1, 1998; September 1, 1990;
Repealed Eff. May 1, 2006.

SECTION .0500 - RULE MAKING PROCEDURES

Rules .0501 - .0508 of Title 15A Subchapter 18D of the North Carolina Administrative Code (T15A.18D .0501 - .0508); has been transferred and recodified from Rules .0501 - .0508 Title 10 Subchapter 10E of the North Carolina Administrative Code (T10.10E .0501 - .0508), effective April 4, 1990.

15A NCAC 18D .0501 PETITIONS

- (a) Any person wishing to request the adoption, amendment, or repeal of a rule of the Water Treatment Facility Operators Board of Certification (hereinafter referred to as the Board) shall make his request in a petition addressed to: Chairman, North Carolina Water Treatment Facility Operators Certification Board, 1635 Mail Service Center, Raleigh, North Carolina 27699-1635.
- (b) The petition shall contain the following information:
- (1) either a draft of the proposed rule or a summary of its contents;
 - (2) the statutory authority for the agency to promulgate the rule;
 - (3) the reasons for the proposal;
 - (4) the effect of proposed rules on existing rules or orders;
 - (5) any data supporting the proposal;
 - (6) the effect of the proposed rule on existing practices in the area involved, including cost factors;
 - (7) the names and addresses, if known, of those most likely to be affected by the proposed rule; and
 - (8) the name and address of the petitioner.
- (c) The Board shall determine, based on a study of the facts stated in the petition, whether the public interest will be served by granting the petition. The Board shall consider all the contents of the submitted petition, plus any additional information it deems relevant.

History Note: Authority G.S. 150B-20; 90A-21(c);
Eff. February 1, 1976;
Readopted Eff. March 1, 1979;
Amended Eff. February 1, 2002; September 1, 1990;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 26, 2015.

15A NCAC 18D .0502 NOTICE

15A NCAC 18D .0503 HEARING OFFICER

15A NCAC 18D .0504 HEARINGS
15A NCAC 18D .0505 STATEMENT OF REASONS FOR AND AGAINST RULE MAKING DECISION
15A NCAC 18D .0506 RECORD OF RULE MAKING PROCEEDINGS
15A NCAC 18D .0507 FEES

History Note: *Authority G.S. 90A-21(c); 150A-11; 150A-12;*
Eff. February 1, 1976;
Readopted Eff. March 1, 1979;
Repealed Eff. September 1, 1990.

15A NCAC 18D .0508 DECLARATORY RULINGS

(a) The Board shall have the power to make declaratory rulings. All requests for declaratory rulings shall be by written petition and shall be submitted to: Chairman, North Carolina Water Treatment Facility Operators Certification Board, 1635 Mail Service Center, Raleigh, North Carolina 27699-1635.

(b) Every request for a declaratory ruling must include the following information:

- (1) the name and address of the petitioner;
- (2) the statute or rule to which the petition relates;
- (3) a concise statement of the manner in which the petitioner is aggrieved by the rule or statute or its potential application to him; and
- (4) the consequences of a failure to issue a declaratory ruling.

(c) The Board shall notify in writing the petitioner of the Chairman's decision to refuse issue a declaratory ruling and state the reasons. The Chairman may refuse to consider a request for a declaratory ruling:

- (1) unless the petitioner shows that the circumstances are so changed since adoption of the rule that such a ruling would be warranted;
- (2) unless the rule making record evidences a failure by the agency to consider specified relevant factors;
- (3) if there has been a similar controlling factual determination in a contested case, or if the factual context being raised for a declaratory ruling was specifically considered upon adoption of the rule being questioned as evidenced by the rule making record; or
- (4) if circumstances stated in the request or otherwise known to the agency show that a contested case hearing would presently be appropriate.

(d) Where a declaratory ruling is deemed appropriate, the Board shall issue the ruling within 60 days of the receipt of the petition.

(e) A declaratory ruling procedure may consist of written submissions, oral hearings, or such other procedures as may be deemed appropriate, in the discretion of the chairman, in the particular case.

(f) The chairman may issue notice to persons who might be affected by the ruling that written comments may be submitted or oral presentations received at a scheduled hearing.

History Note: *Authority G.S. 150B-4;*
Eff. February 1, 1976;
Readopted Eff. March 1, 1979;
Amended Eff. February 1, 2002; September 1, 1990; January 1, 1980;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 26, 2015.

SECTION .0600 - CONTESTED CASES

Rules .0601 - .0624 of Title 15A Subchapter 18D of the North Carolina Administrative Code (T15A.18D .0601 - .0624); has been transferred and recodified from Rules .0601 - .0624 Title 10 Subchapter 10E of the North Carolina Administrative Code (T10.10E .0601 - .0624), effective April 4, 1990.

15A NCAC 18D .0601 OPPORTUNITY FOR LICENSEE OR APPLICANT TO HAVE HEARING

All contested cases shall be conducted in accordance with Article 3A of Chapter 150B of the General Statutes.

History Note: *Authority G.S. 90A-26; 150B-38;*
Eff. February 1, 1976;
Readopted Eff. March 1, 1979;

Amended Eff. September 1, 1990;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 26, 2015.

15A NCAC 18D .0602	NOTICE TO APPLICANT OF BOARD ACTION
15A NCAC 18D .0603	NOTICE TO LICENSEE OF BOARD ACTION
15A NCAC 18D .0604	REQUEST FOR HEARING
15A NCAC 18D .0605	FAILURE TO MAKE REQUEST
15A NCAC 18D .0606	NOTICE OF HEARING
15A NCAC 18D .0607	WAIVER OF HEARING
15A NCAC 18D .0608	INTERVENTION
15A NCAC 18D .0609	HEARING OFFICER
15A NCAC 18D .0610	WRITTEN ANSWER
15A NCAC 18D .0611	VENUE
15A NCAC 18D .0612	AVAILABILITY OF BOARD RECORDS
15A NCAC 18D .0613	DEPOSITIONS AND DISCOVERY
15A NCAC 18D .0614	PRE-HEARING CONFERENCE
15A NCAC 18D .0615	SUBPOENAS
15A NCAC 18D .0616	CONSOLIDATION
15A NCAC 18D .0617	STIPULATIONS
15A NCAC 18D .0618	DISQUALIFICATION OF HEARING OFFICER
15A NCAC 18D .0619	FAILURE OF PARTY TO ATTEND HEARING
15A NCAC 18D .0620	OATH
15A NCAC 18D .0621	CONDUCT OF HEARING
15A NCAC 18D .0622	PROPOSAL FOR DECISION
15A NCAC 18D .0623	RECORD
15A NCAC 18D .0624	TRANSCRIPT

*History Note: Authority G.S. 90A-26; 150A-3; 150A-23 through 150A-37;
Eff. February 1, 1976;
Readopted Eff. March 1, 1979;
Repealed Eff. September 1, 1990.*

SECTION .0700 - OPERATIONS AND MANAGEMENT

15A NCAC 18D .0701 OPERATOR IN RESPONSIBLE CHARGE

(a) The owner shall ensure that the public water system facilities are managed by an operator in responsible charge who possesses a certificate equivalent to or exceeding the requirements in this Subchapter.

(b) The operator in responsible charge shall manage the daily operation and maintenance of the facility. No person shall be in responsible charge of more than any one of the following without written permission from the Board:

- (1) one surface water treatment facility;
- (2) five community public water systems with well water facilities;
- (3) ten non-community public water systems with well water facilities;
- (4) one distribution system serving over 3,300 service connections;
- (5) five distribution systems serving over 500 service connections and less than 3,300 service connections;
- (6) ten total distribution systems;
- (7) ten total cross-connection control systems; or
- (8) any facility located more than a 50-mile radius from where the operator resides.

No person shall be in responsible charge of any combination of a surface water treatment facility, a community public water system with well water facilities, a non-community public water system with well water facilities, a distribution system, and a cross-connection control facility without written permission from the Board.

(c) A request for permission from the Board shall include documentation demonstrating that the facilities in question will be managed in compliance with the requirements of 15A NCAC 18C, which is hereby incorporated by reference, including subsequent amendments and editions.

(d) The operator in responsible charge shall report, with annual certification renewal, the names and public water system identification numbers for all systems for which the operator is the operator in responsible charge.

(e) If an operator in responsible charge takes responsibility for an additional system or relinquishes responsibility for any system, the operator shall notify the Board in writing within 10 days of the change.

(f) The operator in responsible charge shall establish standard operating procedures for each facility for which he or she is responsible. These procedures shall ensure that his or her decisions about water quality or quantity that affect public health are carried out. The procedures shall instruct persons lacking proper certification to refer all the decisions affecting public health to the certified operator on duty or to the operator in responsible charge.

(g) The operator in responsible charge shall be available for consultation on the premises of the facility in case of an emergency, equipment malfunction, or breakdown of equipment. The operator in responsible charge may designate a temporary operator in responsible charge during times when it is impossible for the operator in responsible charge to be on the premises. The temporary operator in responsible charge shall be familiar with the water system and have access to the standard operating procedures developed under Paragraph (f) of this Rule. The temporary operator in responsible charge shall possess a certification equivalent to or exceeding that required by the water system treatment classification. The operator in responsible charge shall notify the Board of any temporary operator in responsible charge designation lasting longer than 14 days.

History Note: Authority G.S. 90A-21(c); 90A-31;
Eff. August 1, 1998;
Amended Eff. May 1, 2006; August 1, 2002; August 1, 2000;
Readopted Eff. September 1, 2018.

SUBCHAPTER 18E – WASTEWATER TREATMENT AND DISPERSAL SYSTEMS

SECTION .0100 – GENERAL

15A NCAC 18E .0101 SCOPE

The rules contained in this Subchapter shall govern wastewater treatment and dispersal from wastewater systems, as defined in G.S. 130A-334(15), serving single or multiple-family residences, places of business, or places of public assembly. The wastewater system shall be designed to prevent the discharge of effluent to the land surface, surface waters, or into groundwater, except as allowed when used in conjunction with an RCW system as set forth in Rule .1002 of this Subchapter.

History Note: Authority G.S. 130A-333; 130A-334(15); 130A-335(a), (b), and (e);
Eff. January 1, 2024.

15A NCAC 18E .0102 APPLICABILITY

(a) The rules of this Subchapter shall not apply to wastewater systems in use which are not malfunctioning as described in Rule .1303(a)(2) of this Subchapter, unless the DDF or wastewater strength increases or unless otherwise specified in this Subchapter. Wastewater systems that are malfunctioning in accordance with Rule .1303(a)(2) of this Subchapter shall adhere to the rules of this Subchapter.

(b) The rules of this Subchapter shall not apply to IPs and CAs issued prior to the effective date of this Rule.

(c) Prior to any increase in DDF or wastewater strength for an existing facility, the owner shall submit an application in accordance with Rule .0202 of this Subchapter.

(d) Notwithstanding Paragraph (a) of this Rule, all wastewater systems shall comply with Section .1300 of this Subchapter.

History Note: Authority G.S. 130A-335(e);
Eff. January 1, 2024.

15A NCAC 18E .0103 INCORPORATION BY REFERENCE

For this Subchapter, the following rules, standards, and other materials are hereby incorporated by reference, including any subsequent amendments and editions. Table I lists the agency, document title, contact information, and terms for access to referenced documents.

Table I: Rules, standards, and other materials incorporated by reference

USDA-NRCS

Soil Survey Laboratory Information Manual, Soil Survey Investigations Report No. 45	Available at no charge at: http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/ref/
Kellogg Soil Survey Laboratory Methods Manual, Soil Survey Investigation Report No. 42	Available at no charge at: http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/ref/
Field Book for Describing and Sampling Soils	Available at no charge at: http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/ref/copy or U. S. Government Publishing Office, P. O. Box 979050, St. Louis, MO, 63197-9000
Guide to Soil Texture by Feel, Journal of Agronomic Education	Available at no charge at: http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/edu/?cid=nrcs142_2_054311
National Engineering Handbook, Part 624 (Drainage), Chapter 10 (Water Table Control); Part 630 (Hydrology), Chapter 18; Part 650 (Engineering Field Handbook), Chapter 14 (Water Management, Drainage)	Available at no charge at: http://www.nrcs.usda.gov/wps/portal/nrcs/detail/mi/technical/engineering
National Electrical Manufacturers Association 1300 North 17 th Street, Suite 900, Arlington, VA 22209 www.nema.org	
Standard 250 – Enclosures for Electrical Equipment	One hundred twenty four dollars (\$124.00)
U. S. Environmental Protection Agency (EPA) U. S. EPA/NSCEP P. O. Box 42419, Cincinnati, OH 45242-0419	
Method 9080 – Cation Exchange Capacity of Soils	Available at no charge at: https://www.epa.gov/hw-sw846/sw-846-test-method-9080-cation-exchange-capacity-soils-ammonium-acetate
ASTM International 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19438-2959 http://www.astm.org	
C564 – Standard Specifications for Rubber Gaskets for Cast Iron Soil Pipe and Fittings	Forty six dollars (\$46.00) each plus seven dollars and forty four cents (\$7.44) shipping and handling
C890 – Standard Practice for Minimum Structural Design Loading for Monolithic or Sectional Precast Concrete Water and Wastewater Structures	Fifty two dollars (\$52.00) each plus fourteen dollars and seventy one cents (\$14.71) shipping and handling
C923 – Standard Specifications for Resilient Connectors Between Reinforced Concrete Manhole Structures, Pipes, and Laterals	Forty six dollars (\$46.00) each plus seven dollars and forty four cents (\$7.44) shipping and handling
C990 – Standard Specifications for Joints for Concrete Pipe, Manholes, and Precast Box Sections Using Preformed Flexible Joint Sealants	Forty six dollars (\$46.00) each plus seven dollars and forty four cents (\$7.44) shipping and handling
C1644 – Standard Specification for Resilient Connectors Between Reinforced Concrete On-Site Wastewater Tanks and Pipes	Fifty two dollars (\$52.00) each plus fourteen dollars and seventy one cents (\$14.71) shipping and handling
D448 – Standard Classification for Sizes of Aggregate for Road and Bridge Construction	Forty six dollars (\$46.00) each plus seven dollars and forty four cents (\$7.44) shipping and handling
D1784 – Standard Specification for Rigid Poly (Vinyl Chloride)(PVC) Compounds and Chlorinated Poly (Vinyl Chloride)(CPVC) Compounds	Forty six dollars (\$46.00) each plus seven dollars and forty four cents (\$7.44) shipping and handling
D1785 – Standard Specifications for Poly	Fifty eight dollars (\$58.00) plus fourteen dollars and seventy one cents

(Vinyl Chloride)(PVC) Plastic Pipe, Schedules 40, 80, and 120	(\$14.71) shipping and handling
D2241 – Standard Specification for Poly (Vinyl Chloride)(PVC) Pressure-Rated Pipe (SDR Series)	Fifty two dollars (\$52.00) each plus fourteen dollars and seventy one cents (\$14.71) shipping and handling
D2466 – Standard Specification for Poly (Vinyl Chloride)(PVC) Plastic Pipe Fittings, Schedule 40	Fifty two dollars (\$52.00) each plus fourteen dollars and seventy one cents (\$14.71) shipping and handling
D2564 – Standard Specification for Solvent Cements for Poly (Vinyl Chloride)(PVC) Plastic Piping Systems	Fifty two dollars (\$52.00) each plus fourteen dollars and seventy one cents (\$14.71) shipping and handling
D2729 – Standard Specification for Poly (Vinyl Chloride)(PVC) Sewer Pipe and Fittings	Fifty two dollars (\$52.00) each plus fourteen dollars and seventy one cents (\$14.71) shipping and handling
D2774 – Standard Practice for Underground Installation of Thermoplastic Pressure Piping	Fifty two dollars (\$52.00) each plus fourteen dollars and seventy one cents (\$14.71) shipping and handling
D3034 – Standard Specification for Type PSM Poly (Vinyl Chloride)(PVC) Sewer Pipe and Fittings	Fifty eight dollars (\$58.00) plus fourteen dollars and seventy one cents (\$14.71) shipping and handling
D6913 – Standard Test Methods for Particle-Size Distribution (Gradation) of Soils Using Sieve Analysis	Seventy five dollars (\$75.00) each plus fourteen dollars and seventy one cents (\$14.71) shipping and handling
D7928 – Standard Test Method for Particle-Size Distribution (Gradation) of Fine-Grained Soils Using the Sedimentation (Hydrometer) Analysis	Seventy five dollars (\$75.00) each plus fourteen dollars and seventy one cents (\$14.71) shipping and handling
F667 – Standard Specification for 3 through 24 in. Corrugated Polyethylene Pipe and Fittings	Fifty two dollars (\$52.00) each plus fourteen dollars and seventy one cents (\$14.71) shipping and handling
F810 – Standard Specification for Smoothwall Polyethylene (PE) Pipe for Use in Drainage and Waste Disposal Absorption Fields	Forty six dollars (\$46.00) each plus seven dollars and forty four cents (\$7.44) shipping and handling
North Carolina Administrative Code	
15A NCAC 01O – Environmental Health	Available at no charge at: http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2001%20-%20departmental%20rules/subchapter%20o/subchapter%20o%20rules.html
15A NCAC 02B – Surface Water and Wetland Standards	Available at no charge at: http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20b/subchapter%20b%20rules.pdf
15A NCAC 02C – Well Construction Standards	Available at no charge at: http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20c/subchapter%20c%20rules.pdf
15A NCAC 02H – Procedures for Permits: Approvals	Available at no charge at: http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20h/15a%20ncac%2002h%20.0101.pdf

15A NCAC 02L – Groundwater Classification and Standards	Available at no charge at: http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20l/subchapter%20l%20rules.pdf
15A NCAC 02T – Waste Not Discharged to Surface Waters	Available at no charge at: http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/subchapter%20t%20rules.pdf
15A NCAC 02U – Reclaimed Water	Available at no charge at: http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20u/subchapter%20u%20rules.pdf
15A NCAC 08G – Authority: Organization: Structure: Definitions	Available at no charge at: http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2008%20-%20water%20pollution%20control%20system%20operators%20certification%20commission/subchapter%20g/subchapter%20g%20rules.pdf
15A NCAC 13B – Solid Waste Management	Available at no charge at: http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2013%20-%20solid%20waste%20management/subchapter%20b/subchapter%20b%20rules.pdf
15A NCAC 18A – Sanitation	Available at no charge at: http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2018%20-%20environmental%20health/subchapter%20a/subchapter%20a%20rules.pdf
15A NCAC 18C – Water Supplies	Available at no charge at: http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2018%20-%20environmental%20health/subchapter%20c/subchapter%20c%20rules.pdf
21 NCAC 39 – On-Site Wastewater Contractors and Inspectors Certification	Available at no charge at: http://reports.oah.state.nc.us/ncac.asp?folderName=\Title%2021%20-%20Occupational%20Licensing%20Boards%20and%20Commissions\Chapter%2039%20-%20On-Site%20Wastewater%20Contractors%20and%20Inspectors%20Certification
NSF International PO Box 130140, Ann Arbor, MI 48105 http://www.nsf.org/	
NSF/ANSI Standard 40 – Residential Wastewater Systems	One hundred five dollars (\$105.00) each plus shipping and handling
NSF/ANSI Standard 41 – Non-Liquid Saturated Treatment Systems	One hundred five dollars (\$105.00) each plus shipping and handling
NSF/ANSI Standard 46 – Evaluation of Components and Devices Used in Wastewater Treatment Systems	One hundred five dollars (\$105.00) each plus shipping and handling
NSF/ANSI Standard 245 – Wastewater Treatment Systems – Nitrogen Reduction	One hundred five dollars (\$105.00) each plus shipping and handling
NSF/ANSI Standard 350 – Onsite	One hundred five dollars (\$105.00) each plus shipping and handling

Residential and Commercial Water Reuse Treatment	
IAPMO 4755 E Philadelphia St, Ontario, CA 91761 http://www.iapmo.org/Pages/IAPMOgroup.aspx	
IAPMO/ANSI Z1000 – Prefabricated Septic Tanks	One hundred dollars (\$100.00) each
CSA 178 Rexdale Blvd, Toronto, ON Canada M9W 1R3 http://www.csagroup.org/	
B66 – Design, material, and manufacturing requirements for prefabricated septic tanks and sewage holding tanks	One hundred eighty dollars (\$180.00) each plus eighteen dollars (\$18.00) shipping and handling
2012 North Carolina Plumbing Code	
	Available at no charge at: https://codes.iccsafe.org/public/collections/nc
2015 North Carolina Building Code	
	Available at no charge at: https://codes.iccsafe.org/public/collections/nc
North Carolina Food Code Manual	
	Available at no charge at: http://ehs.ncpublichealth.com/faf/docs/foodprot/NC-FoodCodeManual-2009-FINAL.pdf
U.S. Government Publishing Office 732 North Capitol St, NW, Washington, DC 20401-0001 https://bookstore.gpo.gov/	
40 CFR 136	Sixty seven dollars (\$67.00) each
Forestry Suppliers, Inc PO Box 8397 Jackson, MS 39284-8397 https://www.forestry-suppliers.com/	
Munsell® Soil Color Book	One hundred ninety five dollars (\$195.00) each plus shipping and handling
National Technical Information Service 5301 Shawnee Rd Alexandria, VA 22312 https://www.ntis.gov/	
DRAINMOD User's Guide	Available at no charge at: https://ntrl.ntis.gov/NTRL/dashboard/searchResults/titleDetail/PB9611238.xhtml

History Note: Authority G.S. 130A-335(e);
Eff. January 1, 2024.

15A NCAC 18E .0104 ABBREVIATIONS

For the purpose of this Subchapter, the following abbreviations refer to:

- (1) ABS: Acrylonitrile-Butadiene-Styrene;
- (2) ACEC: Apparent Cation Exchange Capacity;
- (3) ANSI: American National Standards Institute;
- (4) AOWE: Authorized On-Site Wastewater Evaluator;
- (5) ASTM: American Society for Testing and Materials;
- (6) ATO: Authorization to Operate;
- (7) BOD₅: Five Day Biochemical Oxygen Demand;
- (8) CA: Construction Authorization;

- (9) CBOD: Carbonaceous Biochemical Oxygen Demand;
- (10) cmol/kg: centimoles per kilogram;
- (11) CFR: Code of Federal Regulations;
- (12) CSA: Canadian Standards Association;
- (13) DDF: Design Daily Flow;
- (14) DEQ: Department of Environmental Quality;
- (15) DIP: Ductile Iron Pipe;
- (16) DO: Dissolved Oxygen;
- (17) DOT: Department of Transportation;
- (18) DSE: Domestic Strength Effluent;
- (19) EOP: Engineered Option Permit;
- (20) FE: Iron;
- (21) FOG: Fats, Oil, and Grease;
- (22) gal: gallons
- (23) gpd: Gallons per Day;
- (24) gpd/ft²: Gallons per Day per Square Foot;
- (25) HSE: High Strength Effluent;
- (26) IAPMO: International Association of Plumbing and Mechanical Officials;
- (27) IP: Improvement Permit;
- (28) IPWW: Industrial Process Wastewater;
- (29) LC: Limiting Condition;
- (30) LDP: Large Diameter Pipe;
- (31) LG: Licensed Geologist;
- (32) LHD: Local Health Department;
- (33) LPP: Low Pressure Pipe;
- (34) LSS: Licensed Soil Scientist;
- (35) LTAR: Long Term Acceptance Rate;
- (36) meq/100 g: Milliequivalents per 100 grams;
- (37) mg/L: Milligrams/Liter;
- (38) NEMA: National Electrical Manufacturers Association;
- (39) NH₃: Total Ammonia Nitrogen;
- (40) NOI: Notice of Intent to Construct;
- (41) NOV: Notice of Violation;
- (42) NSF: NSF International;
- (43) OP: Operation Permit;
- (44) PE: Professional Engineer;
- (45) PIA: Provisional, Innovative, and Accepted;
- (46) PPBPS: Prefabricated Permeable Block Panel System;
- (47) psi: Pounds per Square Inch;
- (48) PVC: Polyvinyl Chloride;
- (49) RCW: Reclaimed Water;
- (50) RV: Recreational Vehicle;
- (51) RWTS: Residential Wastewater Treatment System;
- (52) SCO: State Climate Office of North Carolina;
- (53) SDR: Standard Dimension Ratio;
- (54) SPI: Standard Precipitation Index;
- (55) STEP: Septic Tank Effluent Pump;
- (56) SWC: Soil Wetness Condition;
- (57) TKN: Total Kjeldahl Nitrogen;
- (58) TL: Trench Length;
- (59) TN: Total Nitrogen;
- (60) TSS: Total Suspended Solids;
- (61) TW: Trench Width;
- (62) USDA-NRCS: United States Department of Agriculture – Natural Resources Conservation Service;
- (63) VIP: Visual Inspection Protocol; and

(64) WS: Water Supply Class.

*History Note: Authority G.S. 130A-335(e);
Eff. January 1, 2024.*

15A NCAC 18E .0105 DEFINITIONS

In addition to the definitions set forth in G.S. 130A-334, the following shall apply to the rules in this Subchapter:

- (1) "Aggregate" means naturally occurring inorganic material of a specific size or grade. An example of aggregate is clean, washed gravel, or crushed stone that is graded or sized in accordance with size numbers 4, 5, or 6 of ASTM D448.
- (2) "Apparent Cation Exchange Capacity" means the sum of exchangeable bases plus total soil acidity at a pH of 7.0. ACEC is expressed in milliequivalents per 100 grams (meq/100g) of soil or centimoles per kilogram (cmol/kg) of soil. The soil ACEC is calculated by determining the ACEC using the neutral normal ammonium acetate method, pH of 7.0 neutral normal, dividing by the percent clay as determined by particle size distribution using the pipette method, and then multiplying by 100, as described in USDA-NRCS Soil Survey Laboratory Information Manual, Soil Survey Investigations Report No. 45 and Kellogg Soil Survey Laboratory Methods Manual, Soil Survey Investigation Report No. 42, page 229, or EPA Method 9080.
- (3) "Applicant" means the individual who submits an application to the LHD for an IP, CA, OP, or existing system authorization.
- (4) "Approved" means that which the Department or LHD has determined is in accordance with this Subchapter and G.S. 130A, Article 11.
- (5) "Artificial drainage" means any man-made structure or device designed to overcome a SWC or intercept lateral flowing ground or surface water. Artificial drainage systems include groundwater lowering systems, interceptor drains, and surface water diversions.
- (6) "Authorized agent" means a person who has been authorized by the Department in accordance with G.S. 130A, Article 4 and 15A NCAC 01O .0100 to permit wastewater systems.
- (7) "Authorized designer" means a service provider authorized by the manufacturer who creates plans for the installation, expansion, or repair of a proprietary wastewater system.
- (8) "Authorized On-Site Wastewater Evaluator" means a person licensed in accordance with G.S. 90A, Article 5 and meeting the certification requirements in G.S. 130A-336.2(a) and 21 NCAC 39.
- (9) "Backfill" means the soil that is placed in a trench or bed that surrounds or is on top of the dispersal media within the excavation up to the naturally occurring soil surface.
- (10) "Bed" means an excavation with a width greater than three feet containing dispersal media and one or more laterals.
- (11) "Bedroom" means any room defined as a sleeping room in the North Carolina Building Code.
- (12) "Building drain" means the lowest piping of a drainage system that receives the discharge from waste pipes inside the design unit and extends to 10 ft beyond the walls of the building or five feet for a building with a foundation and conveys the sewage to a building sewer.
- (13) "Building sewer" means the part of a drainage system that extends from the end of the building drain and conveys the discharge to a wastewater system.
- (14) "Certified Inspector" means a person authorized to inspect a wastewater system in accordance with G.S. 90A, Article 5, and applicable rules of the North Carolina On-Site Wastewater Contractors and Inspectors Certification Board.
- (15) "Clod" means a compact, coherent, mass of soil produced by digging, plowing, or other human land manipulation.
- (16) "Coastal region" means Beaufort, Bertie, Bladen, Brunswick, Camden, Carteret, Chowan, Columbus, Craven, Cumberland, Currituck, Dare, Duplin, Edgecombe, Gates, Greene, Halifax, Harnett, Hertford, Hoke, Hyde, Johnston, Jones, Lenoir, Martin, New Hanover, Northampton, Onslow, Pamlico, Pender, Pasquotank, Perquimans, Pitt, Richmond, Robeson, Sampson, Scotland, Tyrrell, Washington, Wayne, and Wilson counties.
- (17) "Collection sewer" means gravity flow pipelines, force mains, effluent supply lines, manholes, lift stations, and all appurtenances used for conveying wastes from the building drain or building sewer to and within a wastewater system. A collection system is a collection sewer.

- (18) "Complete data set" means analytical results for all required influent and effluent constituents as specified in the effluent standard for a specific site on a specific date. A data set may include other constituents specified in an RWTS or PIA Approval, permit, or other document.
- (19) "Component" means a part of a wastewater system. The component may be any part of the wastewater system, such as a collection sewer, pretreatment, dispersal field, etc.
- (20) "Composite sample" means commingled individual samples collected from the same point at different times. Samples may be of equal volume or may be proportional to the flow at time of sampling.
- (21) "Control system" means either conventional or accepted systems that are surveyed as part of a survey protocol identified in Rule .1706 of this Subchapter.
- (22) "Cover" means the soil that is placed at or above the naturally occurring soil surface to cover the wastewater system.
- (23) "Demand dosing" means a configuration in which a specific volume of effluent is delivered to a component based upon patterns of wastewater generation from the source and liquid level detection device settings.
- (24) "Department" means the North Carolina Department of Health and Human Services, as defined in G.S. 130A-334(1f). The mailing address for the Department is as follows: NCDHHS, Division of Public Health, On-Site Water Protection Branch, 1642 Mail Service Center, Raleigh, North Carolina 27699-1642.
- (25) "Design daily flow" means the unadjusted quantity of wastewater a facility is projected to produce in a 24-hour period upon which wastewater system sizing and design are based as determined in Section .0400 of this Subchapter.
- (26) "Design unit" means a discrete connection such as an individual dwelling unit, place of business, or place of public assembly on which wastewater DDF is based. Multiple design units may comprise a facility.
- (27) "Dispersal field" means the physical location where final treatment and dispersal of effluent occurs in the soil.
- (28) "Dispersal media" means the media used to provide void space through which effluent flows and may be stored prior to infiltration, such as washed gravel or crushed stone, products referenced in Section .0900 of this Subchapter, products approved pursuant to Section .1700 of this Subchapter, etc.
- (29) "Dispersal system" means the dispersal field and associated components that distribute effluent to and within the dispersal field. This includes a pump, pump tank, pressure manifold, distribution box, drip box, lateral, dispersal media, etc.
- (30) "Dose volume" means an amount of effluent delivered during a dosing event as determined by the liquid level detection device settings in a demand dosing system or by a timer in a timed dosing system.
- (31) "Dwelling unit" means any room or group of rooms located within a structure and forming a single, habitable unit with facilities which are used or intended to be used for living, sleeping, bathing, toilet usage, cooking, and eating.
- (32) "Effluent" means the liquid discharge from a pretreatment process, component, or system.
- (33) "Facility" means one or more design units located on a single or multiple lot(s) or tract(s) of land and served by a wastewater system comprised of one or more wastewater systems.
- (34) "Finished grade" means the final elevation of the land over the wastewater system after installation.
- (35) "Flow equalization" means a system configuration that includes sufficient storage capacity to allow for uniform flow to a subsequent component despite variable flow from the source.
- (36) "Full kitchen" means the appliances meet the requirements of North Carolina Food Code, Chapters 4-1 and 4-2.
- (37) "Grab sample" means a discrete sample collected at a specific time and location.
- (38) "Grease tank" means the tank located outside the facility that is used to reduce the amount of grease discharged to a wastewater system.
- (39) "Grease trap" means a device used inside the facility to reduce the amount of grease discharged to a wastewater system.
- (40) "Gravity distribution" means gravity flow of effluent to and within each lateral.
- (41) "Groundwater lowering system" means a type of artificial drainage system designed to lower the water table by gravity or, in conjunction with a pump, to maintain the vertical separation beneath a dispersal field.
- (42) "Horizon" means a layer of soil, parallel to the surface that has distinct physical, chemical, and biological properties or characteristics such as color, structure, texture, consistence, kinds and number of organisms present, degree of acidity or alkalinity, etc., resulting from soil forming processes.
- (43) "Infiltrative surface" means the designated interface where effluent moves from dispersal media or a distribution device into treatment media, naturally occurring soil, or fill.

- (44) "Influent" means the sewage discharged to a pretreatment component.
- (45) "Installer" means a person authorized to construct, install, or repair a wastewater system in accordance with G.S. 90A, Article 5 and applicable rules of the North Carolina On-Site Wastewater Contractors and Inspectors Certification Board.
- (46) "Interceptor drain" means a type of artificial drainage designed to intercept and divert lateral moving groundwater or perched water away from the dispersal field or other system component to an effective outlet.
- (47) "Invert" means the lowest elevation of the internal cross-section of a pipe, fitting, or component.
- (48) "Jurisdictional wetland" means an area subject to the regulatory jurisdiction of the U.S. Army Corps of Engineers or DEQ.
- (49) "Ksat" or saturated hydraulic conductivity, means the rate of water flow through a unit cross sectional area of soil under saturated conditions. In-situ Ksat is measured in the field using clean water. Results of in-situ Ksat are used to simulate movement of effluent through the soil and may be used to field verify LTAR.
- (50) "Lateral water movement" means the movement of subsurface water downslope often associated with a less permeable horizon. Lateral water movement can be observed in a bore hole, excavation, or monitoring well on sloping sites.
- (51) "Lateral" means any pipe, tubing, or other device used to convey and distribute effluent in a dispersal field.
- (52) "Limiting condition" means soil conditions or site features that determine wastewater system design options. Soil conditions are morphology, depth, restrictive horizons, soil wetness, or organic matter content. Site features are topography, slope, landscape position, or available space.
- (53) "Lithochromic feature" means soil mottle or matrix associated with variations of color due to weathering of parent materials.
- (54) "Long Term Acceptance Rate" means the rate of effluent absorption by the soil, existing fill, or saprolite in a wastewater system after long-term use. The LTAR, in units of gpd/ft^2 , is assigned based upon soil textural class, structure, consistence, depth, percent coarse rock, landscape position, topography, and system type, and is used to determine the dispersal field sizing requirements, in accordance with applicable rules of this Subchapter.
- (55) "Local health department" means any county, district, or other health department authorized to be organized under the General Statutes of North Carolina.
- (56) "Management Entity" means the person, entity, company, or firm designated by the owner of the wastewater system who has primary responsibility for the operation of a wastewater system in accordance with this Subchapter, G.S. 90A, Article 3, and applicable rules of the Water Pollution Control System Operators Certification Commission. The Management Entity may be the owner, a public Management Entity, a certified operator, a management company, or an entity that employs certified operators. The Management Entity is or employs the operator in responsible charge for the wastewater system.
- (57) "Mass loading" means the total mass of one or more organic or inorganic effluent constituents delivered to the wastewater system over a specified period. It is computed by multiplying the total volume of flow during the specified period by the flow-weighted average constituent concentration in the same period. Units of measurement are pounds per day.
- (58) "Matrix" means a volume of soil equivalent to 50 percent or greater of the total volume of a horizon.
- (59) "Mean high-water mark" means, for coastal waters having six inches or more lunar tidal influence, the average height of the high-water over a 19-year period as may be ascertained from National Ocean Survey, U.S. Army Corps of Engineers tide stations data, or as otherwise determined under the provisions of the Coastal Area Management Act. The highest high-water mark as reported by the three agencies shall be applied.
- (60) "Media" means a solid material that can be described by shape, dimensions, surface area, void space, and application.
- (61) "Media filter" means a device that uses materials designed to treat effluent by reducing BOD_5 and removing TSS in an unsaturated environment. Biological treatment is facilitated via microbial growth on the surface of the treatment media.
- (62) "Mottle" means subordinate color of a differing Munsell color system notation in a soil horizon.
- (63) "Mountain region" means Alleghany, Ashe, Avery, Buncombe, Cherokee, Clay, Graham, Haywood, Henderson, Jackson, Macon, Madison, McDowell, Mitchell, Swain, Transylvania, Watauga, and Yancey counties.

- (64) "Naturally occurring soil" means soil formed in place due to natural formation processes that is unaltered by filling, removal, or other artificial modification other than tillage.
- (65) "NEMA 4X" means an enclosure for an electrical control panel or junction box that meets standards for protection of equipment due to the ingress of water, including rain and hose-directed water, and an additional level of protection against corrosion, as set forth in NEMA Standard 250.
- (66) "NSF/ANSI 40 systems" means individual RWTS that are approved and listed in accordance with the standards adopted by NSF International for Class I residential wastewater treatment systems under NSF/ANSI Standard 40 and approved for use in accordance with G.S. 130A-342 and the rules of this Subchapter.
- (67) "Non-ground absorption system" means a system for waste treatment designed not to discharge to the soil, land surface, or surface waters, including approved vault privies, incinerating toilets, mechanical toilets, composting toilets, chemical toilets, and recycling systems.
- (68) "Normal water level" means the term as defined in 15A NCAC 02B .0610(28).
- (69) "Off-site system" means a wastewater system where any system component is located on property other than the lot where the facility is located.
- (70) "Ordinary high-water mark" means the line on the shore established by the fluctuations of water and indicated by physical characteristics such as: a natural line impressed on the bank; shelving; changes in the character of soil; destruction of terrestrial vegetation; or the presence of litter and debris.
- (71) "Organic soils" means those organic mucks and peats consisting of more than 20 percent organic matter, by dry weight, and greater than or equal to 18 inches in thickness.
- (72) "Owner" means a person holding legal title to the facility, wastewater system, or property or his or her representative. The owner's representative is a person who holds power of attorney to act on an owner's behalf or an agent designated by letter or contract to act on the owner's behalf.
- (73) "Parallel distribution" means the distribution of effluent that proportionally loads multiple sections of a dispersal field at one time.
- (74) "Parent material" means the mineral and organic matter that is in its present position through rock decomposition or deposition by water, wind, or gravity.
- (75) "Ped" means a unit of soil structure, such as blocky, granular, prismatic, or platy formed by natural processes.
- (76) "Perched water table" means a zone of saturation held above the main groundwater body by a less permeable layer, impermeable rock, or sediment, which may or may not exhibit redoximorphic features.
- (77) "Person" means any individual, firm, association, organization, partnership, business trust, corporation, company, or unit of local government.
- (78) "Piedmont region" means Alamance, Alexander, Anson, Burke, Cabarrus, Caldwell, Caswell, Catawba, Chatham, Cleveland, Davidson, Davie, Durham, Forsyth, Franklin, Gaston, Granville, Guilford, Iredell, Lee, Lincoln, Mecklenburg, Montgomery, Moore, Nash, Orange, Person, Polk, Randolph, Rockingham, Rowan, Rutherford, Stanly, Stokes, Surry, Union, Vance, Wake, Warren, Wilkes, and Yadkin counties.
- (79) "Pressure dispersal" means a system utilizing an effluent pump or siphon to distribute effluent uniformly to the infiltrative surface in the dispersal field through a pressurized pipe network.
- (80) "Pressure dosed gravity distribution" means pressure delivery of effluent to a manifold, distribution box, or other splitter with subsequent gravity distribution within one or more laterals to the infiltrative surface.
- (81) "Public management entity" means a public entity legally authorized to operate and maintain wastewater systems, including a city pursuant to G.S. 160A, Article 16, a county pursuant to G.S. 153A, Article 15, an interlocal contract pursuant to G.S. 160A, Article 20, a joint management agency pursuant to G.S. 160A, Article 20, a county service district pursuant to G.S. 153A, Article 16, a county water and sewer district pursuant to G.S. 162A, Article 6, a sanitary district pursuant to G.S. 130A, Article 2, Part 2, a water and sewer authority pursuant to G.S. 162A, Article 1, a metropolitan water district pursuant to G.S. 162A, Article 4, a metropolitan sewerage district pursuant to G.S. 162A, Article 5A, a public utility pursuant to G.S. 62, Article 1, a county or district health department pursuant to G.S. 130A, Article 2, or any other public entity legally authorized to operate and maintain wastewater systems.
- (82) "Raw sewage lift stations" means a dosing system that is designed to move untreated sewage from a lower elevation to a higher elevation. Raw sewage lift stations are installed prior to any wastewater treatment.
- (83) "RCW systems" means advanced pretreatment systems approved by the Department in accordance with Section .1700 of this Subchapter that meet RCW effluent standards in Rule .1002 of this Subchapter.

- (84) "Redoximorphic features" means a color pattern of a horizon due to a depletion or concentration of pigment compared to the matrix color, formed by oxidation and reduction of Fe coupled with its removal, translocation, or accrual, or a soil matrix color controlled by the presence of Fe⁺². Redox depletions are a type of redoximorphic feature.
- (85) "Repair area" means an area that has been classified suitable consistent with the Rules in this Subchapter that is reserved for the extension, alteration, wastewater system relocation, or replacement of part or all of the initial wastewater system. The repair area shall be available to be used in the event of a malfunction or if a wastewater system is partially or totally destroyed.
- (86) "Residential Wastewater Treatment Systems" means approved individual advanced pretreatment systems that are covered under standards of NSF International, in accordance with G.S. 130A-342 and applicable Rules in this Subchapter.
- (87) "Restrictive horizon" means a soil horizon that is capable of perching groundwater or effluent and that is brittle and strongly compacted or strongly cemented with iron, aluminum, silica, organic matter, or other compounds. Restrictive horizons may occur as fragipans, iron pans, or organic pans, and are recognized by their resistance in excavation or in using a soil auger.
- (88) "Rock" means the body of consolidated or partially consolidated material composed of minerals at or below the land surface. Rock includes bedrock and partially weathered rock that is hard and cannot be dug with hand tools. The upper boundary of rock is saprolite, soil, or the land surface.
- (89) "Saprolite" means the body of porous material formed in place by weathering of rock that has a massive, rock-controlled structure and retains the arrangement of minerals of its parent rock in a minimum of 50 percent of its volume. Saprolite can be dug with hand tools. The lower limit of saprolite is rock and its upper limit is soil or the land surface.
- (90) "Septic tank" means a structurally sound, water-tight, covered receptacle, approved in accordance with Section .1400 of this Subchapter. A septic tank is designed for primary treatment of wastewater and is constructed to:
- (a) receive the discharge of wastewater from a building;
 - (b) separate settleable and floating solids from the liquid;
 - (c) digest organic matter by anaerobic bacterial action;
 - (d) store digested solids through a period of detention; and
 - (e) allow effluent to discharge for additional treatment and final dispersal.
- (91) "Septic tank effluent pump" means a collection system that uses a septic tank to separate solids and incorporates a pump vault, pump, and associated devices to convey effluent under pressure to a subsequent component.
- (92) "Sequential distribution" means the distribution method in which effluent is loaded into one trench and fills it to a predetermined level before passing through a drop box or relief device to the succeeding trench at a lower elevation. All trenches are fed from the same side.
- (93) "Setback" means the minimum horizontal separation distance between the wastewater system and features listed in Section .0600 of this Subchapter.
- (94) "Settling tank" means a septic tank designed for use in conjunction with a RWTS. A settling tank is not required to meet the design requirements of a septic tank.
- (95) "Serial distribution" means the distribution method in which effluent is loaded into one trench and fills it to a predetermined level before passing through a pipe to the succeeding trench at a lower elevation.
- (96) "Site" means the area in which the wastewater system is located, including the repair area.
- (97) "Soil" means the naturally occurring body of unconsolidated mineral and organic materials on the land surface. Soil is composed of sand-, silt-, and clay-sized particles that are mixed with varying amounts of larger fragments and some organic material. Soil contains less than 50 percent of its volume as rock, saprolite, or coarse-earth fraction. The coarse-earth fraction are mineral particles greater than 2.0 millimeters. The upper limit of the soil is the land surface, and its lower limit is rock, saprolite, or other parent materials.
- (98) "Soil consistence" means the degree and kind of cohesion and adhesion that a soil exhibits.
- (99) "Soil series" means an official series name established by USDA-NRCS.
- (100) "Soil structure" means the arrangement of primary soil particles into compound particles, peds, or clusters that are separated by natural planes of weakness from adjoining units.
- (101) "Soil textural classes" means soil classification based upon size distribution of mineral particles in the fine-earth fraction less than two millimeters in diameter. The fine-earth fraction includes sand, silt, and clay

particles. Sand particles are 0.05 – 2.0 mm in size, silt particles are 0.002 – 0.05 mm in size, and clay particles are less than 0.002 mm in size.

- (102) "Stream" means a body of concentrated flowing water in a natural low area or natural or manmade channel on the land surface. This includes ephemeral, intermittent, and perennial streams as those terms are defined at 15A NCAC 02B .0233(2)(d), (g), and (i), respectively, as well as streams which have been modified by channeling, culvert installation, or relocation.
- (103) "Structurally sound" means a tank that has been installed in accordance with the tank manufacturer's requirements and is able to withstand a minimum uniform live loading of 150 pounds per square foot in addition to all loads to which an underground tank is normally subjected, such as dead weight of the material and soil over the tank, active soil pressure on tank walls, and the uplifting force of groundwater.
- (104) "Surface water diversion" means a natural or constructed drainage feature used to divert surface water, collect runoff, and direct it to an effective outlet. Surface water diversions include waterways, berms, swales, and ditches. Surface water diversions are a type of artificial drainage.
- (105) "TS-I systems" means advanced pretreatment systems approved by the Department in accordance with Section .1700 of this Subchapter that meet TS-I effluent standards in Table XXV of Rule .1201(a) of this Subchapter.
- (106) "TS-II systems" means advanced pretreatment systems approved by the Department in accordance with Section .1700 of this Subchapter that meet TS-II effluent standards in Table XXV of Rule .1201(a) of this Subchapter.
- (107) "Telemetry" means the ability to contact by phone, email, or another electronic medium. The telemetry unit shall continue alarm notifications to the designated party until the alarm condition is remedied or the telemetry unit is physically turned off.
- (108) "Test system" means the dispersal system proposed for accepted status as part of a survey protocol identified in Rule .1706 of this Subchapter.
- (109) "Third-party" means a person or entity engaged in testing or evaluation that may be compensated for their work product that is independent of the parties for whom testing or evaluation is performed and does not otherwise benefit regardless of the outcome. The third-party person or entity has knowledge of the subject area based upon relevant training and experience.
- (110) "Timed dosing" means a configuration in which a specific volume of effluent is delivered to a component based upon a prescribed interval, regardless of facility water use variation over time.
- (111) "Treatment media" means the media used for physical, chemical, and biological treatment in a wastewater treatment component.
- (112) "Trench" means an excavation with a width less than or equal to three feet containing dispersal media and one or more laterals.
- (113) "Underground utility" means any underground line, system, or infrastructure used for producing, storing, conveying, transmitting, identifying, locating, or distributing communication, electricity, gas, petroleum or petroleum products, hazardous liquids, water, steam, or sewage.
- (114) "Unstable slopes" means areas showing indications of mass downslope movement such as debris flows, landslides, and rock falls.
- (115) "Vertical separation" means the depth beneath the dispersal field infiltrative surface to a LC.
- (116) "Warming kitchen" means a kitchen that does not meet the requirements of North Carolina Food Code, Chapters 4-1 and 4-2.
- (117) "Water main standards" means design criteria for pipe and pipe joints and associated installation procedures used in potable water systems and that have been approved by North Carolina DEQ Public Water Supply Section in accordance with 15A NCAC 18C.
- (118) "Watertight" means that no water moves into or out of the structure or device, except through designated inlets and outlets. Watertight tanks shall demonstrate compliance with the leak testing requirements in Rule .0805 of this Subchapter.

History Note: Authority G.S. 130A-335(e) and (f);
Eff. January 1, 2024.

SECTION .0200 – PERMITS

15A NCAC 18E .0201 GENERAL

(a) All wastewater in any facility containing water-using fixtures connected to a water supply source shall discharge to a wastewater system approved by the Department in accordance with the Rules of this Subchapter.

(b) In order for a wastewater system to be approved:

- (1) the applicant shall submit an application in accordance with Rule .0202 of this Section;
- (2) an IP shall be issued in accordance with Rule .0203 of this Section;
- (3) a CA shall be issued in accordance with Rule .0204 of this Section; and
- (4) the authorized agent shall inspect the installation and issue an OP in accordance with Rule .0205 of this Section.

(c) Upon issuance of the CA, the applicant may obtain a building permit in accordance with G.S. 130A-338.

(d) Notwithstanding Paragraph (b) of this Rule, an applicant may choose to have a wastewater system approved under the provisions of G.S. 130A-336.1 or G.S. 130A-336.2 and in accordance with Rule .0207 of this Section.

(e) All documentation related to a wastewater system shall be maintained by the LHD in the county where the permit is issued and the property taxes are paid.

(f) Holding tanks shall not be considered an acceptable wastewater treatment and dispersal system. An IP shall not be issued for a holding tank for new construction or to serve a permanent facility.

*History Note: Authority G.S. 130A-335; 130A-336; 130A-336.1; 130A-336.2; 130A-337; 130A-338;
Eff. January 1, 2024.*

15A NCAC 18E .0202 APPLICATION

(a) An application for an IP, CA, and existing system authorization shall be submitted to the LHD, and approved in accordance with these Rules, for each site prior to the construction, location, or relocation of a residence, place of business, or place of public assembly.

(b) Prior to the repair of a wastewater system, an application for a CA shall be submitted to the LHD.

(c) A pending application for an IP, CA, or existing system authorization for which the LHD is awaiting action by the applicant shall expire 12 months from the date of application.

(d) When an IP, CA, or existing system authorization expires or is revoked, or an application for an IP or CA expires, a new application is required.

(e) For a Type V or VI system as specified in Table XXXII of Rule .1301(b) of this Subchapter, a new application shall be submitted at least 30 days prior to the OP expiring.

(f) An applicant may choose to contract with an LSS to conduct a soil and site evaluation in accordance with G.S. 130A-335(a2). The soil and site evaluation shall be submitted to the LHD as part of the application process.

(g) The application for an IP shall contain the following information:

- (1) name, mailing address, and phone number of the applicant and owner;
- (2) type of permit requested:
 - (A) new;
 - (B) change of use;
 - (C) expansion or increase in DDF; or
 - (D) wastewater system relocation;
- (3) site plan or plat indicating the locations of the following:
 - (A) existing and proposed facilities, structures, appurtenances, and wastewater systems;
 - (B) proposed wastewater system showing setbacks to property line(s) or other fixed reference point(s);
 - (C) existing and proposed vehicular traffic areas;
 - (D) existing and proposed water supplies, wells, springs, and water lines; and
 - (E) surface water, drainage features, and all existing and proposed artificial drainage, as applicable;
- (4) location, parcel identification number, other property identification, 911 address if known, acreage, and general directions to the property;
- (5) description of existing and proposed facilities and wastewater systems;
- (6) information needed to determine DDF and effluent strength of the facility(s) served, including number and function of individual design units, number of bedrooms and occupants per bedroom, or number of occupants;
- (7) whether wastewater other than DSE will be generated;
- (8) notification if the property includes, or is subject to, any of the following:
 - (A) previously identified jurisdictional wetlands;

- (B) existing or proposed easements, rights-of-way, encroachments, or other areas subject to legal restrictions; or
 - (C) approval by other public agencies; and
- (9) signature of applicant and owner.
- (h) The application for a CA shall contain:
 - (1) the information required in Paragraph (g) of this Rule. A site plan or plat shall not be required with the application to repair a permitted wastewater system when the repairs will be accomplished on property owned and controlled by the owner and for which property lines are identifiable in the field;
 - (2) identification of the proposed use of a grinder pump or sewage pump; and
 - (3) the type of the proposed wastewater system specified by the applicant.
- (i) The application for an existing system authorization shall contain:
 - (1) name, mailing address, and phone number of the applicant and owner;
 - (2) a site plan or plat indicating the locations of the existing and proposed facilities, existing wastewater systems and repair areas, existing and proposed water supplies, easements, rights-of-way, encroachments, artificial drainage, and all appurtenances;
 - (3) location, parcel identification number, other property identification, 911 address if known, acreage, and directions to the property;
 - (4) for reconnections, information needed to determine DDF of the facility served, including number and function of individual design units, number of bedrooms and occupants per bedroom, or number of occupants; and
 - (5) signature of applicant and owner(s).
- (j) Submittal of a signed application shall constitute right of entry to the property by an authorized agent.

History Note: Authority G.S. 130A-335; 130A-336; 130A-337; 130A-338;
Eff. January 1, 2024.

15A NCAC 18E .0203 IMPROVEMENT PERMIT

- (a) Upon receipt of a complete application for an IP, an authorized agent shall evaluate the site to determine whether the site is suitable or unsuitable for the installation of a wastewater system in accordance with Section .0500 of this Subchapter. If the site is classified suitable, an IP shall be issued in accordance with this Subchapter. The authorized agent shall prepare dated, written documentation of the soil and site conditions required to be evaluated in Section .0500 of this Subchapter.
- (b) When the site is classified suitable an authorized agent shall issue an IP for the site that includes the items contained in G.S. 130A-336(a)(1) through (6) and the following information:
 - (1) DDF, number of bedrooms, maximum number of occupants or people served, and wastewater strength in accordance with Section .0400 of this Subchapter;
 - (2) required effluent standard - DSE, HSE, NSF/ANSI 40, TS-I, TS-II, or RCW in accordance with Table III of Rule .0402(a), Table XXV of Rule .1201(a), or Rule .1002, of this Subchapter;
 - (3) all applicable setbacks and requirements in accordance with Section .0600 of this Subchapter;
 - (4) description of the facility, structures, vehicular traffic areas, and other proposed improvements;
 - (5) description of existing and proposed public or private water supplies, including private drinking water wells and springs and associated water lines;
 - (6) a site plan or plat as defined in G.S. 130A-334 showing the existing and proposed property lines with dimensions, the location of the facility and appurtenances, the site for the proposed wastewater system and repair area, and the location of water supplies and surface water;
 - (7) the proposed initial wastewater system and repair system areas and types, including LTARs for each system; and
 - (8) permit conditions, such as site-specific site modifications, installation requirements, maintenance of the groundwater lowering system, etc.
- (c) When the site is classified unsuitable, a signed, written report shall be provided to the applicant describing the unsuitable site characteristics and citing the applicable rule(s). If modifications or alternatives are available to support site reclassification to suitable this information shall be included in the report.
- (d) The period of validity for the permit in accordance with G.S. 130A-335(f) shall be stated on the IP.
- (e) The IP shall be transferable subject to the conditions set forth in G.S. 130A-336(a).
- (f) An IP shall be suspended or revoked if:
 - (1) the information submitted in the application is found to be incomplete, false, or incorrect;

- (2) the site is altered and the permitted system cannot be installed or operated as permitted;
- (3) conditions of the IP or the Rules of this Subchapter cannot be met;
- (4) a new IP is issued for the same design unit on the same property; or
- (5) an NOI is issued in accordance with G.S. 130A-336.1(b) or G.S. 130A-336.2(b) for the same design unit on the same property.

(g) An IP shall be applicable to both initial and repair dispersal field areas identified and approved on the IP and only a CA shall be issued if wastewater system repairs are necessary.

*History Note: Authority G.S. 130A-335; 130A-336;
Eff. January 1, 2024.*

15A NCAC 18E .0204 CONSTRUCTION AUTHORIZATION

- (a) The applicant shall obtain a CA after an IP has been issued and prior to the construction, location, or relocation of a facility, or the construction or repair of a wastewater system.
- (b) Conditions of an IP shall be completed prior to the issuance of a CA. A CA shall be issued by an authorized agent for wastewater system installation when it is found that the IP conditions and Rules of this Subchapter are met.
- (c) A CA may be issued at the same time as the IP if no conditions on the IP are required to be completed prior to CA issuance.
- (d) Any necessary easements, rights-of-way, or encroachment agreements shall be obtained prior to the issuance of a CA.
- (e) The CA shall specify the following:
 - (1) all information required in Rule .0203(b) of this Section;
 - (2) the initial wastewater system type and layout, location of all initial wastewater system components, and design details and specifications for the following, as applicable:
 - (A) tanks;
 - (B) collection sewers;
 - (C) pump requirements;
 - (D) advanced pretreatment;
 - (E) distribution devices; and
 - (F) trench width, length, and depth on the downslope side of the trench;
 - (3) the nature of the Management Entity required and the minimum operation and maintenance requirements in accordance with Section .1300 of this Subchapter; and
 - (4) permit conditions, such as site-specific installation requirements, maintenance of the groundwater lowering system, etc.
- (f) A CA shall be issued for each wastewater system serving a facility. Separate CAs may be issued for individual components. A building permit shall not be issued for a design unit until CAs for all components of the wastewater system serving that design unit have been issued.
- (g) Prior to the issuance of a CA for a system where all or part of the system will be under common or joint control, a draft multi-party agreement between the developer and an incorporated owners' association shall be submitted to and its conditions approved by the LHD. The draft multi-party agreement shall include and address the following, as applicable:
 - (1) ownership;
 - (2) transfer of ownership;
 - (3) maintenance;
 - (4) operation;
 - (5) wastewater system repairs; and
 - (6) designation of fiscal responsibility for the continued satisfactory performance of the wastewater system and repair or replacement of collection, treatment, dispersal, and other components.
- (h) Systems or components under common or joint control include the following:
 - (1) wastewater system serving a condominium or other multiple-ownership development; or
 - (2) off-site systems serving two or more facilities where any components are under common or joint ownership or control.
- (i) The CA shall be valid for a period equal to the period of validity of the IP and stated on the permit.
- (j) The CA shall be transferable subject to the conditions set forth in G.S. 130A-336(a).
- (k) A CA shall be suspended or revoked if:
 - (1) the information submitted in the application is found to be incomplete, false, or incorrect;
 - (2) the site is altered and the permitted system cannot be installed or operated as permitted;

- (3) conditions of the CA or the Rules of this Subchapter cannot be met;
- (4) a new CA is issued for the same design unit on the same property; or
- (5) an NOI is issued in accordance with G.S. 130A-336.1(b) or G.S. 130A-336.2(b) for the same design unit on the same property.

History Note: Authority G.S. 130A-335; 130A-336; 130A-338;
Eff. January 1, 2024.

15A NCAC 18E .0205 OPERATION PERMIT

- (a) The applicant shall obtain an OP after the wastewater system has been installed or repaired and the authorized agent has inspected the system. The inspection shall occur prior to the system being covered with soil. The authorized agent shall determine that the system has been installed in accordance with this Subchapter and any conditions of the IP and CA.
- (b) During the wastewater system inspection, the authorized agent shall notify the installer of items that do not meet the rules of this Subchapter and conditions described in the IP and CA. Corrections shall be made to bring the system into compliance with this Subchapter by the installer. If corrections cannot be made, an authorized agent shall not issue an OP, the system shall not be placed into use, and the authorized agent making the determination shall prepare a written report referencing deficiencies in the system installation, citing the applicable rule(s) and IP and CA conditions, and include a letter of Intent to Suspend or Revoke the IP and CA or the CA. A copy of the report shall be provided to the applicant and the installer.
- (c) The OP shall include:
 - (1) the initial system and designated repair system type in accordance with Table XXXII of Rule .1301(b) of this Subchapter and the unique code assigned under Rule .1713(10) of this Subchapter;
 - (2) facility description including number of bedrooms and maximum occupancy, maximum number of occupants or people served, DDF, and wastewater strength;
 - (3) a site plan or plat as defined in G.S. 130A-334 showing the property lines with dimensions, the location of the facility and appurtenances, the site for the wastewater system and repair area including location and dimensions, and the location of water supplies and surface water;
 - (4) dispersal field design including trench or bed length, width, depth, and location;
 - (5) the tank(s) location, capacity, and ID numbers;
 - (6) groundwater monitoring well locations, sampling frequency, and characteristics sampled, as applicable;
 - (7) conditions for system performance, operation, monitoring, influent and effluent sampling requirements, and reporting, including the requirement for a contract with a Management Entity, as applicable;
 - (8) a statement specifying that best professional judgement was used to repair the malfunctioning wastewater system, if applicable; and
 - (9) approved engineered plans, specifications, and record drawings if required in Rule .0303(g) of this Subchapter.
- (d) Prior to the issuance of an OP for a system requiring a multi-party agreement, the multi-party agreement shall be executed between the developer and an incorporated owners' association and filed with the local register of deeds.
- (e) When a wastewater system is required to be designed by an authorized designer or PE, the PE or authorized designer shall provide a written statement to the applicant and authorized agent specifying that construction is complete and in accordance with approved plans, specifications, and modifications. The written statement shall be provided prior to issuance of the OP.
- (f) An OP shall be valid and remain in effect for a system provided:
 - (1) wastewater strength and DDF remain unchanged;
 - (2) the system is operated and maintained in accordance with Section .1300 of this Subchapter;
 - (3) no malfunction is found as defined in Rule .1303(a)(2) of this Subchapter;
 - (4) the system has not been abandoned in accordance with Rule .1307 of this Subchapter;
 - (5) the system complies with the condition(s) of the OP; and
 - (6) the OP has not expired or been revoked.
- (g) For a Type V or VI system as specified in Table XXXII of Rule .1301(b) of this Subchapter, the OP shall expire five years after being issued.
- (h) An authorized agent shall modify, suspend, or revoke the OP or seek other remedies under G.S. 130A, Article 2, if it is determined that the system is not being operated and maintained in accordance with Section .1300 of this Subchapter and all conditions imposed by the OP.
- (i) When an OP expires in accordance with Paragraph (g) of this Rule a new application shall be required prior to issuance of a new OP to confirm that the previously approved facility has not changed and that the system remains in compliance with permit conditions.

- (j) When an OP is revoked due to facility non-compliance, such as additional wastewater flow or increased wastewater strength, a new application shall be required prior to evaluation for a new IP, CA, and OP.
- (k) An OP shall be revoked prior to an ATO being issued for the same design unit on the same property.

History Note: Authority G.S. 130A-335; 130A-337; 130A-338;
Eff. January 1, 2024.

15A NCAC 18E .0206 EXISTING SYSTEM APPROVALS FOR RECONNECTIONS AND PROPERTY ADDITIONS

- (a) Approval by an authorized agent shall be issued prior to any of the following:
- (1) a facility being reconnected to an existing system; or
 - (2) other site modifications as described in Paragraph (c) of this Rule.
- (b) Approvals for reconnecting a facility shall be issued by an authorized agent upon determination of the following:
- (1) the site complies with its OP or the wastewater system was in use prior to July 1, 1977;
 - (2) there is no current or past uncorrected malfunction of the system as described in Rule .1303(a)(2) of this Subchapter;
 - (3) the DDF and wastewater strength for the proposed facility do not exceed that of the existing system;
 - (4) the facility meets the setbacks in Section .0600 of this Subchapter; and
 - (5) the existing system is being operated and maintained as specified in G.S. 130A, Article 11, this Subchapter, and permit conditions.
- (c) Prior to construction, relocation of a structure, the expansion of an existing facility's footprint, or other site modifications that require the issuance of a building permit, but that do not increase DDF or wastewater strength, an approval shall be issued by an authorized agent upon determination of the compliance of the proposed structure with setback requirements in Section .0600 of this Subchapter.
- (d) For approvals issued in accordance with this Rule the authorized agent shall provide written documentation of the approval to the applicant. The written documentation of the approval shall describe the site modification, system use, DDF, wastewater strength, number of bedrooms, and number of occupants, and shall include a site plan showing the location, dimensions, and setbacks of existing and proposed structures to the existing system and repair area.
- (e) When an approval cannot be issued in accordance with this Rule, a signed, written report shall be provided by the authorized agent to the applicant describing the reasons for the denial, citing the applicable rule(s), and including notice of the right to appeal under G.S. 130A-24 and 150B.

History Note: Authority G.S. 130A-335; 130A-337(c) and (d);
Eff. January 1, 2024.

15A NCAC 18E .0207 ALTERNATIVE WASTEWATER SYSTEM PERMITTING OPTIONS

- (a) An applicant may choose to use an EOP for wastewater systems in accordance with G.S. 130A-336.1 or an AOWE in accordance with G.S. 130A-336.2. The EOP shall be used if the wastewater system design requires a PE in accordance with Rule .0303(a) of this Subchapter.
- (b) Prior to the submittal of an NOI for an EOP or an AOWE system as required by G.S. 130A-336.1(b) or G.S. 130A-336.2(b), respectively, a soil and site evaluation shall be conducted in accordance these Statutes and the Rules of this Subchapter.
- (c) The NOI for an EOP or AOWE system shall be submitted to the LHD in the county where the facility is located by the applicant, owner, PE authorized as the legal representative of the owner, or AOWE authorized as the legal representative of the owner. The NOI shall be submitted on the common form for EOP or the common form for AOWE provided by the Department. The common forms are available by accessing the Department's website at <https://ehs.ncpublichealth.com/oswp/>. The forms shall include all the information specified in G.S. 130A-336.1(b) or 130A-336.2(b) and the following:
- (1) the LSS's, and LG's name, license number, address, e-mail address, and telephone number, as applicable. The installer's name, license number, address, e-mail address, and telephone number shall be provided on the EOP common form;
 - (2) information required in Rule .0202 of this Section for IP and CA applications;
 - (3) identification and location on the site plan of existing or proposed potable water supplies, geothermal heating and cooling wells, and groundwater monitoring wells for the proposed site. The PE or AOWE shall reference any existing permit issued for a private drinking water well, public water system as defined in

G.S. 130A-313(10), or a wastewater system on both the subject and adjoining properties to provide documentation of compliance with setback requirements in Section .0600 of this Subchapter; and

- (4) proof of insurance for the PE, LSS, and LG, as applicable. Proof of insurance for the installer shall be provided with the NOI.

(d) The PE or AOWE design shall incorporate findings and recommendations on soil and site conditions, limitations, site modifications, and geologic and hydrogeologic conditions specified by the LSS or LG, as applicable, and in accordance with G.S. 130A-336.1(b)(8) or G.S. 130A-336.2(b)(9), respectively. For an EOP, when the PE chooses to employ pretreatment technologies not approved in this State, the engineering report shall specify the proposed technology and the associated siting, installation, operation, maintenance, and monitoring requirements, including written manufacturer's endorsement of the proposed use.

(e) The PE or AOWE shall allow for the use of Accepted Systems in accordance with G.S. 130A-336.1(e)(5) or G.S. 130A-336.2(d)(5), respectively.

(f) No building permit for construction, location, or relocation shall be issued until after a decision of completeness of the NOI is made by the LHD. If the LHD fails to act within 15 business days for an EOP or within five business days for an AOWE, the common form is deemed complete.

(g) If there are any changes in the site plan that can impact the wastewater system, such as moving the house or driveway, site alterations, or if the applicant chooses to change the DDF or the wastewater strength prior to wastewater system construction, a new NOI shall be submitted to the LHD. The applicant shall request in writing that the PE or AOWE invalidate the prior NOI with a signed and sealed letter sent to the applicant and LHD.

(h) Construction of the wastewater system shall not commence until the system design plans and specifications have been provided to the installer and the signed and dated statement by the installer is provided to the applicant as required by G.S. 130A-336.1(e)(4)(b) or G.S. 130A-336.2(e)(3). The applicant shall be responsible for preventing modifications or alterations of the site for the wastewater system and the system repair area before, during, and after any construction activities for the facility, unless approved by the licensed professionals.

(i) Prior to the LHD providing written confirmation on the common form for the ATO completeness, the applicant, owner, PE, or AOWE shall submit the following to the LHD:

- (1) documentation that all reporting requirements identified in G.S. 130A-336.1(l) or 130A-336.2(l) have been met;
- (2) information set forth in Rule .0301(d) of this Subchapter;
- (3) system start-up documentation, including applicable baseline operating parameters for all components;
- (4) documentation by the applicant that all necessary legal agreements, including easements, encroachments, multi-party agreements, and other documents have been prepared, executed, and recorded in accordance with Rule .0301(b) and (c) of this Subchapter;
- (5) installer's name, license number, address, e-mail address, telephone number, and proof of insurance for AOWE only; and
- (6) record drawings.

(j) The owner of a wastewater system approved in accordance with this Rule shall be responsible for maintaining the wastewater system in accordance with the written operation and management program required in G.S. 130A-336.1(i)(1) or 130A-336.2(i)(1) and Section .1300 of this Subchapter.

(k) For repair of a malfunctioning EOP or AOWE system, an NOI shall be submitted in accordance with this Rule. Rule .1306 of this Subchapter shall be followed for repair of a malfunctioning system. The Management Entity shall notify the LHD within 48 hours of the system malfunction.

(l) The applicant of an EOP or AOWE system who proposes to change the use of the facility shall contact the licensed professionals on the NOI to determine whether the current system would continue to comply with the Rules of this Subchapter for the proposed change of use. The licensed professionals shall determine what, if any, modifications shall be necessary for the wastewater system to continue to comply with the Rules of this Subchapter following the proposed change of use. An NOI reflecting the change of use and any required modifications to the system shall be submitted to the LHD. The permitting process set forth in this Rule shall be followed.

(m) For EOP and AOWE systems, the LHD shall:

- (1) file all EOP and AOWE documentation consistent with current permit filing procedures at the LHD;
- (2) revoke an IP or CA for a wastewater system prior to issuing written confirmation of the NOI for the same design unit on the same property, if applicable;
- (3) revoke an OP for a wastewater system prior to issuing written confirmation of an ATO for the same design unit on the same property, if applicable;

- (4) submit a copy to the Department of the common form indicating written confirmation of NOI and ATO completeness;
 - (5) participate in a post-construction conference in accordance with G.S. 130A-336.1(j) or G.S. 130A-336.2(j);
 - (6) review the performance and operation reports submitted and perform on-site compliance inspections of the wastewater system in accordance with Rule .1305(c) and Table XXXII of Rule .1301(b) of this Subchapter;
 - (7) investigate complaints regarding EOP and AOWE systems;
 - (8) issue a NOV for systems determined to be malfunctioning in accordance with Rule .1303(a)(2) of this Subchapter. The LHD shall direct the owner to contact the PE, LSS, LG, and installer, as applicable, for determination of the reason of the malfunction and development of an NOI for repairs; and
 - (9) require an owner receiving a NOV to pump and haul sewage in accordance with Rule .1306 of this Subchapter.
- (n) The applicant may contract with different licensed professionals than those originally identified on the initial NOI to complete an EOP or AOWE project. When the applicant contracts with different licensed professionals, a revised NOI reflecting the new licensed professionals and proof of insurance shall be submitted to the LHD.
- (o) The applicant and all licensed professionals shall comply with all applicable federal, State, and local laws, rules, and ordinances.

History Note: Authority G.S. 130A-335; 130A-336.1; 130A-336.2; S.L. 2019-151, s. 14;
Eff. January 1, 2024.

SECTION .0300 - RESPONSIBILITIES

15A NCAC 18E .0301 OWNERS

- (a) The owner of a wastewater system shall:
- (1) comply with G.S. 130A, Article 11, the rules of this Subchapter, and permit conditions regarding wastewater system location, including repair area;
 - (2) identify property lines and fixed reference points in the field prior to the LHD site evaluation;
 - (3) make the site accessible for the site evaluation described in Rule .0501 of this Subchapter;
 - (4) field stake or otherwise mark the proposed facility location and all associated appurtenances, such as vehicular traffic areas, garage, swimming pool, shed, entryways, decks, etc.;
 - (5) provide for pits with excavated steps or a ramp in the pit that allow for ingress and egress when necessary for a soil and site evaluation at the site as determined by the LHD or the Department in accordance with Rule .0501 of this Subchapter;
 - (6) provide for system operation, maintenance, monitoring, and reporting, including access for system maintenance;
 - (7) maintain artificial drainage systems, as applicable;
 - (8) prevent encroachment on the initial wastewater system and repair area by utilities, structures, vehicular traffic areas, etc.;
 - (9) provide documentation supporting an exemption from the minimum setback requirements in Rule .0601(a) of this Subchapter to the LHD, as applicable;
 - (10) establish and maintain site-specific vegetation over the dispersal field and repair area; and
 - (11) repair a malfunctioning system as necessary in accordance with this Subchapter.
- (b) The entire initial wastewater system and repair area shall be on property owned or controlled by the wastewater system owner. An easement or encroachment agreement shall be required for the permitting of any of the following installations:
- (1) any part of the wastewater system is located in a common area with other wastewater systems;
 - (2) any part of the wastewater system is located in an area with multiple or third-party ownership or control;
 - (3) any part of the wastewater system is proposed to be in an off-site area; or
 - (4) any part of the wastewater system and the facility are located on different lots or tracts of land and cross a property line or right-of-way.
- (c) Any necessary easements, rights-of-way, or encroachment agreements shall be obtained prior to the issuance of a CA. The easement, right-of-way, or encroachment agreement shall meet the following conditions:
- (1) be appurtenant to specifically described property and run with the land;
 - (2) not be affected by change of ownership or control;
 - (3) remain valid for as long as the wastewater system is required for the facility that it is designed to serve;

- (4) include a description of the uses being granted and shall include ingress, egress, and regress, system installation, operation, maintenance, monitoring, and repairs and any other activity required to remain in compliance with this Subchapter, including that the easement, right-of-way, or encroachment remain free of structures, landscaping, or any other activities that would interfere with the use of the easement or encroachment for its intended purpose;
 - (5) specify in a deed by metes and bounds description the area or site required for the wastewater system and repair area, including collection sewers, tanks, raw sewage lift stations, distribution devices, and dispersal fields; and
 - (6) be recorded with the register of deeds in the county where the system and facility are located.
- (d) Prior to OP issuance for a system required to be designed by an authorized designer or PE, the owner shall submit to the LHD a statement signed by the authorized designer or PE specifying that the system has been installed in accordance with the permitted design. For systems designed by a PE, the statement shall be affixed with the PE seal.

*History Note: Authority G.S. 130A-335;
Eff. January 1, 2024.*

15A NCAC 18E .0302 LOCAL HEALTH DEPARTMENT AND DEPARTMENT

- (a) The permitting of a wastewater system shall be the responsibility of agents authorized by the Department in accordance with G.S. 130A, Article 4 and 15A NCAC 01O .0100, and registered with the North Carolina State Board of Environmental Health Specialist Examiners, as required in G.S. 90A, Article 4, unless the permit is issued in accordance with G.S. 130A-336.1 or G.S. 130A-336.2 and Rule .0207 of this Subchapter.
- (b) When the wastewater system crosses county lines or the facility is in one county and the wastewater system is in another county, the LHD in the county that assesses property taxes on the facility shall implement the requirements of this Subchapter.
- (c) The LHD shall issue an NOV to the owner in the following situations:
 - (1) the wastewater system is malfunctioning in accordance with Rule .1303(a)(2) of this Subchapter;
 - (2) the wastewater system creates or has created a public health hazard or nuisance by effluent surfacing, or effluent discharging into groundwater or surface waters;
 - (3) the wastewater system is partially or totally destroyed, such as components that are crushed, broken, damaged, or otherwise rendered unusable or ineffective so that the component will not function as designed;
 - (4) the owner does not meet the ownership and control requirements of Rule .0301(b) of this Section;
 - (5) the wastewater system was installed without a permit issued in accordance with Section .0200 of this Subchapter; or
 - (6) the facility was expanded without a permit issued in accordance with Section .0200 of this Subchapter.
- (d) The authorized agent shall issue a written notice of non-compliance to the owner when the wastewater system is non-compliant with G.S. 130A, Article 11, the rules of this Subchapter, or the performance standards or conditions in the OP or ATO.
- (e) The Department shall review and approve the wastewater system, including design, layout, plans, and specifications for all wastewater systems that serve a facility with a cumulative DDF greater than 3,000 gpd, as determined in Section .0400 of this Subchapter. The Department shall also review and approve plans and specifications for the following:
 - (1) IPWW systems required by this Section to be designed by a PE unless the wastewater has been determined to not be IPWW in accordance with Rule .0303(a)(17) of this Section;
 - (2) advanced pretreatment or drip dispersal systems not previously approved by the Department; and
 - (3) any other system so specified by the authorized agent.
- (f) Department review shall not be required when the cumulative DDF for the facility is greater than 3,000 gpd as determined in Section .0400 of this Subchapter and:
 - (1) the wastewater system is made up of an individual wastewater system that serves an individual dwelling unit or several individual wastewater systems, each serving an individual dwelling unit; or
 - (2) the wastewater system meets the following criteria:
 - (A) the individual wastewater system(s) serves individual design units with a DDF less than or equal to 1,500 gpd;
 - (B) the initial and repair dispersal fields for each individual wastewater system(s) is, at a minimum, 20 feet from any other individual wastewater system;
 - (C) the total DDF for all dispersal fields is less than or equal to 1,500 gpd per acre based on the portion of the land containing the dispersal fields; and

- (D) the wastewater is not HSE as identified in Section .0400 of this Subchapter.
- (g) Department review shall not be required when a PE calculates the proposed DDF to be less than or equal to 3,000 gpd based on engineering design utilizing low-flow fixtures and low-flow technologies in accordance with Rule .0403(e) of this Subchapter. Pursuant to S.L. 2013-413, s.34, as revised by S.L. 2014-120, s.53, neither the Department nor any LHD shall be liable for a system approved or permitted in accordance with this Paragraph.
- (h) For systems that require Department review and approval, an IP shall not be issued by the LHD until the site plan or plat and system layout, including details for any proposed site modifications, are approved by the Department. A CA shall not be issued by the LHD until plans and specifications, submitted in accordance with Rule .0304 of this Section, are approved by the Department in accordance with these Rules and engineering practices.
- (i) The Department shall provide technical assistance to the LHD as needed for interpretation of this Subchapter, in accordance with the recognized principles and practices of soil science, geology, engineering, and public health.

History Note: Authority G.S. 130A-335;

Eff. January 1, 2024.

15A NCAC 18E .0303 LICENSED OR CERTIFIED PROFESSIONALS

(a) Any wastewater system that meets one or more of the following conditions shall be designed by a PE if required in G.S. 89C:

- (1) the system has a DDF greater than 3,000 gpd, as determined in Section .0400 of this Subchapter, except where the system is limited to an individual wastewater system serving an individual dwelling unit or multiple individual wastewater systems, each serving an individual dwelling unit;
- (2) the system requires advanced pretreatment or drip dispersal and is not a system approved under Sections .1500, .1600, or .1700 of this Subchapter;
- (3) pressure dispersal systems that require pumping more than 500 feet horizontally or more than 50 feet of net elevation head;
- (4) pressure dosed gravity distribution systems that require pumping more than 1,000 feet horizontally or more than 100 feet of net elevation head;
- (5) dosing systems or force mains that have one or more intermediate high points greater than five feet;
- (6) the system requires pumping downhill to a pressure dosed gravity or pressure dispersal field where the volume of the supply line that could drain to the dispersal field between doses exceeds 25 percent of the required dose volume;
- (7) pressure dispersal systems and pressure dosed gravity systems with a DDF greater than 600 gpd serving a single design unit;
- (8) pressure dispersal systems where there is more than 15 percent variation in line length. The 15 percent variation shall be measured by comparing the longest line length to the shortest line length in any dispersal field;
- (9) two or more septic tanks or advanced pretreatment units, each serving a separate design unit, and served by a common dosing tank;
- (10) a STEP system with a pressure sewer or other pressure sewer system receiving effluent from two or more pump tanks;
- (11) an adjusted DDF is proposed based on the use of low-flow fixtures or low-flow technologies in accordance with Rule .0403(e) of this Subchapter;
- (12) the system requires use of sewage pumps prior to the septic tank or other pretreatment system, except for systems governed by the North Carolina Plumbing Code or which consist of grinder pumps and associated pump basins that are approved and listed in accordance with standards adopted by NSF International;
- (13) an individual system is required to use more than one pump or siphon in a single pump tank. Examples include dual pumps as set forth in Rule .1101(b) of this Subchapter;
- (14) the system includes a collection sewer prior to the septic tank or other pretreatment system serving two or more design units, except for systems governed by the North Carolina Plumbing Code;
- (15) the wastewater system includes structures that have not been pre-engineered;
- (16) the proposed pump model is not listed by a third-party electrical testing and listing agency;
- (17) the system is designed for the collection, treatment, and dispersal of IPWW, except under the following circumstances:
 - (A) the Department has determined that the wastewater generated by the proposed facility has a pollutant strength that is lower than or equal to DSE and does not require specialized treatment or

- management. This determination shall be made based on a review of the wastewater generating process, wastewater characteristic data, and material safety data sheets, as compared to DSE; or
- (B) the Department has approved a treatment system or process and management method proposed by the facility owner that generates effluent with a pollutant strength which is lower than or equal to DSE. This approval shall be based on a review of documentation provided in conjunction with prior project specific reviews or a PIA approval. This approval shall be based on data from other facilities, management practices, and other information provided by the owner;
- (18) the wastewater system is designed for RCW;
- (19) any wastewater system designed by a licensed professional that has been determined to be within the practice of engineering in accordance with G.S. 89C-3(6) by the North Carolina Board of Examiners for Engineers and Surveyors;
- (20) any wastewater system approved in accordance with Sections .1500, .1600, and .1700 of this Subchapter that requires in the RWTS or PIA Approval that the system be designed by a PE;
- (21) any system or system component where the Rules of this Subchapter provide for an engineer to propose alternative materials, capacity determination, or performance requirements; and
- (22) any other system so specified by the LHD, based on wastewater system complexity and LHD's experience with the proposed system type.
- (b) A PE, in accordance with G.S. 89C, may propose an alternative design for a facility projected to generate HSE in accordance with Rule .0401(h) of this Subchapter. The alternative design shall include supporting documentation showing that the proposed system design will meet DSE in Table III of Rule .0402(a) of this Subchapter. The alternative design shall be reviewed and approved by the Department unless the system has been approved in accordance with Section .1700 of this Subchapter.
- (c) Plans and specifications for the use of a groundwater lowering system to comply with the vertical separation to a SWC shall be prepared by a licensed professional if required in G.S. 89C, 89E, or 89F. Prior to the issuance of an IP or CA, the plans and specifications shall be reviewed and approved by the authorized agent if the plans and specifications meet the requirements of Rules .0504 and .0910 of this Subchapter and accepted design practices.
- (d) An installer shall construct, install, or repair wastewater systems as required by G.S. 90A, Article 5. The installer shall be responsible for the following:
- (1) certification at the required level according to the system design specifications as required by G.S. 90A, Article 5;
 - (2) notification to the LHD upon completion of the system installation and each stage requiring inspection as conditioned on a CA;
 - (3) participation in a preconstruction conference when specified in the CA or by the RWTS or PIA Approval;
 - (4) participation during the inspection of the wastewater system by the authorized agent;
 - (5) participation during the post-construction conference and all other requirements when the wastewater system is permitted in accordance with Rule .0207 of this Subchapter and G.S. 130A-336.1 or G.S. 130A-336.2; and
 - (6) final cover of the system after LHD approval. The wastewater system shall be in the same condition when covered as when approved.
- (e) The Management Entity, or its employees, shall hold a valid and current certificate or certifications as required for the system from the Water Pollution Control Systems Operators Certification Commission. Nothing in this Subchapter shall preclude any requirements for system Management Entities in accordance with G.S. 90A, Article 3.
- (f) Nothing in this Rule shall be construed as allowing any licensed professional to provide services for which he or she has neither the educational background, expertise, or license to perform, or is beyond his or her scope of work and the applicable statutes for their respective professions.
- (g) The PE, AOWE, or authorized designer shall provide a written statement to the owner specifying that construction is complete and in accordance with approved plans, specifications, and modifications. This statement shall be based on periodic observations of construction and a final inspection for design compliance. Record drawings shall be provided to the owner and LHD when any change has been made to the wastewater system installation from the approved plans.

History Note: Authority G.S. 89C; 89E; 89F; 90A; 130A-335;
Eff. January 1, 2024.

15A NCAC 18E .0304 SUBMITTAL REQUIREMENTS FOR PLANS, SPECIFICATIONS, AND REPORTS PREPARED BY LICENSED PROFESSIONALS FOR SYSTEMS OVER 3,000 GALLONS/DAY

All wastewater systems with a DDF greater than 3,000 gpd shall be designed by a PE, with site evaluation by an LSS, and LG, as applicable, in accordance with G.S. 89C, 89E, and 89F. The wastewater system plans, specifications, and reports shall contain the information necessary for construction of the wastewater system. Plans, specifications, and reports shall include the following information:

- (1) Applicant information and DDF determination:
 - (a) the seal, signature, and the date on all plans, specifications, and reports prepared by the PE, LSS, and any other licensed or registered professionals who contributed to the plans, specifications, or reports;
 - (b) name, address, and phone number for the owner and all licensed professionals who have prepared plans, specifications, and reports for the wastewater system; and
 - (c) DDF and projected wastewater strength based on the application submitted to the LHD that includes calculations and the basis for the proposed DDF and wastewater strength.
- (2) Special site evaluation in accordance with Rule .0510 of this Subchapter, including soil and site evaluation, hydraulic and hydrologic assessment reports, and site plans:
 - (a) soil and site evaluation report, written by the LSS, on the field evaluation of the soil conditions and site features within the proposed initial and repair dispersal field areas including the following:
 - (i) vertical soil profile descriptions for pits and soil borings in accordance with Section .0500 of this Subchapter;
 - (ii) recommended LTAR, system type, trench width, length, depth on downslope side of trench for proposed initial and repair dispersal field areas with justification;
 - (iii) soil and site-based criteria for dispersal field design and site modifications;
 - (iv) for sites originally classified unsuitable, written documentation indicating that the proposed system can be expected to function in accordance with Rule .0509(c) of this Subchapter; and
 - (v) recommended effluent standard for proposed initial and repair dispersal field areas with justification; and
 - (b) hydraulic assessment reports on site-specific field information that shall include:
 - (i) in-situ Ksat measurements at the proposed infiltrative surface elevation where possible and at each distinct horizon within and beneath the treatment zone to a depth of 48 inches below the ground surface or to a depth referenced in an associated hydraulic assessment, such as groundwater mounding analysis or lateral flow analysis;
 - (ii) logs from deep borings identifying restrictive layers, changes in texture and density, and aquifer boundaries;
 - (iii) groundwater mounding for level sites or lateral flow analysis for sloping sites in accordance with Rule .0510(e) of this Subchapter, as applicable; and
 - (iv) contaminant transport analysis showing projected compliance with groundwater standards at property lines or at the required setback from water supply sources within the property, as applicable;
- (3) Site plan prepared by the PE based on a boundary survey prepared by a registered land surveyor with the following information:
 - (a) site topography, proposed site modifications, location of existing and proposed site features listed in Rule .0601 of this Subchapter, proposed facility location, location of proposed initial and repair dispersal field areas and types, and location of LSS soil pits, hand auger borings, deep borings, and in-situ Kats tests, as applicable;
 - (b) existing and proposed public wells or water supply sources on the property or within 500 feet of any proposed initial and repair dispersal field areas;
 - (c) existing and proposed private wells or water supply sources within 200 feet of existing or proposed system component locations;
 - (d) other existing and proposed wells, existing and proposed water lines including fire protection, irrigation, etc., within the property boundaries and within 10 feet of any projected system component;
 - (e) surface waters with water quality classification, jurisdictional wetlands, and existing and proposed stormwater management drainage features and groundwater drainage systems;

- (f) topographic map with two-foot contour intervals or spot elevations when there is less than a two-foot elevation difference across the site identifying areas evaluated for initial and repair dispersal field areas, proposed location of trenches, and pits and soil borings labeled to facilitate field identification;
 - (g) location of tanks and advanced pretreatment components, including means of access for pumping and maintenance; and
 - (h) any site modifications and site and slope stabilization plans.
- (4) System components design, installation, operation, and maintenance information:
- (a) collection systems and sewers:
 - (i) plan and profile drawings, including location, pipe diameter, invert and ground surface elevations of manholes and cleanouts;
 - (ii) proximity to utilities and site features listed in Rule .0601 of this Subchapter;
 - (iii) drawings of service connections, manholes, cleanouts, valves and other appurtenances, aerial crossings, road crossings, water lines, stormwater management drainage features, streams, or ditches; and
 - (iv) installation and testing procedures and pass or fail criteria;
 - (b) tank information:
 - (i) plan and profile drawings of all tanks, including tank dimensions and all elevations;
 - (ii) access riser, manhole, chamber interconnection, effluent filter, and inlet and outlet details;
 - (iii) construction details for built-in-place tanks, including dimensions, reinforcement details and calculations, and construction methods;
 - (iv) identification number for Department approved tanks;
 - (v) installation criteria and water tightness testing procedures with pass or fail criteria; and
 - (vi) anti-buoyancy calculations and provisions;
 - (c) pump stations, including raw sewage lift stations and pump tanks:
 - (i) information required in Sub-item (4)(b) of this Rule;
 - (ii) specifications for pumps, discharge piping, pump removal system, and all related appurtenances;
 - (iii) dosing system total dynamic head calculations, pump specifications, pump curves and expected operating conditions, including dosing, flushing, etc.;
 - (iv) control panel, floats and settings, high-water alarm components, location, and operational description under normal and high-water conditions;
 - (v) emergency storage capacity calculations, timer control settings, and provisions for stand-by power; and
 - (vi) lighting, ventilation, if applicable, wash-down water supply with back siphon protection, and protective fencing;
 - (d) advanced pretreatment systems:
 - (i) information required in Sub-items (4)(b) and (c) of this Rule;
 - (ii) drawings and details showing all advanced pretreatment units and appurtenances such as pumps, valves, floats, etc., size and type of piping, disinfection unit, blowers if needed, location of control panels, height of control panels, etc; and
 - (iii) documentation from the manufacturer supporting the proposed design and use of the advanced pretreatment system to achieve specified effluent standards if not otherwise approved by the Department in accordance with Section .1700 of this Subchapter;
 - (e) dispersal field plans and specifications with design and construction details:
 - (i) final field layout, including ground elevations based on field measurements at a maximum of two-foot intervals or spot elevations when there is less than a two-foot elevation difference across the site;
 - (ii) trench plan and profile drawings, including cross sectional details, length, spacing, connection details, cleanouts, etc., and invert elevations for each lateral;
 - (iii) manifolds, supply lines, pipe sizes, cleanouts and interconnection details, and invert elevations;
 - (iv) flow distribution device design;

- (v) artificial drainage system locations, elevations, discharge points, and design details, as applicable;
 - (vi) site preparation procedures;
 - (vii) construction phasing and wastewater system testing; and
 - (viii) final landscaping and compliance with erosion control requirements, such as site stabilization procedures and drainage;
- (f) materials specification for all materials to be used, methods of construction, means for assuring the quality and integrity of the finished product; and
- (g) operation and maintenance procedures for the Management Entity, inspection schedules, and maintenance specifications for mechanical components and dispersal field vegetative cover; and
- (5) any other information determined to be applicable by the LHD or the Department, such as the impact of projected wastewater constituents on the trench and receiving soil.

History Note: Authority G.S. 130A-335;
Eff. January 1, 2024.

15A NCAC 18E .0305 SUBMITTAL REQUIREMENTS FOR PLANS, SPECIFICATIONS, AND REPORTS PREPARED BY LICENSED PROFESSIONALS FOR SYSTEMS LESS THAN OR EQUAL TO 3,000 GALLONS/DAY

Plans, specifications, and reports for wastewater systems with a DDF less than or equal to 3,000 gpd that are required to be prepared by an LSS or PE, if required in G.S. 89C or 89E, shall include the information required by the following:

- (1) Rule .0304(1) of this Section;
- (2) Rule .0304(2) of this Section for special site evaluations and submittals prepared under Rule .0510 of this Subchapter; and
- (3) Rule .0304(4) of this Section for advanced pretreatment and IPWW.

History Note: Authority G.S. 130A-335;
Eff. January 1, 2024.

SECTION .0400 – DESIGN DAILY FLOW AND EFFLUENT CHARACTERISTICS

15A NCAC 18E .0401 DESIGN DAILY FLOW

- (a) The minimum DDF for dwelling units shall be based on:
 - (1) 175 gpd for a one bedroom dwelling unit with no more than two occupants and 400 square feet of living space or less; or
 - (2) 120 gpd per bedroom with a minimum of 240 gpd per dwelling unit or 60 gpd per person when occupancy exceeds two persons per bedroom, whichever is greater.
- (b) DDF for facilities other than dwelling units shall be in accordance with Table II as follows:

TABLE II. Design daily flow for Facilities

Facility type	Design daily flow
Commercial	
Airports, railroad stations, bus and ferry terminals, etc.	5 gal/traveler, food preparation not included
Barber shops	50 gal/chair
Bars, cocktail lounges∞	20 gal/seat, food preparation not included
Beauty shops, style shops, hair salons	125 gal/chair
Bed and breakfast homes and inns	Dwelling unit DDF based on Paragraph (a) of this Rule plus 120 gal/rented room which includes the following: Meals served to overnight guests Laundry for linens 150 gal/room with cooking facilities in individual rooms
Event Center∞	5 gal/person with toilets and hand sinks up to 4 hrs 10 gal/person with toilets and hand sinks up to 8 hrs

	15 gal/person with toilets and hand sinks greater than 8 hrs Add 5 gal/person with full kitchen
Markets open less than four days/week, such as a flea market or farmers market	30 gal/stall or vendor, food preparation not included
Marinas with no holding tank discharge included	30 gal/boat slip, with bathhouse 10 gal/boat slip, wet slips or slips on dock 5 gal/boat slip, dry storage or warehouse
Motels/hotels	120 gal/room includes the following: No cooking facilities in individual rooms other than a microwave or other similar devices No food service or limited food service establishment Laundry for linens 150 gal/room with cooking facilities in individual rooms
Offices and factories with no IPWW included	12 gal/employee/≤ 8 hr shift Add 2 gal/employee/hr for more than 8 hr shift Add 10 gal/employee for showers
Stores, shopping centers, and malls	100 gal/1,000 ft ² of retail sales area, food preparation not included
Warehouse that are not retail sales warehouses	100 gal/loading bay or 12 gal/employee/≤ 8 hr shift Add 2 gal/employee/hr for more than 8 hr shift
Storage warehouse including self-storage facilities and does not include caretaker residence	12 gal/employee/≤ 8 hr shift Add 2 gal/employee/hr for more than 8 hr shift
Alcoholic beverage tasting areas with no process wastewater included	200 gal/1,000 ft ² of tasting area floor space and includes glass washing equipment Food preparation and food clean up not included 12 gal/employee/≤ 8 hr shift
Camps/Campgrounds	
Summer camps with overnight stays*	60 gal/person, applied as follows: 15 gal/person/food preparation 20 gal/person/toilet facilities 10 gal/person/bathing facilities 15 gal/person/laundry facilities
Day camps not inclusive of swimming area bathhouse*	20 gal/person and 5 gal/meal served with multiuse service or 3 gal/meal served with single-service articles
Temporary Labor Camp or Migrant Housing Camp with overnight stays*	60 gal/person, applied as follows: 15 gal/person/food preparation 20 gal/person/toilet facilities 10 gal/person/bathing facilities 15 gal/person/laundry facilities
Travel trailer or RV in an RV park*	100 gal/space
Recreational Park Trailer or Park Model Trailer 400 ft ² or less in an RV park*	150 gal/space
Bathhouse for campsites and RV park sites with no water and sewer hook ups with a maximum of four people per campsite	70 gal/campsite
Food preparation facilities	
Food Establishments with multiuse articles*	25 gal/seat or 25 gal/15 ft ² of floor space open 6 hrs/day or less 40 gal/seat or 40 gal/15 ft ² of floor space open 6 to 16 hrs/day Add 4 gpd/seat for every additional hour open beyond 16 hrs
Food Establishments with single service articles*	20 gal/seat or 20 gal/15 ft ² of floor space open 6 hrs/day or less 30 gal/seat or 30 gal/15 ft ² of floor space open 6 to 16 hrs/day Add 3 gpd/seat for every additional hour open beyond 16 hrs

Food stand with up to eight seats, mobile food units, and commissary kitchens*	50 gal/100 ft ² of food stand, food unit, or food prep floor space and 12 gal/employee/≤ 8 hr shift Add 2 gal/employee/hr for more than 8 hr shift
Other food service facilities*	5 gal/meal served with multiuse articles 3 gal/meal served with single service articles
Meat markets or fish markets with no process wastewater included*	50 gal/100 ft ² of floor space and 12 gal/employee/≤ 8 hr shift Add 2 gal/employee/hr for more than 8 hr shift
Health care and other care institutions	
Hospitals*	300 gal/bed
Rest homes, assisted living homes, and nursing homes*	150 gal/bed with laundry 75 gal/bed without laundry Add 60 gal/resident employee with laundry
Day care facilities	15 gal/person open ≤ 12 hr shift without laundry Add 1 gal/person/hr open for more than 12 hrs per day Add 5 gal/person with full kitchen
Group homes, drug rehabilitation, mental health, and other care institutions	75 gal/person with laundry
Orphanages	60 gal/student or resident employee with laundry
Public access restrooms	
Convenience store, service station, truck stop*	250 gal/toilet or urinal meeting the following: Open less than 16 hrs/day Food preparation not included Retail space not included
	325 gal/toilet or urinal meeting the following: Open 16 to 24 hrs/day Food preparation not included Retail space not included
Highway rest areas and visitor centers*	325 gal/toilet or urinal or 10 gal/parking space, whichever is greater
Recreational facilities	
Bowling center	50 gal/lane, food preparation not included
Community center, gym [∞]	5 gal/person plus 12 gal/employee/≤ 8 hr shift Add 2 gal/employee/hr for more than 8 hr shift or 50 gal/100 ft ² , whichever is greater
Country club or golf course	10 gal/person 12 gal/employee/≤ 8 hr shift Add 2 gal/employee/hr for more than 8 hr shift 3 gal/person for convenience stations Food preparation not included
Fairground	250 gal/toilet or urinal
Fitness center, spas, karate, dance, exercise [∞]	50 gal/100 ft ² of floor space used by clientele Food preparation not included
Recreational park, State park, county park, and other similar facilities with no sports facilities	10 gal/parking space
Outdoor sports facilities, mini golf, batting cages, driving ranges, motocross, athletic park, ball fields, stadium, and other similar facilities	250 gal/toilet or urinal, 5 gal/seat, or 10 gal/parking space, whichever is greater Food preparation not included
Auditorium, theater, amphitheater, drive-in theater	2 gal/seat or 10 gal/parking space, whichever is greater Food preparation not included
Swimming pools and bathhouses	5 gal/person domestic waste only, bathing load of pool may be used as an alternative method of sizing
Sports facilities courts or other similar facilities	250 gal/toilet or urinal or 50 gal/court, whichever is greater

Institutions	
Church or other religious institution*	2 gal/seat sanctuary only 3 gal/seat with warming kitchen in same structure as sanctuary 5 gal/seat with full kitchen in same structure as sanctuary
Public or private assembly halls used for recreation, regularly scheduled meetings, events, or amusement∞* For churches, flow shall be in addition to sanctuary structure flow	2 gal/person with toilets and hand sinks 3 gal/person with addition of a warming kitchen 5 gal/person with full kitchen
Schools	
Day schools*	6 gal/student with no cafeteria or gymnasium 9 gal/student with cafeteria only 12 gal/student with cafeteria and gymnasium
After school program	5 gal/student in addition to flow for regular school day
Boarding schools	60 gal/student and resident employee with laundry

* Facility has potential to generate HSE.

∞ Designer shall use the maximum building occupancy assigned by the local fire marshal in calculating DDF unless another method for determining DDF is proposed, including the justification for not using the maximum building occupancy.

(c) The minimum DDF from any facility other than a dwelling unit shall be 100 gpd. For facilities with multiple design units, the minimum DDF shall be 100 gpd per design unit. The DDF of the facility shall be the sum of all design unit flows.

(d) DDF determination for wastewater systems with facilities not identified in this Rule shall be determined using available water use data, capacity of water-using fixtures, occupancy or operation patterns, and other measured data from the facility itself or a comparable facility.

(e) Where laundry is not specified for a facility in Table II, but is proposed to be provided, the DDF shall be adjusted to account for the proposed usage and machine water capacity. The applicant or a licensed professional shall provide cut-sheets for laundry machines proposed for use in facilities.

(f) HVAC unit or ice machine condensate, gutter or sump pump discharge, water treatment system back flush lines, or similar incidental flows shall not discharge to the wastewater system, unless a PE designs the wastewater system for these flows.

(g) Unless otherwise noted in Table II, the DDF per unit includes employees.

(h) Food service facilities and other facilities that are projected to generate wastewater with constituent levels greater than DSE, as defined in Rule .0402 of this Section, are identified in Table II with a single asterisk (*) as HSE. Any facility that has a food service component that contributes 50 percent or more of the DDF shall be considered to generate HSE. Determination of wastewater strength shall be based on projected or measured levels of one or more of the following: BOD, TSS, FOG, or TN. Table III of Rule .0402(a) of this Section identifies the constituent limits for DSE.

(i) Wastewater with constituents other than those listed in Table III of Rule .0402(a) of this Section may be classified as IPWW as defined in G.S. 130A-334(2a) on a site-specific basis.

(j) A request for an adjusted DDF shall be made in accordance with Rule .0403 of this Section.

History Note: Authority G.S. 130A-335(e); S.L. 2013-413, s.34; S.L. 2014-120, s. 53; Eff. January 1, 2024.

15A NCAC 18E .0402 SEPTIC TANK EFFLUENT CHARACTERISTICS

(a) Septic tank effluent standards for DSE shall be as set forth in Table III of this Paragraph. Effluent that exceeds these standards for any constituent shall be considered HSE. When measured, effluent characteristics shall be based on at least two effluent samples collected during normal or above-normal operating periods. A normal period is when the occupancy, operation, or use of the facility is average when compared to the occupancy, operation, or use over a time frame of a minimum of one year. The samples shall be taken from the existing or a comparable facility on non-consecutive days of operation. A comparable facility is based on documentation showing that the hours of operation, floor plan, water use practices, water-using fixtures, location, etc., are similar to the facility listed in the application. The samples shall be analyzed for a minimum of BOD₅, TSS, TN, and FOG.

Table III. Septic tank effluent standards for DSE

Constituent	Maximum DSE
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	mg/L
BOD	≤ 350
TSS	≤ 100
TN*	≤ 100
FOG	≤ 30

*TN is the sum of TKN, nitrate nitrogen, and nitrite nitrogen

(b) Designs for facilities that generate HSE or when an adjusted DDF is proposed in accordance with Rule .0403 shall address the issue of wastewater strength in accordance with one of the following:

- (1) Wastewater systems that meet one of the following criteria shall utilize advanced pretreatment, designed in accordance with Rule .1201(b) of this Subchapter, to produce DSE or better prior to dispersal:
 - (A) DDF greater than 1,500 gpd and HSE;
 - (B) any proposed flow reduction in accordance with Rule .0403 of this Section where the DDF is greater than 1,500 gpd; or
 - (C) any proposed flow reduction in accordance with Rule .0403 of this Section with projected or measured effluent characteristics that exceed DSE as set forth in Table III of this Rule; or
- (2) A licensed professional, in accordance with G.S. 89C, 89E, or 89F, may justify not using advanced pretreatment by providing the following, as applicable:
 - (A) the system design is determined based upon a mass loading adjusted LTAR calculated using site-specific LTAR and projected or measured BOD₅ and TSS values. The adjusted LTAR calculations shall be done as follows:

$$\text{MLAF} = 300/(\text{BOD}_5 + \text{TSS}) \text{ or one, whichever is smaller}$$

$$\text{ALTAR} = \text{MLAF} \times \text{LTAR}$$

Where $\text{MLAF} =$ mass loading LTAR adjustment factor

$\text{BOD}_5 =$ measured or projected

$\text{TSS} =$ measured or projected

$\text{LTAR} =$ LTAR assigned by the authorized agent for DSE in accordance with this Subchapter

$\text{ALTAR} =$ adjusted LTAR
 - (B) site-specific nitrogen migration analysis when projected or measured effluent total nitrogen levels are greater than 100 mg/L. Analysis shall demonstrate that the nitrate-nitrogen concentration at the property line will not exceed 10 mg/L; and
 - (C) additional pretreatment to reduce FOG to less than or equal to 30 mg/L, including justification for the proposed pretreatment method.

(c) The requirements of Paragraph (b) shall not apply if the effluent for a specific facility identified in Rule .0401 of this Section as HSE has been measured in accordance with Paragraph (a) of this Rule and shown to be DSE.

History Note: Authority G.S. 130A-335(e); S.L. 2013-413, s. 34; S.L. 2014-120, s. 53; Eff. January 1, 2024.

15A NCAC 18E .0403 ADJUSTMENTS TO DESIGN DAILY FLOW

(a) The authorized agent or the Department shall approve an adjusted DDF relative to the values in Table II of Rule .0401(b) of this Section for new or existing facilities in accordance with this Rule. The water use information provided to support the proposed adjusted DDF shall meet the requirements of Paragraphs (b) or (c) of this Rule and may be provided by the owner, designer, or PE. All adjustments to DDF shall meet the requirements of Paragraph (d) of this Rule.

(b) Adjustments to DDF based on documented data from the facility or a comparable facility, as described in Rule .0402(a) of this Section, shall meet one of the following criteria:

- (1) the submitted data shall consist of a minimum of 12 consecutive monthly total water consumption readings, and 30 consecutive daily water consumption readings taken during a projected normal or above normal wastewater flow month. A normal or above normal month is when the average flow equals or exceeds the mean of the 12 consecutive monthly total water consumption readings. The following calculations shall be done with the submitted data:

- (A) a hydraulic peaking factor shall be calculated by dividing the highest monthly flow of the 12 monthly readings by the sum of the 30 consecutive daily water consumption readings. The hydraulic peaking factor shall not be less than one; and
 - (B) the adjusted DDF shall be calculated by multiplying the numerical average of the greatest 10 percent of the daily readings by the hydraulic peaking factor; or
 - (2) the adjusted DDF shall be calculated by multiplying the highest of the 12 monthly readings by 1.5 and then dividing by the number of days in the month.
- (c) Adjustments to DDF based on the proposed use of extreme water-conserving fixtures, which use less water than the fixtures required by the North Carolina Plumbing Code, shall be based upon the capacity of fixtures and documentation of the amount of flow reduction to be expected from their use in the proposed facility. Cut sheets of the proposed fixtures shall be provided to the LHD and the Department, as applicable.
- (d) The proposed adjusted DDF shall account for projected increased constituent concentrations due to the reduction in water use. Calculations shall be provided to verify that the criteria in Rules .0402 and .1201 of this Subchapter are met.
- (e) Pursuant to S.L. 2013-413, s.34, as revised by S.L. 2014-120, s.53, a PE may propose an adjusted DDF for new or existing dwelling units or facilities identified in Table II of Rule .0401(b) of this Section in accordance with the following:
- (1) DDF less than those listed in Rule .0401 of this Section that are achieved through engineering design that utilizes low-flow fixtures and low-flow technologies;
 - (2) comparison of flow from proposed fixtures and technologies to flow from conventional fixtures and technologies;
 - (3) the signed and sealed proposal shall account for the site-specific impact on the wastewater system based on projected increased constituent concentrations resulting from reduction in water use in accordance with Rule .0402(b) of this Section;
 - (4) inspection of the existing wastewater system and verification that the system meets the Rules of this Subchapter and can accept the increase in constituent loading, as applicable;
 - (5) proposed adjusted DDF for wastewater systems determined to be less than or equal to 3,000 gpd shall not require Department review in accordance with Rule .0302(e) of this Subchapter unless requested by the LHD; and
 - (6) neither the Department nor any LHD shall be liable for any damages caused by a system approved or permitted in accordance with this Paragraph.
- (f) A PE may propose, and the Department shall approve an adjusted DDF for a facility made up of individual dwelling units in accordance with this Rule when the following criteria are met:
- (1) DDF calculated in accordance with this Section is greater than 3,000 gpd;
 - (2) adjusted DDF is based on information in Paragraphs (b) or (c) of this Rule; and
 - (3) increase in wastewater strength is accounted for in accordance with Paragraph (d) of this Rule.
- (g) Adjusted DDF based upon use of water-conserving fixtures shall apply only to design capacity requirements of the dosing system and dispersal fields. The DDF set forth in Rule .0401 of this Section shall be used to determine minimum tank and advanced pretreatment component capacities.

History Note: Authority G.S. 130A-335(e); S.L. 2013-413, s. 34; S.L. 2014-120, s. 53; Eff. January 1, 2024.

SECTION .0500 – SOIL AND SITE EVALUATION

15A NCAC 18E .0501 SITE EVALUATION

(a) Upon receipt of an application, an authorized agent shall investigate each proposed site in accordance with this Section to determine whether the site is suitable or unsuitable for the installation of a wastewater system. The field investigation shall include the evaluation of the following soil and site features with written field descriptions including:

- (1) topography, slope, and landscape position;
- (2) soil morphology:
 - (A) depth of horizons;
 - (B) texture;
 - (C) structure;
 - (D) consistence;
 - (E) color; and
 - (F) organic soils, as applicable;

- (3) SWC;
 - (4) soil depth;
 - (5) restrictive horizons;
 - (6) the suitability for each profile description;
 - (7) LTAR; and
 - (8) available space.
- (b) Soil profiles shall be evaluated at the site by borings, pits, or other means of excavation, and described to reflect variations in soil and site characteristics across both initial and repair areas.
- (c) Soil profiles shall be evaluated and described to the following minimum depths:
- (1) 48 inches from the ground surface; or
 - (2) to a LC determined in accordance with this Section.
- (d) Owners may be required to provide pits when necessary for evaluation of the site as determined by the authorized agent, such as for evaluation of saprolite or soil structure.
- (e) Based on the evaluation of the soil conditions and site features listed in Paragraph (a) of this Rule, each soil profile shall be classified suitable or unsuitable. The authorized agent shall specify the overall site suitability and classification in accordance with Rule .0509 of this Section.
- (f) The authorized agent shall specify the LTAR in accordance with Section .0900 of this Subchapter for sites classified suitable in accordance with Rule .0509 of this Section.
- (g) A LC initially classified unsuitable may be reclassified suitable if the requirements of Rule .0509(b) or (c) of this Section are met.

History Note: Authority G.S. 130A-335(e);
Eff. January 1, 2024.

15A NCAC 18E .0502 TOPOGRAPHY AND LANDSCAPE POSITION

- (a) Uniform stable slopes less than or equal to 65 percent shall be suitable with respect to topography.
- (b) The following shall be unsuitable with respect to topography:
- (1) slopes greater than 65 percent; and
 - (2) areas subject to surface water convergence. The site shall be considered suitable when the surface water can be diverted from the site with berms or other surface water diversion devices;
- (c) The following shall be unsuitable with respect to landscape position:
- (1) depressions, except when with site modifications in accordance with Rule .0910 of this Subchapter, the site complies with the requirements of this Section;
 - (2) a jurisdictional wetland as determined by the U.S. Army Corps of Engineers or DEQ, unless the proposed use is approved in writing by the U.S. Army Corps of Engineers or DEQ; and
 - (3) complex slope patterns, such as areas affected by erosion which have rills or evidence of drainage, and slopes dissected by gullies that prohibit the design, installation, maintenance, monitoring, or repair of the wastewater system.
- (d) For all sites, except where a drip dispersal system is proposed, additional required soil depth based on slope correction shall be calculated using the following formula to determine site suitability for soil depth in accordance with Rule .0505 of this Section:

$$SD = MSD + (TW \times S)$$

Where

SD	=	soil depth required with slope correction, in inches
MSD	=	minimum soil depth, in inches
TW	=	proposed trench width, in inches
S	=	percent slope, in decimal form

History Note: Authority G.S. 130A-335(e);
Eff. January 1, 2024.

15A NCAC 18E .0503 SOIL MORPHOLOGY

The soil morphology shall be evaluated in accordance with the following:

- (1) Texture – The texture of each soil horizon in a profile shall be classified into 12 soil textural classes based upon the relative proportions of sand, silt, and clay sized mineral particles. The soil textural class shall be determined in the field by hand texturing samples of each soil horizon in the soil profile in accordance with

the criteria in Guide to Soil Texture by Feel, Journal of Agronomic Education, USDA, NRCS. Table IV identifies the Soil Groups that shall be suitable with respect to texture.

Table IV. Soil Groups that are suitable with respect to texture

Soil Group	USDA Soil Textural Class	
I	Sands	Sand
		Loamy Sand
II	Coarse Loams	Sandy Loam
		Loam
III	Fine Loams	Silt
		Silt Loam
		Sandy Clay Loam
		Clay Loam
		Silty Clay Loam
IV	Clays	Sandy Clay
		Silty Clay
		Clay

Laboratory testing of the soil textural class may be substituted for field testing when the laboratory testing is conducted in accordance with ASTM D6913 and D7928. When laboratory testing of soil texture is proposed, the LHD shall be notified a minimum of 48 hours before samples are to be taken by the licensed professional, if required by G.S. 89C, 89E, or 89F. The authorized agent and the licensed professional shall be present when the samples are collected. Samples shall be representative of the soil horizon being evaluated for texture. Split samples shall be made available to the LHD when requested. The licensed professional shall document chain of custody and seal, sign, and date the first page of the report.

- (2) Structure – Soil structure shall be determined in the field for each soil horizon in the soil profile and shall be classified and suitability determined in accordance with Table V. If an authorized agent determines that the soil structure cannot be determined from auger borings, pits shall be required.

Table V. Soil structure and associated suitability classification

Structure	Diameter	Classification
Granular	N/A	suitable
Blocky	≤ 1 inch or 2.5 cm	suitable
	> 1 inch or 2.5 cm	unsuitable
Platy	N/A	unsuitable
Prismatic	≤ 2 inches or 5 cm	suitable
	> 2 inches or 5 cm	unsuitable
Absence of structure: Single Grain	N/A	suitable
Absence of Structure: Massive - no structural peds	N/A	unsuitable

- (3) Clay Mineralogy – Clay mineralogy shall be determined in the field by evaluation of moist and wet soil consistence in accordance with the USDA-NRCS Field Book for Describing and Sampling Soils. The clay mineralogy shall be classified and suitability determined in accordance with Table VI.

Table VI. Clay mineralogy field method results, associated mineralogy, and suitability classification

Soil Consistence	Mineralogy	Classification
Moist		
Loose, very friable	Slightly expansive	suitable
Friable, firm	Slightly expansive	suitable
Very firm or extremely firm	Expansive	unsuitable*

Wet		
Nonsticky, slightly sticky Nonplastic, slightly plastic	Slightly expansive	suitable
Moderately sticky Moderately plastic	Slightly expansive	suitable
Very sticky or very plastic	Expansive	unsuitable*

*If either the moist consistence or wet consistence is unsuitable then clay mineralogy is classified unsuitable.

- (a) Laboratory testing of ACEC may be substituted for field testing to determine clay mineralogy. The laboratory testing shall be conducted in accordance with USDA-NRCS Soil Survey Laboratory Information Manual, Soil Survey Investigations Report No. 45, and Kellogg Soil Survey Laboratory Methods Manual, Soil Survey Investigation Report No. 42, page 229, or EPA Method 9080. Table VII shall be used to determine the clay mineralogy suitability when laboratory testing is used. When using laboratory testing to determine clay mineralogy, the clay content of the soil shall be greater than 35 percent and the organic matter component shall be less than 0.5 percent.

Table VII. Clay mineralogy laboratory method results, mineralogy, and associated suitability classification

ACEC in cmol/kg	Mineralogy	Classification
≤ 16.3	Slightly expansive	suitable
> 16.3	Expansive	unsuitable

- (b) When laboratory testing of clay mineralogy is proposed, the LHD shall be notified a minimum of 48 hours before samples are to be taken by the licensed professional, if required by G.S. 89C, 89E, or 89F. The authorized agent and the licensed professional shall be present when the samples are collected. Samples shall be representative of the soil horizon being evaluated for clay mineralogy. Split samples shall be made available to the LHD when requested. The licensed professional shall document chain of custody and seal, sign, and date the first page of the report.
- (4) Organic Soils - Organic soils shall be considered unsuitable.

*History Note: Authority G.S. 130A-335(e);
Eff. January 1, 2024.*

15A NCAC 18E .0504 SOIL WETNESS CONDITION

(a) SWC, such as those caused by a seasonal high-water table, a perched water table, tidal water, seasonally saturated soil, or by lateral water movement, shall be determined by field observations of soil wetness indicators as follows:

- (1) the presence of colors with a value 4 or more and a chroma 2 or less using the Munsell Soil Color Book at greater than or equal to two percent of soil volume as redox depletions or as the matrix of a horizon. Colors of chroma 2 or less that are lithochromic features shall not be considered indicative of a SWC; or
 - (2) the observation or indication of saturated soils, a perched water table, or lateral water movement flowing into a bore hole, monitoring well, or open excavation above a less permeable horizon, that may occur without the presence of colors with a value 4 or more or chroma 2 or less at greater than or equal to two percent of soil volume as redox depletions or as the matrix of a horizon.
 - (3) The shallowest depth to SWC determined in this Paragraph shall be used.
- (b) Initial site suitability as to SWC shall be determined by field observations of soil wetness indicators in accordance with Paragraph (a) of this Rule. Sites where the SWC is less than 12 inches below the naturally occurring soil surface, or less than 18 inches if more than six inches of Group I soils are present, shall be considered unsuitable with respect to SWC.
- (c) Monitoring or modeling procedures as set forth in this Rule may be used to reclassify the site as suitable with respect to SWC.
- (d) Monitoring or modeling procedures as set forth in this Rule shall be required when the owner proposes to use a wastewater system requiring a greater depth to a SWC than the depth observed by soil wetness indicators in accordance with Paragraph (a) of this Rule.

(e) Modeling procedures as set forth in this Rule shall be required when the owner proposes to use sites with Group III or IV soils within 36 inches of the naturally occurring soil surface with artificial drainage, or on sites when fill is proposed to be used in conjunction with an artificial drainage system.

(f) Monitoring or modeling procedures may include the following:

- (1) direct monitoring procedure as set forth in Paragraph (g) of this Rule;
- (2) modeling procedure as set forth in Paragraph (h) of this Rule;
- (3) monitoring and modeling procedure as set forth in Paragraph (i) of this Rule; or
- (4) other modeling procedures as set forth in Paragraph (j) of this Rule.

(g) The direct monitoring procedure involves determining the SWC by observation of water surface elevations in wells during periods of high-water in accordance with the following:

- (1) no later than 30 days prior to the start of the monitoring period, the owner shall notify the LHD of the intent to monitor water surface elevations by submitting a proposal prepared by a licensed professional, if required in G.S. 89C, 89E, or 89F, that includes a site plan, well and soil profile at each monitoring site, and a monitoring plan as follows:
 - (A) the site plan shall include the proposed sites for wastewater systems, the longitude and latitude of the site, the location of monitoring wells, and all drainage features that may influence the SWC. The site plan shall also specify any proposed fill and drainage modifications;
 - (B) the monitoring plan shall include the proposed number, installation depth, screening depth, soil and well profile, materials, and installation procedures for each monitoring well. A minimum of three water level monitoring wells shall be installed for water surface observation at each site. Sites handling systems with a DDF greater than 600 gpd shall have one additional well per 600 gpd increment. Well locations shall include portions of the initial and repair dispersal field areas containing the most limiting soil and site conditions. The monitoring plan shall also provide for monitoring of the water surface elevations in the wells and all precipitation at the site; and
 - (C) notification of whether the owner or a licensed professional will perform the monitoring, including the name of the licensed professional, if applicable.
- (2) prior to installation of the monitoring wells, the authorized agent shall approve the plan. Plan approval shall be based upon a site visit and compliance with this Rule. If the plan is denied, a signed, written report shall be provided to the owner that describes the reasons for denial, the changes necessary for approval of the plan, and notice of the right to appeal under G.S. 130A-24 and 150B;
- (3) wells shall extend a minimum of five feet below the naturally occurring soil surface, or existing ground surface for existing fill determined in accordance with Rule .0909(d) of this Subchapter, except that wells that extend down only 40 inches from the ground surface may be used if a continuous record of the water table is provided for a minimum of half of the monitoring period. One or more shallower wells may be required on sites where shallow lateral water movement or a perched SWC is anticipated based on the site investigation;
- (4) the water elevation in the monitoring wells shall be recorded daily from January 1 to April 30, taken at the same time during the day, plus or minus three hours. Rain gauges shall be located within two miles of the site. Daily rainfall measurements shall also be recorded from December 1 through April 30; and
- (5) the most recent information available from the SCO shall be used to determine the recurrence frequency of the total amount of rainfall at the site for the 120-day period ending April 15 based upon the site's historic rainfall record. This shall be done when the 120-day cumulative rainfall for the monitoring period ending on April 15 equals or exceeds the site's historic rainfall for the same period with a 30 percent frequency. The recurrence frequency shall be determined with one of the following methods:
 - (A) the licensed professional shall determine the 120-day SPI for April 15 by using the Integrated Water Portal located on the SCO's website at: <http://climate.ncsu.edu/water/map>. The licensed professional shall click on the map pixel that corresponds closest to the site's location. The Department will assist in obtaining this information upon request; or
 - (B) the recurrence frequency of the site's cumulative precipitation for the 120-day monitoring period ending on April 15 shall be determined for the site on a case-by-case basis from the most recent master grid provided to the Department by the SCO. The master grid contains probability distribution parameters that shall be used by the Department based upon guidance from the SCO. Based on the master grid, the Department shall derive the recurrence frequency values for the grid point that corresponds closest to the site's latitude and longitude.

- (6) The SWC shall be determined by the shallowest level that is continuously saturated for the number of consecutive days during the January through April well monitoring period shown in Table VIII as follows:

TABLE VIII. Rainfall SPI and exceedance probability during monitoring season related to number of consecutive days of continuous saturation

April 15 SPI 120-day range	Recurrence frequency range 120-day cumulative April 15 rainfall	Number of consecutive days of continuous saturation for SWC
SPI -0.543 to 0	30% to 49.9% duration	3 days or 72 hours
SPI 0 to 0.545	50% to 69.9% duration	6 days or 144 hours
SPI 0.546 to 0.864	70% to 79.9% duration	9 days or 216 hours
SPI ≥ 0.865	80% to 100% duration	14 days or 336 hours

- (7) If monitoring well data is collected during monitoring periods that span multiple years, the year that yields the shallowest SWC shall apply.
- (h) The modeling procedure may be used to determine SWC by using DRAINMOD, a groundwater simulation model, to predict daily water levels over a minimum 30-year period using site-specific input parameters as outlined in the DRAINMOD User's Guide. The SWC shall be determined as the shallowest level predicted by DRAINMOD to be saturated for a 14-day continuous period between January 1 and April 30 with a recurrence frequency of 30 percent, an average of a minimum of nine years in 30, and in accordance with the following:
- (1) weather input files shall consist of hourly rainfall and daily temperature data collected over the entire period of record but for a minimum of a 30-year period from a measuring station site, such as the National Weather Service or SCO. The measuring station used shall be the station located closest to the owner's site;
 - (2) soil and site inputs for DRAINMOD shall include the following:
 - (A) soil input file with the soil moisture characteristic curve and data for the soil profile that is closest to the described soil profile that is present on the site;
 - (B) soil horizon depths determined on site;
 - (C) site measured or proposed drain depth and spacing, and drain outlet elevation;
 - (D) in-situ Ksat measurements for a minimum of three representative locations on the site and at each location for the three most representative soil horizons within five feet of the surface. In-situ Ksat measurements shall be for one representative soil horizon at or above redoximorphic depletion features and two representative soil horizons at and below redoximorphic concentration features at each location on the site;
 - (E) all other model parameters based upon the DRAINMOD User's Guide; and
 - (F) a sensitivity analysis shall be conducted for the following model parameters: soil input files for a minimum of two other most closely related soil profiles; in-situ Ksat of each horizon; drain depth and spacing; and surface storage and depth of surface flow inputs.

The sensitivity analysis shall be used to evaluate the range of soil and site characteristics for choosing input parameters related to the soil profiles, Ksat input values based upon the range of in-situ Ksat values measured on the site, and inputs for surface and subsurface drainage features based upon the range of possible elevations and distances that occur or may occur after installation of improvements. The sensitivity analysis shall establish which parameters are most critical for determination of the depth to SWC. Conservative values for the most critical parameters shall be used in applying the model to the site;
 - (3) for sites designed to receive over 600 gpd, the SWC determination using DRAINMOD shall take into consideration the impact of wastewater application on the projected water table surface; and
 - (4) the groundwater simulation analysis shall be prepared and submitted to the LHD by licensed professionals, if required in G.S. 89C, 89E, or 89F, qualified to use DRAINMOD by training and experience. The LHD shall submit the groundwater simulation analysis to the Department for technical review prior to approval of the SWC determination.
- (i) The monitoring and modeling procedure is a combination of the direct monitoring procedure and the modeling procedure. The SWC shall be determined as the shallowest level predicted by DRAINMOD to be saturated for a 14-day continuous period between January 1 and April 30 with a recurrence frequency of 30 percent, an average of a minimum of nine years in 30, and in accordance with the following:
- (1) the procedures set forth in Paragraph (g) shall be used to monitor water surface elevation and precipitation. The rain gauges and monitoring wells required by Subparagraph (g)(4) shall use a recording device and a

data file that is DRAINMOD compatible. The recording devices shall record rainfall hourly or daily and well water levels daily. The data file shall be submitted with the report to the LHD;

- (2) DRAINMOD shall be used to predict daily water levels. The DRAINMOD modeling shall be in accordance with the following:
- (A) weather input files shall be developed from daily temperature and hourly or daily rainfall data collected over a minimum 30-year period from a measuring station, such as the National Weather Service or SCO. The measuring station used shall be the station located closest to the site. Daily maximum and minimum temperature data for the December 1 through April 30 monitoring period shall be obtained from the closest available weather station;
 - (B) soil and site inputs for DRAINMOD, including a soils data file closest to the soil series identified, depths of soil horizons, in-situ Ksat of each horizon, depth and spacing of drainage features, and depression storage shall be selected in accordance with procedures outlined in the DRAINMOD User's Guide;
 - (C) inputs shall be based upon site-specific soil profile descriptions. Soil and site input factors shall be adjusted during the model calibration process to achieve the best possible fit as indicated by the least squares analysis of the daily observations over the whole monitoring period and to achieve the best possible match between the shallowest water table depth during the monitoring period that is saturated for 14 consecutive days, measured vs. predicted. The mean absolute deviation between measured and predicted values shall be no greater than six inches during the monitoring period;
 - (D) for sites intended to receive greater than 1,500 gpd, the SWC determination using DRAINMOD shall take into consideration the impact of wastewater application on the projected water table surface; and
 - (E) the DRAINMOD analysis shall be prepared and submitted to the LHD by licensed professionals, if required in G.S. 89C, 89E, or 89F, qualified to use DRAINMOD by training and experience. The LHD or owner may request a technical review by the Department prior to approval of the SWC determination.

The monitoring and modeling procedure may also be used to re-evaluate a SWC that was previously evaluated by the direct monitoring procedure.

(j) Modeling procedures other than those set forth in this Rule may be used to determine SWC upon approval by the Department. Other modeling procedures shall be approved if the following requirements are met:

- (1) the modeling procedures use daily water levels or weather records over a 30-year period to predict future daily water levels;
- (2) the proposed model and prediction are shown to be as accurate as the prediction from DRAINMOD, calculated in accordance with Paragraph (h) of this Rule; and
- (3) documentation is provided in accordance with Rule .0509(c) of this Section.

(k) A report of the investigations made for the direct monitoring procedure, modeling procedure, or monitoring and modeling procedure in accordance with Paragraphs (g), (h), or (i) of this Rule shall be prepared prior to approval of the SWC determination. A request for technical review of the report by the Department shall include digital copies of monitoring data, model inputs, output data, and graphic results, as applicable.

History Note: Authority G.S. 130A-335(e);
Eff. January 1, 2024.

15A NCAC 18E .0505 SOIL DEPTH

- (a) The soil depth shall be measured from the naturally occurring soil surface to rock, saprolite, or parent material.
- (b) Soil depth to saprolite, rock, or parent material greater than or equal to 18 inches shall be suitable.
- (c) Soil depth to saprolite, rock, or parent material less than 18 inches shall be unsuitable.

History Note: Authority G.S. 130A-335(e);
Eff. January 1, 2024.

15A NCAC 18E .0506 SAPROLITE

- (a) Sites classified unsuitable due to depth to saprolite or other LC may be reclassified suitable in accordance with this Rule.

(b) Sites with saprolite shall be classified as suitable if an investigation of the site using pits at locations approved by the authorized agent confirms that the following conditions are met:

- (1) a 24-inch minimum vertical separation shall be maintained in saprolite from the infiltrative surface to an unsuitable LC, unless any of the vertical separation consists of a suitable soil horizon, in which case, the 24-inch separation may be calculated based on one inch of suitable soil being equivalent to two inches of saprolite; and
- (2) the following physical properties and characteristics shall be present in the saprolite below the proposed infiltrative surface:
 - (A) the saprolite texture as determined in the field by hand texturing samples of each horizon shall be sand, loamy sand, sandy loam, loam, or silt loam;
 - (B) the clay mineralogy shall be suitable in accordance with Rule .0503(3) of this Section;
 - (C) greater than two-thirds of the saprolite by volume shall have a moist consistence of loose, very friable, friable, or firm;
 - (D) the saprolite wet consistence shall be nonsticky or slightly sticky and nonplastic or slightly plastic;
 - (E) the saprolite shall be in an undisturbed, naturally occurring state;
 - (F) the saprolite shall have no open and continuous joints, quartz veins, or fractures relic of parent rock; and
 - (G) laboratory determinations may be used to supplement field determinations. Split samples shall be made available to the LHD.

History Note: Authority G.S. 130A-335(e); S.L. 2015-147, s. 3;
Eff. January 1, 2024.

15A NCAC 18E .0507 RESTRICTIVE HORIZONS

(a) Soils in which restrictive horizons are three inches or more in thickness and at depths greater than or equal to 18 inches below the naturally occurring soil surface shall be suitable.

(b) Soils in which restrictive horizons are three inches or more in thickness and at depths less than 18 inches below the naturally occurring soil surface shall be unsuitable.

History Note: Authority G.S. 130A-335(e);
Eff. January 1, 2024.

15A NCAC 18E .0508 AVAILABLE SPACE

(a) Sites shall have available space to allow for the installation of the initial wastewater system and repair area for a system identified or approved in Sections .0900, .1500, or .1700 of this Subchapter. The available space provided shall meet all required setbacks in Sections .0600 or .1200 of the Subchapter and provide access to the wastewater system for operation and maintenance activities. A site with sufficient available space shall be suitable.

(b) If the site does not have available space for both an initial wastewater system and repair area it shall be unsuitable.

(c) The repair area requirement of Paragraph (a) of this Rule shall not apply to a lot or tract of land which meets the following:

- (1) described in a recorded deed or a recorded plat on January 1, 1983;
- (2) insufficient size to satisfy the repair area requirement of Paragraph (a) of this Rule, as determined by the authorized agent;
- (3) DDF is no more than 480 gallons for a single-family dwelling unit or a single facility; and
- (4) the proposed facility will generate DSE.

(d) Although a lot or tract of land may be exempt from the repair area requirement under Paragraph (c) of this Rule, the authorized agent shall determine if there is any available space for the repair area. The authorized agent shall determine the maximum feasible repair area available, and that repair area shall be specified on the IP, CA, and OP.

(e) If a site meets any of the following criteria, a repair area shall be required, even if the site is exempt from the repair area requirement of Paragraph (c) of this Rule:

- (1) proposed increase in flow or wastewater strength to an existing facility permitted under the exemption of Paragraph (c) of this Rule; or
- (2) any new initial wastewater system is proposed on a lot or tract of land on which the exemption in Paragraph (c) of this Rule was previously utilized.

(f) Notwithstanding the criteria for when a repair area is required in accordance with Paragraph (e) of this Rule, a site shall remain exempt from the repair area requirements of Paragraph (a) of this Rule when all of the following conditions are met:

- (1) an owner submits an application to the LHD for an increase in flow to an existing facility permitted in accordance with Paragraph (c) of this Rule and the facility DDF remains less than or equal to 480 gpd of DSE;
- (2) there is sufficient available space for the existing system to be modified pursuant to the Rules of this Subchapter;
- (3) the site for the existing system complies with the Rules of this Subchapter and the existing system is not malfunctioning in accordance with Rule .1303(a)(2) of this Subchapter; and
- (4) the conditions set forth in Paragraph (d) of this Rule are met.

(g) Prior to the issuance of the IP, the proposed dispersal field shall be field located and staked on-contour, as applicable, to verify that initial and repair wastewater systems can be installed in the area delineated. The dispersal field may be installed level but off contour if an authorized agent has determined that there is sufficient vertical separation to a LC along the entire trench length in accordance with Rule .0901(g)(2) of this Subchapter.

(h) The initial and repair area shall not be altered so that the wastewater system specified on the IP, CA, and OP cannot be installed and function as permitted.

History Note: Authority G.S. 130A-335(e) and (f); S.L. 2015-147, s. 1; Eff. January 1, 2024.

15A NCAC 18E .0509 SITE SUITABILITY AND CLASSIFICATION

(a) A site evaluated in accordance with Rules .0502 through .0508 of this Section with all parameters determined as suitable shall result in an overall site classification of suitable. Any parameter determined as unsuitable shall result in an overall site classification of unsuitable.

(b) Sites classified as unsuitable may be reclassified as suitable as follows:

- (1) when site modifications are made that meet the requirements in Sections .0900 or .1200 of this Subchapter for the minimum vertical separation to the SWC;
- (2) if installation of an interceptor drain will intercept and divert lateral water to prevent saturation of the wastewater system;
- (3) with the use of advanced pretreatment based on the modified siting and sizing criteria in Section .1200 of this Subchapter; or
- (4) with the use of a wastewater system identified or approved in Sections .0900 or .1700 of this Subchapter.

(c) For sites that are classified as unsuitable in accordance with this Rule, a special site evaluation in accordance with Rule .0510 of this Section may be provided that demonstrates that the proposed wastewater system can be expected to overcome the unsuitable site conditions and function in accordance with this Subchapter.

(d) An IP shall not be issued for a site which is classified unsuitable.

History Note: Authority G.S. 130A-335(e); Eff. January 1, 2024.

15A NCAC 18E .0510 SPECIAL SITE EVALUATIONS

(a) A special site evaluation shall demonstrate that the proposed use of the site with a specific wastewater system design and configuration will not result in effluent discharge to the ground surface or contravention of groundwater or surface water standards. Special site evaluations shall be performed by a licensed professional, if required in G.S. 89C, 89E, or 89F.

(b) The owner may submit a special site evaluation for a site classified as unsuitable as set forth in Rule .0509 of this Section to an authorized agent. The special site evaluation shall include written documentation and demonstrate that the proposed wastewater system can be expected to overcome the unsuitable site conditions and function in accordance with this Subchapter.

(c) Any site that is proposed with one or more of the following shall require a special site evaluation:

- (1) proposal submitted in accordance with Rule .0509(c) of this Section;
- (2) sand lined trench systems when the texture of the receiving permeable horizon is sandy loam or loam and the DDF is greater than 600 gpd, or when the texture of the receiving permeable horizon is silt loam;
- (3) DSE drip dispersal systems meeting the following soil and site conditions:

- (A) depth from the naturally occurring soil surface to any LC is greater than or equal to 18 inches and the LTAR is proposed to exceed 0.5 gpd/ft² for Group I, 0.35 gpd/ft² for Group II, or 0.2 gpd/ft² for Group III soils;
- (B) depth from the naturally occurring soil surface to any SWC is less than 18 inches and the LTAR is proposed to exceed 0.5 gpd/ft² for Group I, 0.3 gpd/ft² for Group II, or 0.15 gpd/ft² for Group III soils;
- (C) Group IV soils are encountered within 18 inches of the naturally occurring soil surface or within 12 inches of the infiltrative surface, whichever is deeper, and the LTAR is proposed to exceed 0.05 gpd/ft²;
- (D) Group IV soils are encountered within 18 inches of the naturally occurring soil surface and the depth from the naturally occurring soil surface to any LC is less than 24 inches;
- (E) Group IV soils are encountered within 18 inches of the naturally occurring soil surface and the driplines are installed in new fill material;
- (F) groundwater lowering system is used to comply with soil depth and vertical separation requirements to a SWC;
- (G) proposed LTAR exceeds that assigned by the LHD; or
- (H) DDF is greater than 1,500 gpd;
- (4) advanced pretreatment systems meeting the following soil and site conditions:
 - (A) vertical separation to a LC is proposed to be reduced. The vertical separation to rock or tidal water shall not be reduced to less than 12 inches;
 - (B) less than 18 inches of naturally occurring soil to a LC, excluding SWC;
 - (C) increased LTAR is proposed for a site with Group III or IV soils within three feet of the infiltrative surface;
 - (D) increased LTAR is proposed for a site with Group II or III soils that requires a groundwater lowering system;
 - (E) proposed use of a groundwater lowering system to comply with vertical separation requirements to a SWC;
 - (F) bed systems located beneath the advanced pretreatment unit on a site with uniform slope exceeding two percent except in Group I soils with a SWC greater than 36 inches;
 - (G) bed systems with a DDF greater than 1,500 gpd; or
 - (H) increased LTAR is proposed on a site with a DDF greater than 1,500 gpd;
- (5) drip dispersal systems and Group IV soils are within 18 inches of the naturally occurring soil surface or within 12 inches of the infiltrative surface, whichever is deeper, and the LTAR is proposed to exceed 0.1 gpd/ft² for NSF/ANSI 40, 0.12 gpd/ft² for TS-I, or 0.15 gpd/ft² for TS-II;
- (6) NSF/ANSI 40 and drip dispersal systems when the LTAR is proposed to exceed 0.8 gpd/ft² for Group I soils, 0.5 gpd/ft² for Group II soils, 0.25 gpd/ft² for Group III soils, or 0.1 gpd/ft² for Group IV soils;
- (7) TS-I and drip dispersal systems which meet the following criteria:
 - (A) site has less than 18 inches of naturally occurring soil to any unsuitable LC;
 - (B) Group III soils are present and a groundwater lowering system is used to comply with the vertical separation requirements to a SWC;
 - (C) Group IV soils are encountered within 18 inches of the naturally occurring soil surface, the LTAR is proposed to exceed 0.05 gpd/ft², and the system is proposed to be installed in new fill; or
 - (D) LTAR is proposed to exceed 1.0 gpd/ft² for Group I soils, 0.6 gpd/ft² for Group II soils, 0.3 gpd/ft² for Group III soils, or 0.12 gpd/ft² for Group IV soils;
- (8) TS-II and drip dispersal systems which meet the following criteria:
 - (A) Subparagraphs (7)(A), (B), or (C) of this Rule; or
 - (B) LTAR is proposed to exceed 1.2 gpd/ft² for Group I soils, 0.7 gpd/ft² for Group II soils, 0.4 gpd/ft² for Group III soils, or 0.15 gpd/ft² for Group IV soils;
- (9) site-specific nitrogen migration analysis is required to verify that the nitrate-nitrogen concentration at the property line will not exceed groundwater standards;
- (10) LHD or Department determines that the combination of soil conditions, site topography and landscape position, DDF, system layout, and proposed stormwater appurtenances will potentially result in hydraulic overload; or
- (11) DDF greater than 3,000 gpd, unless the requirements of Rule .0302(f) of this Subchapter are met.

(d) The special site evaluation shall include hydrologic or hydraulic testing, as applicable, and analysis, in accordance with Rule .0304(2)(b) of this Subchapter.

(e) For wastewater systems with a DDF greater than 3,000 gpd, the special site evaluation shall include sufficient site-specific data to predict the height of the water table mound that will develop beneath the field on level sites and the rate of lateral and vertical flow away from the trenches on sloping sites, unless the conditions in Paragraph (f) of this Rule are met. The data submitted may include deep soil borings to an impermeable layer or to a depth to support the hydrologic testing and modeling, permeability, in-situ Ksat measurements, water level readings, and other information determined to be necessary by the LHD or the Department, such as the impact of projected wastewater constituents on the trench and receiving soil. The site shall be considered unsuitable if the data indicate any of the following:

- (1) the groundwater mound that will develop beneath the site cannot be maintained two feet or more below the bottom of the trenches;
- (2) effluent is likely to become exposed on the ground surface; or
- (3) contaminant transport analysis indicates that groundwater standards established in accordance with 15A NCAC 02L are determined or projected to be violated at the property line.

(f) For wastewater systems with a DDF greater than 3,000 gpd and dispersal fields designed for less than or equal to 1,500 gpd, in-situ Ksat measurements and groundwater mounding or lateral flow analysis shall not be required if a special site evaluation demonstrates that the dispersal fields are in separate lateral flow windows or are shown to not be hydraulically connected.

(g) The Department shall review the special site evaluation if requested by the LHD or if required in accordance with Rule .0302(e) of this Subchapter.

*History Note: Authority G.S. 89E; 89F; 130A-335(a1), (e), and (f);
Eff. January 1, 2024.*

SECTION .0600 – LOCATION OF WASTEWATER SYSTEMS

15A NCAC 18E .0601 LOCATION OF WASTEWATER SYSTEMS

(a) Every wastewater system shall be located the minimum setbacks from the site features specified in Table IX. The setback shall be measured on the ground surface, unless otherwise specified in this Rule, from the nearest wastewater system component sidewall or as otherwise specified in a system specific rule or PIA Approval.

TABLE IX. Minimum setbacks from all wastewater systems to site features

Site Features	Setback in feet
Any transient or non-transient non-community water supply well, community well, shared water supply well, well that complies with 15A NCAC 18A .1700, or water supply spring	100
A private drinking water well or upslope spring serving a single family dwelling unit	50
Any other well or source not listed in this table, excluding monitoring wells	50
Surface waters classified WS-I, from ordinary high-water mark	100
Waters classified SA, from mean high-water mark	100
Any Class I or Class II reservoir, from normal water level	100
Lake or pond, from normal water level	50
Any other stream, non-water supply spring, or other surface waters, from the ordinary high-water mark	50
Tidal influenced waters, such as marshes and coastal waters, from mean high-water mark	50
Permanent stormwater retention basin, from normal water level	50
Any water line, unless the requirements of Paragraph (i) have been met	10
Closed loop geothermal wells	15
Building foundation and deck supports	5
Patio, porch, stoop, lighting fixtures, or signage, including	1

supporting structures such as posts or pilings	
Any basement, cellar, or in-ground swimming pool	15
Buried storage tank or basin, except stormwater	10
Above ground swimming pool and appurtenances that require a building permit	5
Top of slope of embankment or cuts of two feet or more vertical height with a slope greater than 50 percent	15
Top of slope of embankment or cuts of two feet or more vertical height with a slope greater than 33 percent and less than or equal to 50 percent	15 If the site has suitable soil depth that extends for a minimum horizontal distance of 15 feet from the edge of the dispersal field, no minimum setback is required.
Top of slope of embankment or cuts of two feet or more vertical height with a slope less than 33 percent	0
Groundwater lowering system, as measured on the ground surface from the edge of the feature	25
Downslope interceptor drains and surface water diversions with a vertical cut of more than two feet, as measured on the ground surface from the edge of the feature	15
Upslope and sideslope interceptor drains and surface water diversions with a vertical cut of more than two feet, as measured on the ground surface from the edge of the feature	10
A stormwater collection system as defined in 15A NCAC 02H .1002(48), excluding gutter drains that connect to a stormwater collection system, with a vertical cut of more than two feet as measured from the center of the collection system	10
Bio-retention area, injection well, infiltration system, or dry pond	25
Any other dispersal field, except designated dispersal field repair area for project site	20
Any property line	10
Burial plot or graveyard boundary	10
Above ground storage tank from dripline or foundation pad, whichever is more limiting	5
Utility transmission and distribution line poles and towers, including guy wires, unless a greater setback is required by the utility company	5
Utility transformer, ground-surface mounted	5
Underground utilities	5

(b) Wastewater systems may be located closer than 100 feet but never less than 50 feet from water supply wells or an upslope spring for repairs, space limitations, and other site-planning considerations when one of the following conditions is met:

- (1) the well was constructed prior to July 1, 1993, in accordance with 15A NCAC 18A .1720; or
- (2) a variance for a reduced well setback has been issued in accordance with one of the following:
 - (A) 15A NCAC 02C .0118 for a shared water supply well, a wastewater system permitted or installed in saprolite, or for a transient non-community public water supply well; or
 - (B) 15A NCAC 18C .0203(b) for a non-transient non-community public water system.

(c) Wastewater systems shall not be located closer than 100 feet to springs, uncased wells, and ungrouted wells used as a source of drinking water and located downslope from the dispersal field.

(d) Underground utilities maintain a five-foot setback and shall not encroach on the wastewater system and repair area.

(e) The reduced setbacks in Table X shall apply to septic tanks and pump tanks if a leak test has been performed at the job site on the septic tank and pump tank in accordance with Rule .0805 of this Subchapter that verifies the tank, pipe penetrations, and riser connections are watertight.

TABLE X. Reduced setbacks for tanks to some site features

Site Features	Setback in feet
Permanent stormwater retention basin, from normal water level	35
Bio-retention area, injection well, infiltration system, or dry pond	15
Groundwater lowering system, as measured on the ground surface from the edge of the feature	15
Any water line	5
A stormwater collection system as defined in 15A NCAC 02H .1002(48), excluding gutter drains that connect to a stormwater collection system, with a vertical cut of more than two feet as measured from the center of the collection system	5

(f) No minimum setback shall be required from a well that has been permanently abandoned in accordance with 15A NCAC 02C .0113 and for which a record of abandonment has been submitted in accordance with 15A NCAC 02C .0114.

(g) Initial and repair dispersal field systems shall not be located under impervious surfaces or areas subject to vehicular traffic unless approved in accordance with G.S. 130A-343 and Section .1700 of this Subchapter.

(h) If a collection sewer is installed under areas subject to vehicular traffic or areas subject to soil disturbance or compaction, one of the following pipe materials shall be used:

- (1) DIP;
- (2) a minimum of Schedule 40 PVC, Polyethylene, or ABS pipe sleeved in DIP;
- (3) a minimum of Schedule 40 PVC, Polyethylene, or ABS pipe sleeved in DOT traffic rated culvert pipe;
- (4) a minimum of Schedule 40 PVC, Polyethylene, or ABS pipe with 30 inches of compacted material provided over the crown of the pipe; or
- (5) other pipe materials may be proposed when designed, inspected, and certified by a PE and approved by the LHD.

(i) In addition to the requirements of Paragraph (a) of this Rule, wastewater systems with a proposed DDF greater than 3,000 gpd, as determined in Rule .0401 of this Subchapter, shall be located the minimum setbacks from the site features in Table XI.

TABLE XI. Minimum setbacks from wastewater systems greater than 3,000 gpd to site features

Feature	Setback in feet
Any Class I or II reservoir or any public water supply source utilizing a shallow, under 50 feet, groundwater aquifer, from feature or normal water level	500
Any other public water supply source, unless a confined aquifer	200
Any private drinking water well or upslope spring, unless a confined aquifer	100
Surface water classified WS- I, from ordinary high-water mark	200
Surface waters classified WS-II, WS-III, B, or SB, from mean high-water mark or ordinary high-water mark	100
Waters classified SA, from mean high-water mark	200
Any property line	25

(j) Wastewater systems with a DDF greater than 3,000 gpd that meet the requirements of Rule .0510(f) of this Subchapter may use the setbacks identified in Table IX of this Rule.

(k) Collection sewers shall be located the minimum setbacks to site features shown in Table IX, unless a different minimum setback is specified in Table XII. When a reduced setback to a collection sewer is utilized, the piping requirements for the reduced setback shall be extended to comply with the unreduced setback. The distribution device shall receive the reduced setback when demonstrated to be watertight with an on-site leak test.

TABLE XII. Minimum setbacks from collection sewers to site features

Feature	Setback in feet
Any public water supply source, including	100

wells, springs, and Class I or Class II reservoirs, from feature or normal water level	50, if constructed of or sleeved in Schedule 80 PVC or DIP with mechanical joints equivalent to water main standards, and the collection sewer is leak tested and shown to be watertight*
Any water supply well excluding those regulated under 15A NCAC 18C	50
	25, if constructed of Schedule 40 pressure rated PVC or DIP with mechanical joints equivalent to water main standards, and the collection sewer is leak tested and shown to be watertight*
	15, if constructed of Schedule 80 PVC, sleeved in DIP or Schedule 80 PVC, and the collection sewer is leak tested and shown to be watertight*
Surface waters classified WS-I, WS-II, WS-III, B, SA, or SB, from mean high-water mark or ordinary high-water mark	50
	10, if constructed of or sleeved in Schedule 80 PVC or DIP with mechanical joints equivalent to water main standards, and the collection sewer is leak tested and shown to be watertight*
Any other stream, non-water supply spring, or other surface waters, from the ordinary high-water mark	10
Tidal influenced waters, such as marshes and coastal waters, from mean high-water mark	10
Closed loop geothermal wells	5
Any service connection as defined in 15A NCAC 18C .0102(c)(21)	5
Any basement, cellar, or in-ground swimming pool	10
Top of slope of embankment or cuts of two feet or more vertical height with a slope greater than 50 percent	5
Interceptor drains and surface water diversions, with a vertical cut of more than two feet as measured on the ground surface from the edge of the diversion	5
Permanent stormwater retention basin, from normal water level	10
Bio-retention area, injection well, infiltration system, or dry pond	5
Any other dispersal field, except designated dispersal field repair area for project site	5
Any property line	5
Burial plot or graveyard boundary	5

*Pipe materials other than DIP, Schedule 40 pressure rated PVC, or Schedule 80 PVC shall be acceptable when the materials conform to materials, testing methods, and acceptability standards meeting water main standards and when the line has been designed, installed, inspected, and certified by a PE and approved by the LHD.

(l) The minimum setback from water lines to collection sewers shall be 10 feet, except as follows:

- (1) the water line is laid in a separate trench with the elevation of the bottom of the water line 18 inches above the top of the collection sewer; or
- (2) the water line is laid in the same trench as the collection sewer with the water line located on one side of the trench, on a bench of undisturbed earth and with the elevation of the bottom of the water line 18 inches above the top of the collection sewer. The collection sewer shall be located the width of the trench from the water line.

- (m) Collection sewers and water lines shall not cross, except as follows:
- (1) 18 inches clear vertical separation is maintained, with the collection sewer crossing under the water line; or
 - (2) the water line crosses under the collection sewer or 18 inches clear vertical separation is not maintained and the following criteria are met:
 - (A) the collection sewer is constructed of DIP with joints equivalent to water main standards and extends 10 feet on each side of the point of crossing, with full sections of pipe centered at the point of crossing; and
 - (B) the water line is constructed of ferrous materials with joints equivalent to water main standards and extends a minimum of 10 feet on each side of the point of crossing, with full sections of pipe centered at the point of crossing.
- (n) Collection sewers shall not cross storm drains, except as follows:
- (1) 12 inches clear vertical separation is maintained between the collection sewer and storm drain;
 - (2) the collection sewer is constructed of DIP with mechanical joints or restrained push-on joints equal to water main standards; or
 - (3) the collection sewer is encased in concrete or DIP for a minimum of five feet on either side of the crossing.
- (o) Collection sewers shall not cross under a stream, except as follows:
- (1) a minimum of 36 inches of separation from the stream bottom is maintained;
 - (2) the collection sewer is constructed of DIP with mechanical joints or restrained push-on joints equal to water main standards; or
 - (3) the collection sewer is encased in concrete or DIP for a minimum of 10 feet on either side of the crossing and protected against the normal range of high and low water conditions, including the 100-year flood or wave action.
- (p) Collection sewer aerial crossings shall be constructed of DIP with mechanical joints or restrained push-on joints equal to water main standards and freeze protected. Pipe shall be anchored for a minimum of 10 feet on either side of the crossing.
- (q) If septic tanks, pump tanks, grease tanks, raw sewage lift stations, wastewater treatment plants, sand filters, and other advanced pretreatment systems are located in areas subject to flooding at a frequency greater than a 10-year storm, they shall be designed and installed to be watertight and to remain operable during all flooding events.

History Note: Authority G.S. 130A-334; 130A-335(e) and (f); S.L. 2019-215, s. 2;
Eff. January 1, 2024.

15A NCAC 18E .0602 APPLICABILITY OF SETBACKS

- (a) The minimum setback requirements in Table IX of Rule .0601(a) of this Section for SA waters, basements, property lines, and cuts of two feet or more vertical height, shall not apply to the installation of a single wastewater system serving a single-family residence with a maximum DDF of 480 gpd on a lot or tract of land that meets the following requirements:
- (1) on July 1, 1977, is described in a deed, contract, other instrument conveying fee title, or in a recorded plat;
 - (2) is of insufficient size to satisfy the minimum setback requirements in Table IX of Rule .0601(a) of this Section for SA waters, basements, property lines, and cuts of two feet or more vertical height of this Section on July 1, 1977; and
 - (3) cannot be served by a community or public sewerage system on the date system construction is proposed to begin.
- (b) For those lots or tracts of land described in Paragraph (a) of this Rule, the maximum feasible setback shall be required, but shall not be less than the minimum setbacks in Table XIII.

TABLE XIII. Minimum setbacks from wastewater systems to specific site features on lots described in this Rule

Feature	Minimum setback in feet
SA waters from mean high-water mark	50
Basement	8
Property line	5
Cuts of two feet or more vertical height	5

(c) For wastewater systems installed in Group I soils on lots or tracts of land that meet the requirements of Paragraph (a) of this Rule, the wastewater system shall be located the maximum feasible distance but no less than 10 feet from any other wastewater system.

(d) For wastewater systems installed on lots or tracts of land which, on July 1, 1982, are specifically described in a deed or recorded plat, and the wastewater system cannot meet the minimum setbacks in Table IX of Rule .0601(a) of this Section for groundwater lowering systems, the wastewater system shall be located the maximum feasible horizontal distance but no less than 10 feet from the groundwater lowering system.

(e) Any local board of health ordinances in effect on June 30, 1977, which establish greater minimum setback requirements than those provided for in this Section, shall remain in effect and shall apply to a lot or tract of land to which Table IX of Rule .0601(a) of this Section does not apply.

*History Note: Authority G.S. 130A-335(e);
Eff. January 1, 2024.*

SECTION .0700 – COLLECTION SEWERS, RAW SEWAGE LIFT STATIONS, SEPTIC TANK EFFLUENT PUMP SYSTEMS, AND PIPE MATERIALS

15A NCAC 18E .0701 COLLECTION SEWERS

(a) Collection sewers shall be designed and constructed in accordance with the following criteria:

- (1) Building drains and building sewers shall be in accordance with the North Carolina Plumbing Code and approved by the local building inspector.
- (2) Pipe material shall be specified to comply with the applicable ASTM standards based on pipe material.
- (3) Gravity sewers shall be designed to maintain minimum scour velocities of two feet per second with the pipe half full and one foot per second at the peak projected instantaneous flow rate. Force mains shall be sized to obtain a minimum two-foot per second scour velocity at the projected pump operating flow rate.
- (4) Infiltration and exfiltration shall not exceed 100 gpd per inch diameter per mile of gravity sewer pipe or 20 gpd per inch diameter per mile of pressure pipe in force mains and supply lines.
- (5) Collection sewers shall be buried three feet deep, except as provided for in Rule .0601(h)(4) of this Subchapter.
- (6) Ferrous material pipe or other pipe designed and bedded for traffic-bearing loads shall be provided where collection sewers are subject to vehicular traffic.
- (7) Manholes shall be used for gravity collection sewers at any bend, junction, and a maximum of every 425 feet along the collection sewer. Drop manholes shall be required where the inlet to outlet elevation difference exceeds two and one half feet. Manhole lids shall be watertight if located below the 100-year flood elevation, within 100 feet of any public water system source, or within 50 feet of any private water system source or any surface waters classified WS-I, WS-II, WS-III, SA, SB, or B.
- (8) Cleanouts may be used instead of manholes for four-inch and six-inch sewers serving one or two design units, or as otherwise allowed by the North Carolina Plumbing Code. Cleanouts shall be required a maximum of every 100 feet for four or six-inch sewers and at all junctions and bends which exceed 45 degrees, unless otherwise allowed by the North Carolina Plumbing Code.
- (9) Air relief valves shall be provided as needed for force mains when the length exceeds 1,000 feet or for intermediate high points that exceed five feet.
- (10) Collection sewers may require additional ventilation provisions, such as a stand pipe, based on length, size, and location.

(b) STEP systems may be used as an alternative to gravity collection sewers.

*History Note: Authority G.S. 130A-335(e), (f), and (f1);
Eff. January 1, 2024.*

15A NCAC 18E .0702 RAW SEWAGE LIFT STATIONS

(a) Raw sewage lift stations permitted by the LHD shall meet all setbacks for wastewater systems in accordance with Table IX of Rule .0601(a) of this Subchapter.

(b) Raw sewage lift stations shall meet the following design and construction standards:

- (1) dual pumps shall be provided for stations serving two or more buildings or for a facility with more than six water closets;

- (2) pumps shall be listed by a third-party electrical testing and listing agency, such as Underwriter's Laboratories;
- (3) pumps shall be grinder pumps or solids-handling pumps capable of handling a minimum of three-inch spheres. If the raw sewage lift station serves no more than a single water closet, lavatory, and shower, two-inch solids handling pumps shall be acceptable;
- (4) minimum pump capacity shall be two and one half times the average daily flow;
- (5) raw sewage lift stations serving single buildings shall be designed for pump run times between three to 10 minutes at average daily flow;
- (6) pump station emergency storage capacity and total liquid capacity shall be determined in accordance with Rule .0802 of this Subchapter except for a sealed, watertight chamber serving an individual building, in which case a minimum storage capacity of eight hours shall be required; and
- (7) all applicable requirements for pump tanks and dosing systems as set forth in Rule .0802 and Section .1100 of this Subchapter shall apply to raw sewage lift stations.

(c) A raw sewage lift station that is a sealed, watertight chamber shall meet the setback requirements for collection sewers in Rule .0601(k) of this Subchapter. Sealed, watertight chambers shall be a single prefabricated unit with a sealed top lid, and preformed inlet and outlet pipe openings connected with solvent welds, O-ring seals, rubber boots, stainless steel straps, or equivalent.

*History Note: Authority G.S. 130A-335(e), (f), and (f1);
Eff. January 1, 2024.*

15A NCAC 18E .0703 PIPE MATERIALS

- (a) The gravity pipe between a septic tank, gravity distribution device, and the dispersal field shall be a minimum of three-inch Schedule 40 PVC, Schedule 40 polyethylene, or Schedule 40 ABS.
- (b) Three-inch or greater non-perforated polyethylene corrugated tubing, PVC SDR 21 and SDR 26 pressure rated at 160 psi or greater and labeled as compliant with ASTM D2241, PVC SDR 35 gravity sewer pipe rated as compliant with ASTM D3034, or alternative non-perforated pipe materials described in Paragraph (d) of this Rule, may be substituted for Schedule 40 between the distribution device and the dispersal field when the following minimum installation criteria are met:
 - (1) the pipe is placed on a compacted, smooth surface free of indentations or clods at a uniform grade, and with an excavation width of one foot;
 - (2) the pipe is placed in the middle of the excavation with three inches of clearance between the pipe and the walls;
 - (3) a washed gravel or crushed stone envelope is placed in the excavation on both sides of the pipe and to a point two inches above the top of the pipe;
 - (4) six inches of soil is placed and compacted over the stone or gravel envelope; and
 - (5) earthen dams consisting of two feet of undisturbed or compacted soil are located at both ends of the excavation separating the trench from the distribution device.
- (c) All pipe joints from the septic tank to the dispersal field shall be watertight. Solvent cement-joints shall be made in a two-step process with primer manufactured for thermoplastic piping systems and solvent cement conforming to ASTM D2564.
- (d) Pipe used for gravity distribution laterals shall be corrugated plastic tubing complying with ASTM F667 or smooth-wall plastic pipe complying with ASTM D2729 or ASTM F810. The pipe shall be marked as complying with ASTM standards. The corrugated tubing or smooth-wall pipe shall have three rows of holes, each hole between one-half inch and three-fourths inches in diameter and spaced longitudinally approximately four inches on centers. The rows of holes may be equally spaced 120 degrees on centers around the pipe periphery, or three rows may be located in the lower portion of the tubing, the outside rows being approximately on 120-degree centers. The holes may be located in the same corrugation or staggered in adjacent corrugations. Other types of pipe may be used for laterals provided the pipe satisfies the requirements of this Rule and is approved by the Department.
- (e) Pump discharge piping, including the force main to the next component in the wastewater system, shall be of Schedule 40 PVC or stronger material and pressure rated for water service at a minimum of 160 psi or two times the maximum operating pressure, whichever is greater. The pipe shall meet ASTM D1784, ASTM D1785, and ASTM D2466.
- (f) Pipe materials other than those identified in this Rule may be proposed when designed and certified by a PE, including any installation and testing procedures. Gravity pipe materials shall be shown to comply with the requirements of Paragraphs (a), (b), and (c) of this Rule. Alternative pressure rated pipe materials shall be constructed of PVC, polyethylene, or other pressure rated pipe and conform to applicable ASTM standards for pipe material and methods of joining. The proposed pipe shall be installed per ASTM D2774. Installation testing shall include a hydrostatic pressure test similar to pressure testing required for

water mains for any line exceeding 500 feet in length and shall comply with the requirements of Rule .0701(a)(4) of this Section.

*History Note: Authority G.S. 130A-335(e), (f), and (f1);
Eff. January 1, 2024.*

SECTION .0800 – TANK CAPACITY, LEAK TESTING, AND INSTALLATION REQUIREMENTS

15A NCAC 18E .0801 SEPTIC TANK CAPACITY REQUIREMENTS

(a) Minimum liquid capacities for septic tanks shall be in accordance with the following:

- (1) The minimum capacity of any septic tank shall be 1,000 gallons unless otherwise provided for in this Rule.
- (2) The minimum capacity of any septic tank serving an individual dwelling unit with five bedrooms or less shall be sized as set forth in Table XIV.

TABLE XIV. Minimum septic tank liquid capacity for dwelling units

Number of bedrooms	Minimum liquid capacity in gallons
4 or less	1,000
5	1,250

- (3) Septic tanks for dwelling units greater than five bedrooms, multiple dwelling units, places of business, or places of public assembly shall be sized in accordance with Table XV.
- (4) The minimum septic tank capacity serving two or more dwelling units shall be 1,500 gallons.

TABLE XV. Septic tank capacity for facilities not listed in Table XIV

Design daily flow in gpd (Q)	Minimum septic tank liquid capacity (V) calculation in gallons
$Q \leq 600$	$V = 2Q$
$600 < Q < 1,500$	$V = 1.17Q + 500$
$1,500 \leq Q \leq 4,500$	$V = 0.75Q + 1,125$
$Q > 4,500$	$V = Q$

- (5) Septic tanks for RWTS and PIA Systems shall be sized in accordance with the RWTS or PIA Approval, pursuant to Sections .1500 and .1700 of this Subchapter.
- (b) The minimum liquid capacity requirements of Paragraph (a) of this Rule shall be met by use of a single two compartment tank or by two tanks installed in series. The tanks in series may be constructed with or without a baffle wall. Each tank shall have a minimum liquid capacity of 1,000 gallons.
- (c) When a grinder pump or sewage lift pump is installed prior to the septic tank, the required septic tank liquid capacity as set forth in this Rule shall be doubled. The minimum liquid capacity may be met by installing two or more septic tanks in series, each tank containing two compartments. The minimum liquid capacity of each tank shall be 1,000 gallons.
- (d) The Department shall review other septic tanks designed to receive wastewater from grinder pumps or sewage lift pumps if designed by a PE to ensure that effluent discharged from the septic tank meets DSE as set forth in Table III of Rule .0402(a) of this Subchapter.
- (e) An effluent filter approved in accordance with Rule .1404 of this Subchapter shall be in the outlet of the final compartment of the septic tank.
- (f) When two or more tanks are used in series in accordance with Paragraphs (b) or (c) of this Rule, the following conditions shall be met:
 - (1) the outlet of the initial tank shall consist of an outlet sanitary tee extending down 25 to 50 percent of the liquid depth; and
 - (2) an approved effluent filter shall be in the outlet of the final compartment.

History Note: Authority G.S. 130A-334; 130A-335(e), (f), and (f1);

Eff. January 1, 2024.

15A NCAC 18E .0802 PUMP TANK CAPACITY REQUIREMENTS

(a) The minimum pump tank liquid capacity shall be greater than or equal to the required septic tank liquid capacity as set forth in Rule .0801 of this Section.

(b) For a flow equalization system, the minimum pump tank capacity shall be based upon the sum of the volumes of the following parameters:

- (1) volume is sufficient to ensure pump submergence or as recommended by the pump manufacturer;
- (2) minimum dose volume in accordance with Rule .1101(d) of this Subchapter;
- (3) flow equalization storage; and
- (4) emergency storage capacity in accordance with Paragraph (e) of this Rule.

(c) An alternate minimum pump tank liquid capacity may be proposed by the authorized designer or PE to the LHD based upon the sum of the volumes of the following parameters:

- (1) volume is sufficient to ensure pump submergence or as recommended by the pump manufacturer;
- (2) minimum dose volume in accordance with Rule .1101(d) of this Subchapter;
- (3) flow equalization storage, if applicable; and
- (4) emergency storage capacity in accordance with Paragraph (e) of this Rule.

(d) A PE may propose an alternative design to the LHD to calculate the minimum pump tank liquid capacity required. The alternative method shall provide documentation of pump submergence, dose volume capacity, emergency storage capacity, and flow equalization storage, as applicable. The LHD shall approve the alternative design upon a showing that all required storage capacity is accounted for in the wastewater system without reducing the required septic tank or grease tank capacities specified in Rules .0801 and .0803 of this Section.

(e) The pump tank emergency storage capacity requirement shall be determined based on the following criteria and Table XVI:

- (1) type of facility served;
- (2) classification of surface waters that would be impacted by a pump tank failure; and
- (3) availability of standby power devices and emergency maintenance personnel.

TABLE XVI. Pump tank emergency storage capacity requirements

Facility Type	Surface Water Classification of Watershed	Standby Power and Emergency Maintenance Personnel Provisions	Emergency Storage Capacity Period Requirement
Residential systems and other systems in full time use	WS-I, WS-II, WS-III, SA, SB, and B waters	No standby power	24 hours
		Manually activated standby power and telemetry contacting a 24-hour maintenance service	12 hours
		Automatically activated standby power and telemetry contacting a 24-hour maintenance service	4 hours
	All other surface waters or no surface waters	No standby power	12 hours
		Manually activated standby power and telemetry contacting a 24-hour maintenance service	8 hours
		Automatically activated standby power and telemetry contacting a 24-hour maintenance service	4 hours
Non-residential systems not in full-time use and all other systems	All surface waters	No standby power	12 hours
		Manually activated standby power and telemetry contacting a 24-hour maintenance service	8 hours
		Automatically activated standby power and telemetry contacting a 24-hour maintenance service	4 hours

(f) Telemetry shall be demonstrated to be operational to the authorized agent and the Management Entity prior to issuance of the OP.

History Note: Authority G.S. 130A-335(e), (f), and (f1);
Eff. January 1, 2024.

15A NCAC 18E .0803 GREASE TANK CAPACITY REQUIREMENTS

(a) Grease tanks or grease tanks used with grease traps shall be required for food preparation facilities, food processing facilities, and meat markets; churches, institutions, and places of public assembly that include a full kitchen; and other facilities expected to generate FOG levels that are higher than DSE as defined in Table III of Rule .0402(a) of this Subchapter. The grease tank shall be plumbed to receive all wastes associated with food handling, preparation, and cleanup. No toilet wastes shall be discharged to a grease tank.

(b) The minimum grease tank liquid capacity shall be 1,000 gallons or as calculated by one of the following, whichever is greater:

- (1) five gallons per meal served per day;
- (2) equal to the required septic tank liquid capacity calculated in accordance with Rule .0801 of this Section; or
- (3) equal to the capacity as determined in accordance with the following:

$$\text{Where } \text{GLC} = \text{D} \times \text{GL} \times \text{ST} \times \text{HR} / 2 \times \text{LF}$$

Where GLC = grease tank liquid capacity, in gallons
D = number of seats in dining area
GL = gallons of wastewater per meal: 1.5 single-service or 2.5 multiuse
ST = storage capacity factor = 2.5
HR = number of hours open
LF = loading factor: 1.25 if along an interstate highway; 1.0 if along US Highway or recreational areas; or 0.8 if along other roads

(c) When the required minimum grease tank capacity for a facility is less than or equal to 1,500 gallons, the grease tank may be a single tank with two compartments and a minimum 2:1 length to width ratio.

(d) When the required minimum grease tank capacity for a facility is greater than 1,500 gallons, the grease tank shall have a minimum 4:1 length to width ratio and four compartments. This requirement can be met by two or more tanks in series. When this requirement is met by having two or more tanks in series, each tank in the series shall have a minimum liquid capacity of 1,000 gallons and a minimum 2:1 length to width ratio.

(e) A grease rated effluent filter approved in accordance with Rule .1404 of this Subchapter shall be in the final compartment of the grease tank.

(f) When two or more grease tanks are used in series in accordance with Paragraph (d) of this Rule, the following conditions shall be met:

- (1) an approved grease rated effluent filter shall be in the final compartment; and
- (2) the outlet of the initial tank shall consist of a sanitary tee extending down 40 to 60 percent of the liquid depth.

(g) The grease tank liquid capacity requirements set forth in this Rule may be reduced by up to 50 percent when used in conjunction with a grease trap located inside the facility. The system shall be designed by a PE, if required by G.S. 89C, and approved by the Department when review of documentation provided by the PE and manufacturer demonstrate that the grease trap is projected to reduce FOG concentration by at least 50 percent.

(h) Grease traps and grease tanks shall be maintained by a septage management firm permitted in accordance with G.S. 130A-291.1, and the contents disposed of in accordance with 15A NCAC 13B .0800.

History Note: Authority G.S. 130A-335(e), (f), and (f1);
Eff. January 1, 2024.

15A NCAC 18E .0804 SIPHON TANK CAPACITY REQUIREMENTS

Siphon tanks shall be sized to provide the minimum dose requirements of Rule .1101(d) of this Subchapter, plus three inches of freeboard above the siphon trip level.

History Note: Authority G.S. 130A-335(e), (f), and (f1);
Eff. January 1, 2024.

15A NCAC 18E .0805 TANK LEAK TESTING AND INSTALLATION REQUIREMENTS

(a) All tanks installed under the following conditions shall be leak tested:

- (1) when a SWC is present within four feet of the elevation of the top of a mid-seam pump tank;
- (2) with advanced pretreatment when required in the RWTS or PIA Approval;
- (3) when required in the approved plans and specifications for a wastewater system designed by a PE;
- (4) when the tank is constructed in place; or
- (5) as required by the authorized agent based upon site or system specific conditions, such as misaligned seams, exposed reinforcement, or damage observed that may have occurred during transport or installation.

(b) Tanks subject to leak testing in accordance with Paragraph (a) of this Rule shall be leak tested using either a hydrostatic test procedure or vacuum test procedure as follows:

- (1) The operational procedures to be followed for the hydrostatic test are:
 - (A) fill tank with water to the outlet invert or pipe, as applicable;
 - (B) allow the tank to sit for one hour;
 - (C) tank shall be approved if the water level drops less than or equal to one-eighth inch in one hour;
 - (D) if a leak is detected, the tank may be repaired in accordance with the tank manufacturer's written instructions, refilled, and retested;
 - (E) surface wetness or condensation shall not be considered an active water leak; and
 - (F) the tank manufacturer or installer is allowed one attempt to retest the tank before the authorized agent can deny the tank for use in the installation based on failure to pass the leak test.
- (2) The operational procedures to be followed for the vacuum test are:
 - (A) temporarily seal inlet and outlet pipes and access openings;
 - (B) using calibrated equipment, draw a vacuum on the empty tank to a negative pressure of two and one half inches of mercury;
 - (C) hold the vacuum for five minutes and re-measure and record the ending negative pressure inside the tank;
 - (D) no bracing or internal support that is not part of the approved tank shall be allowed;
 - (E) tank shall be approved if the difference between the starting negative pressure and the ending negative pressure is less than or equal to one-fifth inch;
 - (F) if a leak is detected, the tank may be repaired in accordance with the tank manufacturer's written instructions and retested;
 - (G) the tank manufacturer or installer is allowed one attempt to retest the tank before the authorized agent can deny the tank for use in the installation based on the failure to pass the leak test; and
 - (H) all tank openings shall be un-sealed after the vacuum test is completed.

(c) Tanks unable to pass a leak test or be repaired to pass a leak test shall be removed from the site and the imprint described in Rule .1402(d)(15) or (e)(8) of this Subchapter marked over.

(d) The septic tank outlet pipe shall be inserted through the outlet pipe penetration boot, creating a watertight joint, and extending a minimum of two feet beyond the septic tank outlet. The pump tank outlet pipe shall be inserted through the outlet pipe penetration boot, creating a watertight joint, or through another watertight joint, such as a rubber grommet, in the pump tank riser.

(e) The septic tank outlet pipe and pump tank outlet pipe shall be placed on undisturbed soil or bedded in accordance with Rule .0703(b) of this Subchapter to prevent differential settling of the pipe. The pipe shall be level for a minimum of two feet after exiting the tank.

(f) The tank shall be installed level. A tank is considered level if the difference between the front and back is plus or minus one inch and the difference from side to side is plus or minus one inch. The tank excavation, bedding, backfill, and compaction shall be in accordance with the tank manufacturer's installation requirements, specifications, and the tank approval.

(g) The tank excavation shall be separated from the dispersal system by at least two feet of undisturbed soil. Piping from the tank to the next component shall be placed on undisturbed soil, compacted soil, or bedded using sand, gravel, stone, or other aggregate.

(h) Effluent filters and risers shall be installed in accordance with the design and construction criteria of Rule .1402(b) and (c) of this Subchapter.

(i) Any system serving a facility with a DDF greater than 3,000 gpd shall have access manholes installed on the tank and extending at a minimum to finished grade. The access manholes shall be designed and maintained to prevent surface water inflow and sized to allow access for routine inspections, operation, and maintenance.

*History Note: Authority G.S. 130A-335(e), (f), and (f1);
Eff. January 1, 2024.*

SECTION .0900 – SUBSURFACE DISPERSAL

15A NCAC 18E .0901 GENERAL DESIGN AND INSTALLATION CRITERIA FOR SUBSURFACE DISPERSAL SYSTEMS

(a) Wastewater systems shall be used on sites classified suitable in accordance with Rule .0509 of this Subchapter. The sizing and siting criteria in this Rule shall be based on soil receiving DSE. The site shall meet the following minimum criteria:

- (1) 12 inches of naturally occurring soil between the infiltrative surface and any LC; and
- (2) 18 inches of separation between the infiltrative surface and any SWC if more than six inches of separation consists of Group I soils.

(b) If any part of the trench or bed media extends above the naturally occurring soil surface, the system shall be a fill system and shall meet the requirements of Rule .0909 of this Section.

(c) The LTAR shall be determined in accordance with the following:

- (1) Tables XVII and XVIII shall be used, as applicable;
- (2) the LTAR shall be assigned based upon soil textural class or saprolite textural class, as applicable, structure, consistence, SWC, depth, percent coarse rock, landscape position, topography, and system type;
- (3) LTARs determined from Table XVII shall be based on the soil textural class of the most limiting, naturally occurring soil horizon to a depth of 12 inches below the infiltrative surface or 18 inches to any SWC if more than six inches of the separation consists of Group I soils;
- (4) LTARs determined from Table XVIII shall be based on the saprolite textural class of the most limiting, naturally occurring saprolite to a depth of 24 inches below the infiltrative surface, or less than 24 inches if combined with soil in accordance with Rule .0506(b) of this Subchapter; and
- (5) for facilities that generate HSE as specified in Rule .0401(h) of this Subchapter or a facility with a full kitchen, the LTAR shall not exceed the mean rate for the applicable Soil Group.

TABLE XVII. LTAR for wastewater systems based on Soil Group and texture class

Soil Group	USDA Soil Textural Class		LTAR in gpd/ft ²
I	Sands	Sand	0.8 – 1.2
		Loamy Sand	
II	Coarse Loams	Sandy Loam	0.6 – 0.8
		Loam	
III	Fine Loams	Sandy Clay Loam	0.3 – 0.6
		Silt Loam	
		Clay Loam	
		Silty Clay Loam	
		Silt	
IV	Clays	Sandy Clay	0.1 – 0.4
		Silty Clay	
		Clay	

TABLE XVIII. LTAR for wastewater systems in saprolite based on Saprolite Group and texture class

Saprolite Group	Saprolite Textural Class		LTAR in gpd/ft ²
I	Sands	Sand	0.6 – 0.8
		Loamy Sand	0.5 – 0.7
II	Loams	Sandy Loam	0.4 – 0.6
		Loam	0.2 – 0.4
III	Fine Loams	Silt Loam	0.1 – 0.3
		Sandy Clay Loam*	0.05 – 0.15

* Sandy clay loam saprolite can only be used with advanced pretreatment in accordance with Section .1200 of this Subchapter.

(d) The minimum required infiltrative surface area and trench length shall be calculated in accordance with the following:

- (1) the minimum required infiltrative surface area shall be calculated by dividing the DDF by the LTAR;
- (2) the minimum trench length shall be calculated by dividing the minimum required infiltrative surface area by the equivalent trench width. The following equation shall be used to calculate the minimum trench length required:

$$\begin{array}{rcl} \text{TL} & = & (\text{DDF} / \text{LTAR}) / \text{ETW} \\ \text{Where TL} & = & \text{trench length, in feet} \\ \text{DDF} & = & \text{design daily flow, in gpd} \\ \text{LTAR} & = & \text{in gpd/ft}^2 \\ \text{ETW} & = & \text{equivalent trench width, in feet;} \end{array}$$

- (3) the area occupied by step-downs, drop boxes, and supply lines shall not be part of the minimum required infiltrative surface area;
- (4) the total trench length required for trench products other than conventional gravel shall be as follows:
 - (A) for trench products identified in Section .0900 of this Subchapter, the minimum line length shall be calculated in accordance with this Section; or
 - (B) for trench products approved under Section .1700 of this Subchapter, the minimum line length shall be calculated in accordance with the PIA Approval; and
- (5) when HSE is proposed to be discharged to a dispersal field with no advanced pretreatment or has not been reclassified as DSE in accordance with Rule .0402(c) of this Subchapter, a licensed professional, if required in G.S. 89C, 89E, or 89F, shall calculate the adjusted LTAR in accordance with Rule .0402(b)(2) of this Subchapter.

(e) Any dispersal field where cover is required above the naturally occurring soil surface shall not be installed on slopes greater than 30 percent.

(f) Soil cover above the original grade shall be placed over the entire dispersal field and shall extend laterally five feet beyond the trenches. On level sites, the final grade of the dispersal field shall be crowned at one-half percent grade as measured from the centerline of the dispersal field.

(g) Wastewater system installation shall be in accordance with the following criteria:

- (1) a device that measures elevation, such as an engineer's level or laser level shall be used for the following:
 - (A) staking, flagging, or marking on the ground surface the location of trenches on site before installation begins;
 - (B) installation of the trenches; and
 - (C) verification of elevations, excavations, and installation of other system components;
- (2) trenches shall be installed with 12 inches of naturally occurring suitable soil between the infiltrative surface and any unsuitable LC. If the vertical separation between the infiltrative surface and any SWC is less than 18 inches, and if more than six inches of the separation consists of Group I soils, a pressure dispersal system shall be required;
- (3) the trenches shall follow the ground contour. Trenches may be installed level but off contour if an authorized agent has determined that there is sufficient vertical separation to a LC along the entire trench length in accordance with Subparagraph (2) of this Paragraph;
- (4) the lateral shall be centered horizontally in the trench;
- (5) the type and placement of soil cover shall be approved by the authorized agent in accordance with this Subparagraph. The cover material shall be free of trash, debris, or large clods that do not break apart. The system can be installed utilizing native backfill unless otherwise specified in this Section or the PIA Approval;
- (6) final soil cover over the dispersal field shall be a minimum of six inches deep after settling. The finished grade over the tanks and dispersal field shall be sloped to shed surface water;
- (7) surface water runoff, including stormwater, gutter drains, or downspouts, shall be diverted away from the wastewater system. No depressions shall be allowed over the dispersal field area;
- (8) Schedule 40 PVC or other pipe approved pursuant to Section .0700 of this Subchapter may be used as needed to connect sections of trench and overcome site limitations. The trench bottom area where solid piping is installed shall not be included as part of the minimum required infiltrative surface area;

- (9) gravity effluent distribution components including distribution boxes, drop boxes, and flow diversion devices shall be watertight, corrosion resistant, constructed to withstand active and passive loads, and their installation shall meet the following criteria:
 - (A) separated by a minimum of two feet of undisturbed soil from the septic tank and trench(es);
 - (B) placed level on a solid foundation of undisturbed soil, pea gravel, or concrete to prevent differential settling of the component; and
 - (C) backfilled by hand to minimize disturbance;
 - (10) when parallel distribution is used to distribute effluent to the trenches, the installer shall demonstrate to the authorized agent during the final inspection that the distribution devices perform as designed;
 - (11) serial and sequential distribution shall be approved by the authorized agent when the step-down or drop box in an individual trench is constructed to allow full utilization of the upstream trench prior to overflowing to the next downslope trench in accordance with the following criteria:
 - (A) step-downs shall be constructed of a minimum of two feet of undisturbed soil, bedding material, or concrete and the effluent shall be conveyed over the step-down through Schedule 40 PVC or other pipe approved in accordance with Rule .0703 of this Subchapter. The installer shall demonstrate that the step-downs perform as designed. The authorized agent shall approve the step-downs when the installation and elevations have been verified in accordance with the CA; and
 - (B) drop boxes shall be separated from the trench by a minimum of two feet of undisturbed soil and constructed to allow for full utilization of the upstream trench prior to overflowing to the next lower drop box. The installer shall demonstrate that the drop boxes perform as designed. The authorized agent shall approve the drop boxes when the installation and elevations have been verified in accordance with the CA; and
 - (12) trench products other than conventional gravel shall be installed as follows:
 - (A) for trench products identified in Section .0900, the trench products shall be installed in accordance with this Section; or
 - (B) for trench products approved under Section .1700 of this Subchapter, the trench products shall be installed in accordance with their PIA Approval.
- (h) Alternating dual dispersal fields shall only be used with DSE in Soil Groups III and IV. Alternating dual dispersal fields shall be approved when designed and installed in accordance with Paragraph (g) of this Rule and the following:
- (1) both initial and repair dispersal fields shall be installed at the same time;
 - (2) initial and repair dispersal fields of the same system type are each sized at a minimum of 75 percent of the total trench length required;
 - (3) the initial and repair dispersal fields shall be separated by an effluent flow diversion valve(s);
 - (4) diversion valve(s) shall be resistant to 500 pounds crushing strength and corrosion resistant;
 - (5) effluent flow diversion valves shall be installed below finished grade in a valve box and be accessible and operable from the ground surface; and
 - (6) trench products approved under Section .1700 of this Subchapter shall be installed in accordance with their PIA Approval.

History Note: Authority G.S. 130A-335(e), (f), and (f1);
Eff. January 1, 2024.

15A NCAC 18E .0902 CONVENTIONAL WASTEWATER SYSTEMS

- (a) A conventional wastewater system shall consist of a septic tank and a gravity distribution dispersal field. In addition to the requirements set forth in Rule .0901 of this Section, this Rule shall apply to conventional wastewater systems as defined in G.S. 130A-343.
- (b) In addition to the installation requirements set forth in Rule .0901(g) of this Section, the following shall apply:
 - (1) trenches shall be constructed level in all directions with a plus or minus one-half inch tolerance from side-to-side and the maximum fall in a single trench not to exceed one-fourth inch in 10 feet as determined by a device that measures elevation, such as an engineer's level or laser level;
 - (2) trenches shall be located not less than three times the trench width on centers. The minimum spacing for trenches is six feet on center;
 - (3) trench widths shall be at least two feet, but no more than three feet, and trench depth shall not exceed 36 inches on the downslope side of the trench, except as approved by an authorized agent;

- (4) aggregate used in trenches shall be clean, washed gravel or crushed stone and graded or sized in accordance with size numbers 4, 5, or 6 of ASTM D448. The aggregate shall be distributed uniformly across the infiltrative surface and over the pipe and placed 12 inches deep with a minimum of six inches below the pipe and two inches over the pipe; and
- (5) the laterals shall meet the requirements of Rule .0703(d) of this Subchapter.

History Note: Authority G.S. 130A-335(e) and (f); 130A-343;
Eff. January 1, 2024.

15A NCAC 18E .0903 BED SYSTEMS

- (a) This Rule shall apply to bed systems receiving DSE.
- (b) Bed systems shall be limited to 600 gpd unless approved for a greater DDF in accordance with a PIA Approval.
- (c) Sites for bed systems shall meet the following criteria:
 - (1) soil texture is Group I, II, or III; and
 - (2) design options for the site are limited by topography or available space.
- (d) The number of square feet of infiltrative surface area required shall be increased by 50 percent over that required for a trench system as calculated in accordance with Rule .0901(d) of this Section.
- (e) In addition to the installation requirements set forth in Rule .0901(g) of this Section, the following shall apply:
 - (1) the bottom of the bed shall be excavated level, plus or minus one-half inch, in all directions;
 - (2) laterals shall be one and one-half feet from the side of the bed;
 - (3) laterals shall be placed on three-foot centers;
 - (4) aggregate used shall comply with the requirements of Rule .0902(b)(4) of this Section;
 - (5) products approved under Section .1700 of this Subchapter shall be installed in accordance with their PIA Approval;
 - (6) the gravel surface shall be covered by an approved geo-textile fabric capable of preventing the downward movement of soil particles while allowing the movement of liquids and gases; and
 - (7) when pressure dispersal is used, the lateral design criteria shall meet the minimum requirements of Rules .0907(e) or .0908(d) of this Section or in accordance with a PIA Approval.

History Note: Authority G.S. 130A-335(e), (f), and (f1);
Eff. January 1, 2024.

15A NCAC 18E .0904 LARGE DIAMETER PIPE SYSTEMS

- (a) LDP systems consist of laterals composed of corrugated, polyethylene tubing encased in a nylon and polyester blend filter wrap that are installed in trenches in the dispersal field. The laterals shall be one of the following:
 - (1) eight-inch inside diameter with a 10-inch outside diameter; or
 - (2) 10-inch inside diameter with a 12-inch outside diameter.
- (b) LDP systems shall only be used with DSE.
- (c) LDP pipe, filter wrap, and fittings shall meet the following criteria:
 - (1) pipe and fittings shall comply with the requirements of ASTM F667;
 - (2) the corrugated pipe shall have two rows of holes, each hole between three-eighths inch and one-half inch in diameter, located 120 degrees apart along the bottom half of the pipe with each hole 60 degrees from the bottom center line, and staggered so that one hole is present in the valley of each corrugation;
 - (3) pipe shall be marked with a visible top location indicator, 120 degrees away from each row of holes;
 - (4) corrugated pipe shall be covered with filter wrap at the factory;
 - (5) filter wrap shall be spun, bonded, or spunlaced nylon, polyester, or nylon/polyester blend filter wrap meeting the minimum requirements in Table XIX; and
 - (6) the LDP with filter wrap shall be encased in a black polyethylene sleeve prior to installation in the trench to prevent physical damage and ultraviolet radiation deterioration of the filter wrap.

Table XIX. Minimum filter wrap requirements for LDP

Property	Value
Unit Weight	1.0 ounce per square yard
Sheet Grab Tensile Strength	Machine Direction: 23 pounds

Trapezoid Tear Strength	Machine Direction: 6.2 pounds
Mullen Burst Strength	40 psi or 276 kilopascals
Frazier Air Permeability	500 cubic feet per minute per square foot at pressure differential of one-half inch of water

- (d) The requirements of Rule .0901 of this Section shall apply to LDP systems except as follows:
- (1) the LTAR determined in accordance with Rule .0901(c) of this Section shall not exceed 0.8 gpd/ft²; and
 - (2) to calculate the minimum trench length in accordance with Rule .0901(d) of this Section, an equivalent trench width of two feet shall be used for eight-inch LDP and two and one-half feet shall be used for 10-inch LDP.
- (e) In addition to the requirements set forth in Rule .0901(g) of this Section, LDP system installations shall comply with the following:
- (1) trenches for 8-inch LDP shall be a minimum of 10 inches and a maximum of 18 inches wide. Trenches for 10-inch LDP shall be a minimum of 12 inches and a maximum of 24 inches wide;
 - (2) the infiltrative surface and pipe shall be level with a maximum fall of one inch in 100 feet;
 - (3) backfill shall have no more than 10 percent by volume of fibrous organics, building rubble, rocks, large clods, or other debris and shall be Soil Groups I, II, or III;
 - (4) the LDP shall be connected to the collection sewer or a stepdown pipe using an offset adapter to create a mechanical joint; and
 - (5) the minimum on center spacing for eight-inch LDP shall be five feet and for 10-inch LDP shall be six feet.

History Note: Authority G.S. 130A-335(e) and (f);
Eff. January 1, 2024.

15A NCAC 18E .0905 PREFABRICATED PERMEABLE BLOCK PANEL SYSTEMS

- (a) PPBPS utilize both horizontal and vertical air chambers in a 16-inch PPBPS and are constructed to promote downline and horizontal distribution of effluent. PPBPS systems shall only be used with DSE.
- (b) The requirements of Rule .0901 of this Section shall apply to PPBPS systems except as follows:
- (1) the LTAR determined in accordance with Rule .0901(c) of this Section shall not exceed 0.8 gpd/ft²; and
 - (2) to calculate the minimum trench length in accordance with Rule .0901(d) of this Section, an equivalent trench width of six feet shall be used.
- (c) In addition to the requirements set forth in Rule .0901(g) of this Section, PPBPS system installations shall comply with the following and the manufacturer's specifications:
- (1) PPBPS trenches shall be located a minimum of eight feet on center or three times the trench width, whichever is greater; and
 - (2) trench sidewalls shall be raked in Group IV soils.
- (d) When used in bed and fill systems, PPBPS shall use the equivalent trench width of six feet to calculate the minimum trench or lateral length required.
- (e) When used in sand lined trench systems, PPBPS shall use the equivalent trench width of three feet to calculate the minimum trench length required.

History Note: Authority G.S. 130A-335(e) and (f);
Eff. January 1, 2024.

15A NCAC 18E .0906 SAND LINED TRENCH SYSTEMS

- (a) Sand lined trench systems receiving DSE may be used on sites originally classified unsuitable due to SWC, soil morphology, restrictive horizon, or soil depth that may be reclassified as suitable in accordance with this Rule when there is a DDF less than or equal to 1,500 gpd.
- (b) Sand lined trench systems with advanced pretreatment shall comply with Rule .1205 of this Subchapter.
- (c) The soil and site shall meet the following criteria:
- (1) the texture of the receiving permeable horizon is sand, loamy sand, sandy loam, loam, or silt loam;
 - (2) the structure of the receiving permeable horizon is classified suitable;
 - (3) the moist consistence of the receiving permeable horizon is loose, very friable, friable, or firm;

- (4) if the receiving permeable horizon has zones of heavier textured materials, these zones are discontinuous with an average thickness not exceeding one-third of the required thickness of the receiving permeable horizon;
 - (5) the naturally occurring receiving permeable horizon shall be less than or equal to 60 inches below the naturally occurring soil surface. If the receiving permeable horizon is greater than 60 inches below the naturally occurring soil surface, advanced pretreatment shall be used in accordance with Rule .1205 of this Subchapter;
 - (6) artificial drainage shall be provided, as needed, to maintain the following minimum vertical separation from the infiltrative surface to a SWC:
 - (A) 18 inches with gravity or pressure dosed gravity distribution; or
 - (B) 12 inches with pressure dispersal; and
 - (7) the minimum required thickness of the receiving permeable horizon shall be determined by the texture of that horizon as follows:
 - (A) sand or loamy sand texture requires a minimum thickness of one foot;
 - (B) sandy loam or loam texture requires a minimum thickness of two feet; or
 - (C) silt loam texture requires a minimum thickness of three feet.
- (d) If a groundwater lowering system is required to comply with the minimum vertical separation in Paragraph (c)(6) of this Rule to a SWC that is not related to lateral water movement, design plans and specifications shall be prepared by a licensed professional if required in G.S. 89C, 89E, or 89F. The groundwater lowering system shall:
- (1) extend into the receiving permeable horizon;
 - (2) have an outlet with location and elevation that allows for free discharge of groundwater as required for the groundwater lowering system to be functional. The outlet location and elevation shall be shown on the artificial drainage system plan with relative water level elevations and wastewater system site elevations labeled; and
 - (3) all groundwater lowering system components are integral to the wastewater system and subject to ownership and control requirements of Rule .0301(b) and (c) of this Subchapter.
- (e) The LTAR shall be determined in accordance with Table XX for sand-lined trench systems. The minimum trench length shall be calculated in accordance with Rule .0901(d) of this Section, except that the ETW shall be equal to the installed trench width. The LTAR shall be based on the lesser of the following:
- (1) LTAR set forth in Table XX based on the most hydraulically limiting, naturally occurring soils overlying the permeable receiving horizon; or
 - (2) 10 percent of the in-situ Ksat of the receiving permeable horizon.

TABLE XX. LTAR for sand lined trench systems based on the most hydraulically limiting, naturally occurring soils overlying the permeable receiving horizon

Soil Group	Texture of Most Hydraulically Limiting Overlying Soil Horizon	Distribution Type	LTAR in gpd/ft ²
I	Sands	Gravity or Pressure Dosed Gravity	0.7 – 0.9
		Pressure Dispersal	0.8 – 1.2
II	Coarse Loams	Gravity or Pressure Dosed Gravity	0.5 – 0.7
		Pressure Dispersal	0.6 – 0.8
III	Fine Loams	Gravity or Pressure Dosed Gravity	0.2 – 0.4
		Pressure Dispersal	0.3 – 0.6
IV	Clays	Gravity or Pressure Dosed Gravity	0.1 – 0.2
		Pressure Dispersal	0.15 – 0.3

- (f) There shall be no reduction in trench length compared to a conventional wastewater system when Accepted or Innovative gravelless trench product is used.
- (g) A special site evaluation in accordance with Rule .0510 of this Subchapter shall be required for the following conditions to field verify the LTAR:
- (1) the texture of the receiving permeable horizon is sandy loam or loam and the system DDF is greater than 600 gpd; or
 - (2) the texture of the receiving permeable horizon is silt loam.

(h) In addition to the requirements set forth in Rule .0901(g) of this Section, sand lined trench system installations shall comply with the following:

- (1) gravity trenches shall have a maximum width of three feet and a minimum width of one and a half feet;
- (2) trenches shall be located not less than three times the trench width on center. The minimum spacing for trenches shall be five feet on center;
- (3) the sand lined trenches shall be constructed to extend into the naturally occurring receiving permeable horizon;
- (4) the infiltrative surface shall be no deeper than 24 inches below finished grade. The top of the trench media shall be at or below the naturally occurring soil surface. Drip tubing shall be installed a minimum of six inches below the natural grade;
- (5) soil used to line the trench shall be sand in texture. The installer shall provide written laboratory verification of the media textural classification and quality when requested by the LHD based on a visual inspection of the sand used during installation. When laboratory analysis is required, the material shall be clean, uncoated fine, medium, or coarse sand with a minimum of 90 percent in sizes ranging from 0.1 to 2.0 millimeters, with no more than one percent smaller than 0.074 millimeters or a No. 200 Sieve;
- (6) pressure dosed gravity distribution or pressure dispersal shall be used when the total dispersal field line length exceeds 750 linear feet in a single system;
- (7) pressure dispersal shall be used when the total dispersal field line length exceeds 1,200 linear feet in a single system;
- (8) when pressure dispersal is used, the pressure dispersal network shall be designed in accordance with Rules .0907(e) or .0908(f) of this Section, except that the trench width shall comply with this Paragraph. The total line length shall be calculated based on infiltrative surface area;
- (9) drip dispersal systems in sand lined trenches shall require multiple runs per trench of drip tubing with emitters as follows:
 - (A) a minimum of two runs within a trench between one and one half and two feet wide; and
 - (B) a minimum of three runs within a trench between two and three feet wide.The drip tubing shall be uniformly spaced across the trench with the tubing six inches from the trench sidewalls. Drip tubing shall be covered by a minimum of six inches of sand lined trench media meeting the requirements of Subparagraph (5) of this Paragraph. Drip dispersal systems shall comply with the requirements of Section .1600 of this Subchapter and this Rule;
- (10) finished grade shall provide for positive surface drainage away from all system components, with the dispersal field crowned at one-half percent as measured from the centerline of the dispersal field. The finished grade requirements shall be made a condition of the CA; and
- (11) trench products approved under Section .1700 of this Subchapter shall be installed in accordance with PIA Approval.

(i) Other sand lined trench systems may be approved on a site-specific basis in accordance with Rule .0509(c) of this Subchapter.

*History Note: Authority G.S. 130A-335(e) and (f);
Eff. January 1, 2024.*

15A NCAC 18E .0907 LOW PRESSURE PIPE SYSTEMS

(a) LPP systems utilize a network of small diameter pipes with three feet to six feet pressure head to distribute effluent across the entire dispersal field. Any subsurface dispersal system listed in this Section may incorporate LPP dispersal.

(b) LPP systems with advanced pretreatment shall comply with Rules .1202, .1203, .1205, or .1206 of this Subchapter.

(c) The LTAR shall be determined as follows:

- (1) Tables XXI and XXII shall be used to determine the LTAR for LPP systems, as applicable;
- (2) the LTAR determined from Table XXI shall be based on the soil textural class of the most limiting, naturally occurring soil horizon to a depth of 12 inches below the infiltrative surface;
- (3) the LTAR determined from Table XXII shall be based on the saprolite textural class of the most limiting, naturally occurring saprolite to a depth of 24 inches below the infiltrative surface, or less than 24 inches if combined with soil in accordance with Rule .0506(b) of this Subchapter; and
- (4) for facilities that generate HSE as specified in Rule .0401(h) of this Subchapter or a facility with a full kitchen, the LTAR shall not exceed the mean rate for the applicable Soil Group.

TABLE XXI. LTAR for LPP systems based on Soil Group and texture class

Soil Group	USDA Soil Textural Class		LTAR in gpd/ft ²
I	Sands	Sand	0.4 – 0.6
		Loamy Sand	
II	Coarse Loams	Sandy Loam	0.3 – 0.4
		Loam	
III	Fine Loams	Sandy Clay Loam	0.15 – 0.3
		Silt Loam	
		Clay Loam	
		Silty Clay Loam	
		Silt	
IV	Clays	Sandy Clay	0.05 – 0.2
		Silty Clay	
		Clay	

TABLE XXII. LTAR for LPP systems in saprolite based on Saprolite Group and texture class

Saprolite Group	Saprolite Textural Class		LTAR in gpd/ft ²
I	Sands	Sand	0.3 – 0.4
		Loamy Sand	0.25 – 0.35
II	Loams	Sandy Loam	0.2 – 0.3
		Loam	0.1 – 0.2
		Silt Loam	0.05 – 0.15

- (d) The minimum required dispersal field area and trench length shall be calculated in accordance with the following:
- (1) the minimum required dispersal field area shall be calculated by dividing the DDF by the LTAR; and
 - (2) the minimum trench length shall be calculated by dividing the required dispersal field area by a lateral spacing of five feet. The following equation shall be used to calculate the minimum line length required.

$$TL = (DDF / LTAR) / LS$$

Where TL = length of trench, in feet
 DDF = design daily flow, in gpd
 LTAR = in gpd/ft²
 LS = five-foot line spacing
 - (3) When HSE is proposed to be discharged to an LPP dispersal field with no advanced pretreatment or has not been reclassified as DSE in accordance with Rule .0402(c) of this Subchapter, a licensed professional, if required in G.S. 89C, 89E, or 89F, shall calculate the adjusted LTAR in accordance with Rule .0402(b) of this Subchapter.
- (e) In addition to the requirements set forth in Rule .0901(g) of this Section, LPP system design and installation shall comply with the following, unless otherwise specified in a PIA Approval:
- (1) the LPP distribution network shall be constructed of one to two-inch diameter pressure rated Schedule 40 PVC laterals placed in gravel that meets the requirements in Rule .0902(b)(4) of this Section or other approved media;
 - (2) the trench width shall be one to two feet;
 - (3) trenches shall be located not less than three times the trench width on center. The minimum spacing for trenches shall be five feet on center;
 - (4) trenches shall include a minimum of eight inches of gravel or other approved media, either from a PIA Approval or subsurface dispersal system listed in Section .0900 of this Subchapter. The lateral shall be installed a minimum of five inches above the infiltrative surface;
 - (5) laterals, manifolds and LPP fields shall comply with the following design criteria:
 - (A) the maximum lateral length shall yield no more than a 10 percent difference in orifice delivery rate between the first and last orifice along the lateral;

- (B) no more than one-third of the total number of holes shall be less than 5/32 inches in diameter, with no orifices sized smaller than one-eighth inch in diameter in any lateral line;
- (C) all orifices shall face upwards, except for two orifices, one-third of the way from the beginning and end of each lateral, which shall face downward; and
- (D) maximum orifice spacing shall be as follows: Soil Group I - five feet; Soil Group II - six feet; Soil Group III - eight feet; and Soil Group IV - 10 feet;
- (6) the orifices shall be protected by the following:
 - (A) lateral sleeved within a three or four-inch perforated corrugated or smooth wall tubing meeting the requirements of Rule .0703(d) of this Subchapter; or
 - (B) orifice shields that prevent aggregate, soil, and tree roots from clogging the orifices;
- (7) the following additional design provisions shall be required for sloping sites:
 - (A) separately valved manifolds shall be required for all subfield segments where the elevation difference between the highest and lowest laterals exceeds three feet;
 - (B) the orifice spacing, orifice size or both shall be adjusted to compensate for relative elevation differences between laterals branching off a common supply manifold and to compensate for the lines at the lowest elevation receiving more effluent at the beginning and end of a dosing cycle;
 - (C) the lateral network shall be designed to achieve a 10 to 40 percent higher steady state flow rate per linear foot into the upper lines, relative to the lower lines, depending on the amount of elevation difference and the number of laterals. The steady state flow rate is based on the pipe being full;
 - (D) maximum elevation difference between the highest and lowest laterals in a field shall not exceed 10 feet unless the flow is uniformly divided using multiple pumps or split between subfield segments without requiring simultaneous adjustment of multiple pressure regulating valves in separate locations. Flow shall be uniformly divided such that the dose volumes to the subfields does not vary more than 10 percent on an area basis; and
 - (E) the Department shall approve other designs based upon the authorized designer or PE providing documentation showing equivalent hydraulic performance to this Subparagraph;
- (8) turn-ups shall be provided at the ends of each lateral, constructed of Schedule 40 PVC pipe or stronger pressure-rated pipe, and shall terminate at the ground surface and be installed in a valve box or equivalent that provides access for operation and maintenance;
- (9) the supply manifold shall be constructed of solvent-welded pressure rated Schedule 40 PVC;
- (10) the supply manifold shall be sized large enough based on the size and number of laterals served to prevent more than a 20 percent variation in pressure head between the first and last laterals due to losses within the manifold when feeding the manifold from a lower elevation;
- (11) the supply manifold shall comply with the following design criteria:
 - (A) the ratio of the supply manifold inside cross-sectional area to the sum of the inside cross-sectional areas of the laterals served shall exceed 0.7:1 as measured from where the supply line connects to the manifold;
 - (B) the reduction between the manifold and connecting laterals shall be made off the manifold using reducing tees or fittings; and
 - (C) cleanouts shall be installed at the distal ends of the supply manifold and shall be enclosed in valve boxes accessible from the ground surface;
- (12) pressure regulating valves shall be provided for pressure adjustment at the fields;
- (13) valves shall be installed in an access device, such as a valve box, and be accessible and operable from the ground surface. Valves serving contiguous subfields shall be in a common valve box;
- (14) the LPP dosing system shall comply with the following design criteria:
 - (A) the pump operating flow rate shall be based upon delivering three feet to six feet of residual pressure head at the distal end of all laterals;
 - (B) the dose volume shall be between five and 10 times the liquid capacity of the lateral pipe dosed, plus the liquid capacity of the portions of manifold and supply lines which drain between doses; and
 - (C) when pumping downhill and the supply line volume exceeds 20 percent of the calculated dose volume, special design considerations shall be followed to prevent more than 20 percent of the dose volume from draining by gravity to the dispersal field between doses; and
- (15) the trenches shall be covered to a minimum depth of four inches after settling.

(f) The authorized agent or Department may approve on a site-specific basis drip dispersal systems used in LPP trenches and other LPP designs based on documentation showing that the proposed design meets the performance requirements of this Rule.

*History Note: Authority G.S. 130A-335(e) and (f);
Eff. January 1, 2024.*

15A NCAC 18E .0908 DRIP DISPERSAL SYSTEMS

(a) This Rule provides for the permitting of drip dispersal systems receiving DSE. Drip dispersal systems shall comply with the provisions of this Rule and Section .1600 of this Subchapter.

(b) Drip dispersal systems with advanced pretreatment shall comply with Rule .1204 of this Subchapter.

(c) Drip dispersal systems shall meet the following soil and site criteria:

- (1) A minimum of 18 inches of naturally occurring suitable soil above a LC, 13 inches of naturally occurring suitable soil above a SWC, and the minimum vertical separation to any LC shall be 12 inches. A groundwater lowering system may be used to comply with the vertical separation to a SWC when only Group I or II soils with suitable structure are present within 36 inches of the naturally occurring soil surface.
- (2) For new fill, the soil and site shall meet the following criteria:
 - (A) Rule .0909(b) and (c) of this Section, except as otherwise specified in this Subparagraph;
 - (B) no SWC shall exist within the first 12 inches below the naturally occurring soil surface. A groundwater lowering system shall not be used to comply with the initial site requirements for a new fill system; and
 - (C) minimum vertical separation to any unsuitable soil horizon or rock shall be 18 inches and 12 inches for any SWC.
- (3) For existing fill, the soil and site shall meet the following criteria:
 - (A) Rule .0909(d) and (e) of this Section, except as otherwise specified in this Subparagraph; and
 - (B) minimum vertical separation to any LC shall be 24 inches.

(d) Tables XXIII and XXIV shall be used to determine the LTAR for all DSE drip dispersal systems:

- (1) Table XXIII shall be used for systems utilizing soil. The LTAR shall be based on the most limiting, naturally occurring soil horizon within 18 inches of the naturally occurring soil surface or to a depth of 12 inches below the infiltrative surface, whichever is deeper;
- (2) Table XXIV shall be used for systems utilizing saprolite. The LTAR shall be based on the most limiting, naturally occurring saprolite to a depth of 24 inches below the infiltrative surface;
- (3) the LTAR for new fill systems shall not exceed 0.5 gpd/ft² for Group I, 0.3 for gpd/ft² Group II, 0.15 gpd/ft² for Group III or 0.05 gpd/ft² for Group IV soils, respectively;
- (4) sections of blank tubing without emitters shall not count towards the minimum dripline length required; and
- (5) the DDF shall be divided by the LTAR, determined from Table XXIII or XXIV, to determine the minimum dispersal field area required. The minimum dripline length shall be determined by dividing the required area by the maximum line spacing of two feet. The designer may recommend additional linear footage as soil and site conditions allow. The following equations shall be used to calculate the minimum dispersal field area and dripline length required:

$$\begin{aligned}
 MA &= DDF / LTAR \\
 DL &= MA / LS \\
 \text{Where } MA &= \text{minimum dispersal field area, in ft}^2 \\
 DDF &= \text{design daily flow, in gpd} \\
 LTAR &= \text{in gpd/ft}^2 \\
 DL &= \text{dripline length, in feet} \\
 LS &= \text{two-foot line spacing}
 \end{aligned}$$

TABLE XXIII. LTAR for DSE drip dispersal systems based on Soil Group and texture class

Soil Group	USDA Soil Textural Class		LTAR in gpd/ft ²
I	Sands	Sand	0.4 – 0.6
		Loamy Sand	
II	Coarse Loams	Sandy Loam	0.3 – 0.4

		Loam	
III	Fine Loams	Sandy Clay Loam	0.15 – 0.3
		Silt Loam	
		Clay Loam	
		Silty Clay Loam	
		Silt	
IV	Clays	Sandy Clay	0.05 – 0.2
		Silty Clay	
		Clay	

TABLE XXIV. LTAR for DSE drip dispersal systems based on Saprolite Group and texture class

Saprolite Group	Saprolite Textural Class	LTAR in gpd/ft ²
I	Sand	0.3 – 0.4
	Loamy sand	0.25 – 0.35
II	Sandy loam	0.2 – 0.3
	Loam	0.1 – 0.2
	Silt Loam	0.05 – 0.1

- (e) A special site evaluation shall be required in accordance with Rule .0510 of this Subchapter, as applicable.
- (f) Drip dispersal installation shall be in accordance with the following criteria:
- (1) dripline shall be installed in accordance with the approved design. The design shall specify installation depth, installation equipment, blanking, drainback prevention, and any other site-specific design requirements identified by the designer;
 - (2) dripline shall be installed a minimum of one inch into naturally occurring soil, except when installed in a fill system;
 - (3) driplines shall be installed level. A maximum variance of plus or minus two inches shall be allowed within any contiguous section of dripline containing drip emitters;
 - (4) a minimum of six inches of cover shall be maintained over the dripline. The six inches of cover may be met by the addition of up to six inches, after settling, of suitable Group II or III soil over the drip field;
 - (5) drip dispersal fields shall be sloped to shed surface water;
 - (6) if cover material is required and the slope is greater than 30 percent, a slope stabilization plan shall be provided by a licensed professional if required in G.S. 89C, 89E, or 89F; and
 - (7) the drip dispersal system shall be field tested after installation in accordance with Rule .1603 of this Subchapter.

*History Note: Authority G.S. 130A-335(e) and (f);
Eff. January 1, 2024.*

15A NCAC 18E .0909 FILL SYSTEMS

- (a) Both new and existing fill systems are a system in which all or part of the dispersal field media is installed in fill material. The system includes both the basal area of dispersal field and the toe slope in all directions.
- (b) New fill systems may be installed on sites that meet the following requirements:
- (1) a minimum of the first 18 inches below the naturally occurring soil surface consists of suitable soil with the exception that no SWC exists within the first 12 inches below the naturally occurring soil surface and a groundwater lowering system is not used to meet this requirement;
 - (2) systems shall be installed only on sites with uniform slopes less than four percent;
 - (3) stormwater diversions, subsurface interceptor drains, or swales shall be required as needed upslope of the system to divert surface runoff or lateral flow from passing over or into the system; and
 - (4) the area of suitable soil shall be large enough to include the basal area of dispersal field and the toe slope in all directions.
- (c) New fill system design and installation shall be in accordance with the following criteria:
- (1) trenches shall be installed with a minimum of 24 inches separating the infiltrative surface and any LC for gravity distribution and pressure dosed gravity distribution, except for any SWC that requires 18 inches of

separation. If pressure dispersal is used, the minimum separation distance shall be 18 inches between the infiltrative surface and any LC and 12 inches to a SWC. This separation requirement may be met with the use of a groundwater lowering system only in Soil Groups I and II with suitable structure;

- (2) fill systems with a DDF greater than 480 gpd shall use pressure dispersal systems;
- (3) fill material soil texture shall be classified as Group I up to the top of the trenches. The final six inches of fill used to cover the system shall have a finer texture, such as Group II or III soils, for the establishment of a vegetative cover;
- (4) minimum cover shall be six inches after settling;
- (5) additional fill may be added to facilitate drainage and accommodate final landscaping requirements at the site necessary to stabilize the fill, shed surface water, and establish a vegetative cover. The additional fill may be provided if the infiltrative surface is less than 30 inches below the finished grade;
- (6) where fill material is added, the fill material and the existing soil shall be mixed to a depth of six inches below the interface. Vegetative cover, organic litter, and the O horizon shall be removed before the additional fill material is incorporated;
- (7) the fill system shall be constructed as an elongated berm with the long axis parallel to the ground elevation contours of the slope;
- (8) the side slope of the fill system shall not exceed a rise to run ratio of 1:4. If the first 18 inches below the naturally occurring soil surface is Group I soil, the side slope of the fill shall not exceed a rise to run ratio of 1:3;
- (9) the outside edge of the trench shall be located a minimum of five feet horizontally from the top of the side slope;
- (10) the fill system shall be shaped to shed surface water and shall be stabilized with a vegetative cover;
- (11) trench products approved under Section .1700 of this Subchapter shall be installed in accordance with PIA Approval; and
- (12) the setback requirements shall be measured from the projected toe of the slope. If this setback cannot be met, the setback requirements shall be measured five feet from the nearest edge of the trench if the following conditions are met:
 - (A) slope of the site does not exceed two percent;
 - (B) the first 18 inches of soil beneath the naturally occurring soil surface shall consist of Group I soils; and
 - (C) the lot or tract of land was recorded on or before December 31, 1989.

(d) An existing pre-July 1, 1977 fill site that does not meet the requirements of Paragraph (b) of this Rule may be utilized for a wastewater system if the following requirements are met:

- (1) substantiating data are provided by the lot owner indicating that the fill material was placed on the site prior to July 1, 1977;
- (2) the fill material shall have Group I soil texture for a minimum depth of 24 inches below the existing ground surface;
- (3) the fill material shall have no more than 10 percent by volume of fibrous organics, building rubble, or other debris, and shall not have discrete layers containing greater than 35 percent of shell fragments;
- (4) if a minimum of 24 inches of Group I fill material is present, additional fill with soil texture classified Group I may be added to comply with the separation requirements of Subparagraph (e)(5) of this Rule;
- (5) SWC is 18 inches or greater below the ground surface of the fill. This requirement shall be met without the use of a groundwater lowering system; and
- (6) the area of suitable soil shall be large enough to include the basal area of dispersal field and the toe slopes in all directions.

(e) Existing fill system design and installation shall be in accordance with Paragraph (c) of this Rule and the following criteria:

- (1) the DDF shall not exceed 480 gpd;
- (2) pressure dispersal shall be used. LPP systems shall meet the requirements of Rule .0907(d) and (e) of this Section. Drip dispersal systems shall meet the requirements of Rule .0908(d) and (f) of this Section;
- (3) the LTAR shall not exceed 0.5 gpd/ft² for pressure dispersal systems;
- (4) existing fill sites with 48 inches of Group I soils may use conventional trenches with a maximum LTAR of 1.0 gpd/ft² in lieu of a pressure dispersal system;

- (5) the minimum vertical separation to any LC shall be 24 inches for pressure dispersal systems and 48 inches for conventional systems. This vertical separation requirement may be met by adding additional Group I soil, but shall not be met with the use of a groundwater lowering system;
 - (6) where additional Group I fill is to be added, the side slope of the fill shall not exceed a side slope ratio of 1:3; and
 - (7) trench products approved under Section .1700 of this Subchapter shall be installed in accordance with their PIA Approval.
- (f) The LTAR for new and existing fill systems shall be determined in accordance with Rule .0901(c) of this Section and the following:
- (1) the LTAR shall be based on the most limiting, naturally occurring soil horizon within 18 inches of the ground surface or to a depth 12 inches below the infiltrative surface, whichever is deeper;
 - (2) the lowest LTAR for the applicable Soil Group shall be used for systems installed in accordance with this Rule; and
 - (3) for sites with a minimum of 18 inches of Group I soils below the naturally occurring soil surface or to a depth of 12 inches below the infiltrative surface, whichever is deeper, the LTAR shall not exceed 1.0 gpd/ft² for gravity or pressure dosed gravity distribution or 0.5 gpd/ft² for pressure dispersal systems.
- (g) The authorized agent or Department may approve other fill system designs on a site-specific basis in accordance with a PIA Approval or Rule .0509(c) of this Subchapter.

*History Note: Authority G.S. 130A-335(e) and (f);
Eff. January 1, 2024.*

15A NCAC 18E .0910 ARTIFICIAL DRAINAGE SYSTEMS

- (a) Artificial drainage systems are a site modification and may be proposed to reclassify sites as suitable that were originally classified unsuitable due to a SWC, lateral water movement, saturated soils, a perched water table, or other oxyaquic conditions. Artificial drainage systems include groundwater lowering systems, interceptor drains, and surface water diversions.
- (b) Groundwater lowering systems may be used when the following criteria are met:
- (1) the site has Group I or II soils with suitable structure and clay mineralogy; and
 - (2) the groundwater lowering system shall be designed to maintain the vertical separation to a SWC as specified in Rule .0901(g)(2) of this Section.
- (c) Plans and specifications for the use of a groundwater lowering system to comply with the vertical separation to a SWC shall be prepared by a licensed professional if required in G.S. 89C, 89E, or 89F in accordance with Rule .0303 of this Subchapter. The plans and specifications shall meet the following design criteria:
- (1) Gravity groundwater lowering systems shall be designed in accordance with the following:
 - (A) substantiating information, calculations, and data shall be provided justifying the effectiveness of the proposed drainage system design;
 - (B) design and devices shall comply with accepted standards of practice as set forth in the USDA-NRCS National Engineering Handbook, Part 624 - Drainage, Chapter 10 - Water Table Control, and Part 650 - Engineering Field Handbook, Chapter 14 - Water Management, Drainage;
 - (C) the effectiveness of groundwater lowering systems shall be determined by use of the Ellipse, Hooghoudt, or equivalent drainage equations for sites with Group I or II soils. Justification for use of a specific drainage equation shall be provided;
 - (D) drainage equation input parameters shall be based upon field descriptions of soil profiles and in-situ K_{sat} measurements. The drainage coefficient used in these equations shall be calculated from the highest monthly rainfall value with a 30-percent exceedance probability from the closest available National Weather Service or SCO. A source of these data is the WETS tables published in the Natural Resource Conservation Service Field Office Technical Guides available online at: efotg.sc.egov.usda.gov/efotg_locator.aspx. This monthly value shall be divided by 14 to give the drainage coefficient in inches per day. For systems with a DDF greater than 1,500 gpd, the projected contribution of wastewater application shall be added to the drainage coefficient used in the equations;
 - (E) DRAINMOD shall be used to determine the groundwater lowering system effectiveness at sites with three or more effective soil layers, Group III or IV soils within 36 inches of the naturally occurring soil surface, or sites requiring a groundwater lowering system using pumps; and

- (F) the modeling procedure set forth in Rule .0504(h) of this Subchapter shall be followed.
- (2) Groundwater lowering systems using pumps shall be designed in accordance with the following:
 - (A) plan and profile detail drawings of pump tank, showing all dimensions, pumps, discharge piping, floats, and float and alarm activation levels;
 - (B) calculations and supporting information shall be provided as the basis for sizing the pumps, dose volume, emergency storage capacity, and overall tank capacity;
 - (C) the high-water alarm in the control panel shall automatically contact a 24-hour maintenance service;
 - (D) information on discharge pipe line, line location, materials, and provisions for erosion control at the discharge point;
 - (E) except as otherwise provided in this Paragraph, the requirements of Section .1100 of this Subchapter shall apply to artificial drainage systems using pumps; and
 - (F) dual alternating pumps shall be required when serving two or more design units. Each pump shall be sized at a capacity of two and one half times the projected peak inflow rate to the pump tank.
- (3) Plans and specifications for all groundwater lowering systems shall include the following:
 - (A) location of existing and proposed drainage systems in relation to all facilities and wastewater system components. Plans shall indicate flow direction, slope and drain outlet location;
 - (B) profile drawings showing drainage trench dimensions, depth, pipe size, aggregate envelope, and filter fabric detail, cover, and cleanout detail;
 - (C) elevations with reference to an established benchmark;
 - (D) specifications for all groundwater lowering system materials and installation procedures;
 - (E) the entire groundwater lowering system, including the outlet, shall be on property owned or controlled by the person owning or controlling the system. Necessary legal agreements shall be provided in accordance with Rule .0301(c) of this Subchapter; and
 - (F) easements for egress, ingress, and regress for maintenance of groundwater lowering systems serving two or more lots shall be at least 20 feet wide plus the width of the groundwater lowering system.
- (d) Interceptor drains shall be used on sites where a SWC results from laterally flowing groundwater that can be diverted away from the dispersal field.
- (e) Other artificial drainage systems, including surface water diversions, shall comply with USDA-NRCS guidance documents.

*History Note: Authority G.S. 130A-335(e) and (f);
Eff. January 1, 2024.*

15A NCAC 18E .0911 PRIVIES

- (a) A privy shall be approved when it consists of a pit, floor slab, and seat assembly housed in a building that affords privacy and protection from the weather and meets the following criteria:
 - (1) the pit shall consist of an excavation with a minimum bottom surface area of three and one half feet square;
 - (2) the maximum depth of the pit shall not exceed 36 inches;
 - (3) the pit bottom shall not be located closer than 12 inches to a LC;
 - (4) the pit shall be curbed to prevent caving. In sandy or loose soil, the curb shall extend the full depth of the pit. In clay soils, partial curbing may be acceptable if soils have sufficient cohesion to not collapse;
 - (5) the floor shall be constructed of concrete, wood, or other approved materials. The following criteria shall be met, as applicable:
 - (A) for wood construction, rot resistant joists are used covered with tight tongue-and-groove rot resistant flooring;
 - (B) wood floors shall be anchored to the sills. The minimum sill size shall be four-inch by four-inch; and
 - (C) when other materials are used the material shall be shown to provide strength, durability and prevent entrance of flies and mosquitoes to the privy pit;
 - (6) the pit shall be vented through screened PVC Schedule 40 pipe or other pipe approved in accordance with Rule .0703 of this Subchapter, six inches in diameter, and extending above the roofline. The vent pipe shall be:
 - (A) located on a south side wall of the building;

- (B) covered to prevent rainfall from entering, but still allow gases to escape;
 - (C) straight without any bends in the pipe; and
 - (D) black colored pipe; and
- (7) privies shall not be used for the disposal of water-carried sewage.
- (b) Any person owning or controlling the property upon which a privy is located shall be responsible for the following requirements:
 - (1) when the pit becomes filled to within 18 inches of the top of the ground, the privy building shall be moved to a new pit and the old pit covered with soil; and
 - (2) if the pit caves in, a new pit shall be provided.
- (c) The person owning or controlling the system shall be responsible for the following requirements:
 - (1) the privy and grounds adjacent shall be kept free of debris;
 - (2) a hinged seat cover and hinged door shall be provided and kept closed when the privy is not in use;
 - (3) flies shall be excluded from the pit by the privy building door fitting in the frame and no unscreened openings in the building;
 - (4) garbage and trash shall be kept out of the pit; and
 - (5) the privy building shall not be used for storage.
- (d) When a new pit is required, a CA and OP shall be obtained.

History Note: Authority G.S. 130A-335(e) and (f);
Eff. January 1, 2024.

SECTION .1000 – NON-GROUND ABSORPTION WASTEWATER TREATMENT SYSTEMS

15A NCAC 18E .1001 ALTERNATIVE TOILETS

- (a) Use of alternative toilets, such as incinerating, composting, and mechanical toilets, and privies shall comply with the North Carolina Plumbing Code and this Rule.
- (b) Use of chemical or portable toilets is governed by G.S. 130A-335(h).
- (c) When an alternative toilet or chemical toilet is used, all wastewater generated in the facility shall be discharged to a wastewater system that is approved under this Subchapter.
- (d) Removal of residuals from incinerating toilets, composting toilets, mechanical toilets, vault privies, chemical toilets, or portable toilets shall be performed only by a person that holds a current NC Septage Management Firm permit in accordance with Rule 15A NCAC 13B .0832(a)(1). All waste shall be taken to an approved disposal site per G.S. 130A-291.1(d).

History Note: Authority G.S. 130A-335(e);
Eff. January 1, 2024.

15A NCAC 18E .1002 RECLAIMED WATER SYSTEMS

- (a) An RCW system shall be one of the following:
 - (1) an alternate management option as identified in 15A NCAC 02U .0401(c) for use with a system permitted in accordance with 15A NCAC 02U;
 - (2) a conjunctive wastewater system, as defined in 15A NCAC 02U .0103(4), permitted under the Rules of this Subchapter that:
 - (A) incorporates a beneficial use component, such as toilet flushing or landscape irrigation; and
 - (B) the beneficial use component is not necessary to meet the wastewater disposal needs of the facility;
 - (3) a conjunctive wastewater system permitted under the rules of this Subchapter when there is a non-conjunctive use wastewater system permitted and approved in accordance with 15A NCAC 02H or 15A NCAC 02T for the facility;
 - (4) a wastewater system designed for the complete recycle or reuse of DSE; or
 - (5) a wastewater system designed to meet the wastewater disposal needs of a facility that serves a beneficial reuse, as defined in 15A NCAC 02U .0103(2), which incorporates a subsurface wastewater dispersal system.
- (b) An RCW system shall be designed to produce effluent prior to discharge that complies with the effluent standards for a Type 1 treatment process in accordance with 15A NCAC 02U .0301(b) and the TN standard for a TS-II system in accordance with Table XXV of Rule .1201(a) of this Subchapter. The wastewater system shall be approved in accordance with Section

.1700 of this Subchapter or designed by a PE and approved by the Department when it has been determined to comply with this Rule.

(c) When utilizing an RCW system, the dispersal field and repair area shall comply with the siting and sizing requirements of Section .1200 of this Subchapter for a TS-II system except as follows:

- (1) setback reductions may be concurrently taken with both an LTAR increase and a vertical separation reduction when a special site evaluation is submitted and approved in accordance with Rule .0510 of this Subchapter;
- (2) for systems designed to comply with a TN standard of 10 mg/L one of the following siting and sizing criteria may be utilized:
 - (A) the property line setback may be reduced to five feet and the SA waters setback may be reduced to 50 feet for wastewater systems with a DDF less than or equal to 3,000 gpd;
 - (B) the property line setback may be reduced to 10 feet, the SA waters setback may be reduced to 100 feet, and the other surface waters setback may be reduced to 50 feet for systems with a DDF greater than 3,000 gpd; or
 - (C) the vertical separation to a SWC may be reduced to 12 inches for wastewater systems with a DDF greater than 3,000 gpd that use pressure dispersal;
- (3) the LTAR may be increased up to a factor of four compared to that assigned by the LHD for a system using DSE in Group I soils with a wastewater system that uses pressure dispersal when the following site conditions are met:
 - (A) 48 inches of Group I soils from the naturally occurring soil surface; and
 - (B) 30 inches to a SWC below the naturally occurring soil surface;
- (4) requirements to comply with an effluent TN standard set forth in this Paragraph may be waived when:
 - (A) the effluent is used exclusively for toilet or urinal flushing; or
 - (B) a site-specific nitrogen migration analysis based on projected or measured effluent nitrogen levels demonstrates that the nitrate-nitrogen concentration at the property line will not exceed 10 mg/L; and
- (5) the size of the dispersal field may be proportionally reduced based on the documented percentage of effluent reduction that is enabled by the year-round conjunctive, recycle, or reuse component.

(d) Conjunctive uses may include toilet and urinal flushing and landscape irrigation by drip dispersal. Wastewater from a system designed for complete recycling of DSE shall be used only for flushing of toilets and urinals. RCW shall not be used for body contact or human consumption. An RCW system that includes conjunctive use shall meet the following:

- (1) Toilet and urinal flushing components shall be approved by the local building inspections department and be in compliance with the North Carolina Plumbing Code, including pipe marking requirements and back-siphon protection provisions for proximate potable water supplies.
- (2) Siting, sizing, setbacks, and installation requirements of this Subchapter may be modified for the landscape irrigation component if they comply with the requirements for conjunctive use irrigation systems in 15A NCAC 02U, based upon information provided by the licensed professionals, if required in G.S. 89C, 89E, or 89F.
- (3) System design, operation, and management requirements shall comply with requirements for comparable systems in 15A NCAC 02U, including provisions for continuous on-line monitoring and recording for turbidity and a mechanism to prevent effluent utilization if the turbidity exceeds 10 NTUs, if the E. Coli or fecal coliform levels are not being met, or the disinfection unit is not operable.
- (4) Requirements to comply with an effluent TN standard may be waived on a project specific basis when documentation is provided showing that the proposed design will not result in an exceedance of the groundwater standards in accordance with 15A NCAC 02L.

(e) All RCW systems approved in accordance with this rule shall be designed by a PE and the plans approved by the Department prior to LHD permit issuance.

*History Note: Authority G.S. 130A-335(e);
Eff. January 1, 2024.*

SECTION .1100 – SYSTEM DOSING AND CONTROLS

15A NCAC 18E .1101 GENERAL DOSING SYSTEM REQUIREMENTS

(a) Dosing systems with a single pump or siphon shall be required to be used to deliver effluent into laterals when:

- (1) gravity distribution cannot be achieved between the septic tank and dispersal field;
 - (2) the total lateral length exceeds 750 linear feet in a single system; or
 - (3) a pressure dosed gravity distribution or pressure dispersal system is used.
- (b) Dosing systems with multiple alternating or sequencing pumps or siphons shall be used to discharge to separate dispersal fields when:
- (1) DDF from a single system exceeds 3,000 gpd; or
 - (2) the total line length exceeds 2,000 linear feet in a single trench system or 5,000 linear feet in a drip dispersal system.
- (c) If alternating pumps or siphons are not required in accordance with Paragraph (b) of this Rule, but used, then the alternating pumps or siphons may discharge to a single dispersal field.
- (d) The dose volume to a dispersal field shall be calculated as follows:
- (1) 66 to 75 percent of the volume of the installed linear lateral footage for pressure dosed gravity distribution systems;
 - (2) 66 to 75 percent of the volume of the installed linear lateral footage for LDP systems and trench products with a PIA approval based on lateral capacity equivalent to the capacity of a four-inch corrugated pipe;
 - (3) LPP systems in accordance with Rule .0907(e)(14)(B) of this Subchapter; and
 - (4) drip dispersal systems in accordance with Rule .1602(f)(3) of this Subchapter.
- (e) The pump operating flow rate from a dosing system shall be designed to achieve scour velocity in the supply line and to distribute effluent in accordance with the dispersal field design.
- (f) The pump operating flow rate or average pump run time shall be within 25 percent of the initial measurements collected during the final inspection.
- (g) All dosing systems shall be tested using water prior to issuance of an OP. The test shall be conducted by the installer, LSS, authorized designer, AOWE, and PE, as applicable, witnessed by the LHD, and include a demonstration and documentation of the following:
- (1) pump or siphon operating flow rate and dose volume delivered;
 - (2) float control levels;
 - (3) high-water alarm, including sound;
 - (4) operating pressure head, if applicable; and
 - (5) delivery of water to the dispersal field.

*History Note: Authority G.S. 130A-335(e), (f), and (f1);
Eff. January 1, 2024.*

15A NCAC 18E .1102 PUMP DOSING

- (a) The effluent pump shall be:
- (1) capable of handling a minimum of one-half inch solids or be a screened, high head pump designed for effluent;
 - (2) designed to meet the pump operating flow rate and total dynamic head specified for the effluent distribution system;
 - (3) removable without requiring entrance into the tank; and
 - (4) listed by a third-party electrical testing and listing agency, such as Underwriter's Laboratory. A PE may propose a pump model not listed by a third-party electrical testing and listing agency. The Department shall approve the pump when review of documentation provided by the PE demonstrates that the pump model meets the performance requirements for the dispersal field design.
- (b) A vent or anti-siphon hole of a 3/16-inch minimum diameter shall be used to prevent air locking of the pump and siphoning from the pump tank when pumping downhill. When a check valve is provided, the anti-siphon hole or vent shall be located between the pump and the check valve. Additional venting may be required at the high point in the pump force main to prevent siphoning.
- (c) Each pump discharge line in a pump tank shall have a disconnect device, such as a pressure-rated threaded union, flange, or camlock.
- (d) Check valves or other type valves shall prevent drainback from the dispersal field or supply line into the pump tank. A system may be designed and approved for the supply line to drain back to the pump tank based on site-specific considerations, such as freeze protection.
- (e) An isolation valve shall be provided on the field side of the disconnect device when pumping uphill.
- (f) The pump discharge piping shall be accessible within the tank or riser from finished grade.

- (g) Fittings and valves shall be of compatible non-corrodible material. Isolation valves and disconnects shall be located within 18 inches of the top of the access riser opening.
- (h) All submersible pumps shall be provided with a non-corrodible rope or chain attached to each pump enabling pump removal from the ground surface without requiring dewatering or entrance into the tank.

*History Note: Authority G.S. 130A-335(e), (f), and (f1);
Eff. January 1, 2024.*

15A NCAC 18E .1103 CONTROL PANELS

(a) A control panel shall be provided for all systems that use a pump. The control panel enclosure shall be rated NEMA 4X at a minimum. A third-party electrical testing and listing agency shall list the control panel. The control panel shall include for each pump:

- (1) an independent overload protection, if not integral with the pump motor;
- (2) circuit breaker(s);
- (3) a motor contactor that disconnects all current to the pump or a solid-state relay that controls current to the pump;
- (4) a hand-off-automatic (H-O-A) switch or alternate method to enable manual or automatic pump operation and for the pump to be deactivated manually;
- (5) a pump run light;
- (6) an elapsed time meter; and
- (7) an event counter.

(b) An automatic pump sequencer shall be included in systems requiring multiple pumps in accordance with Rule .1101(b) of this Section and shall remain operable whenever any pump is inoperable.

(c) When telemetry is required in accordance with Sections .0800, .1500, .1600, and .1700 of this Subchapter, the control panel shall be connected to an active phone line, wireless internet router, dedicated cellular line, or another form of telemetry that allows the Management Entity to be notified and respond to alarm conditions. The telemetry shall remain active for the life of the wastewater system. The authorized designer, AOWE, or PE shall specify the minimum notification frequency based on site-specific conditions.

(d) The control panel bottom shall be mounted a minimum of 24 inches above finished grade, within 50 feet of and in the line of sight of the pump tank. The Management Entity and LHD shall be able to access the control panel and operate the pumps when the owner is not present.

(e) A NEMA 4X junction box shall be installed above grade or adjacent to the pump tank riser when the control panel is located more than 10 feet from the pump tank access riser and one or more electrical splices are used. Electrical splices shall not be used within the conduit piping.

(f) Wiring shall be conveyed to the control panel or outside junction box through waterproof, gasproof, and corrosion-resistant conduits, with no splices or junction boxes inside the tank. Wire and wire conduit openings inside the pump tank and disconnect enclosure shall be sealed.

(g) Dual and multiple fields shall be dosed by separate pumps that shall automatically alternate or sequence. The supply lines shall be "H" connected to permit manual alternation between fields dosed by each pump. "H" connection valving shall be accessible from the ground surface, either from the pump tank access manhole or in a separate valve chamber outside the pump tank. The Department shall approve other methods of dosing dual or multiple fields when the authorized designer or PE provides documentation of equivalent performance to this Paragraph.

(h) Liquid level detection devices, such as floats, shall be provided in the pump tank to control pump cycles and trigger notification of alarm conditions. The liquid level detection device configuration shall meet the following requirements:

- (1) a minimum of 12 inches of effluent shall be maintained in the bottom of the pump tank;
- (2) pump-off level shall be set to keep the pump submerged or in accordance with the manufacturer's written specifications;
- (3) a separate control float shall be provided to activate the high-water alarm;
- (4) the high-water alarm float shall be set to activate within six inches of the pump-on level or higher, if applicable, if providing design equalization capacity in a timed dosing system;
- (5) the lag pump float switch, where provided, shall be located at or above the high-water alarm activation level; and
- (6) floats shall be supported utilizing durable, corrosion resistant material, and designed to be adjustable, removable, and replaceable from the ground surface without requiring dewatering, entrance into the tank, or pump removal.

- (i) The pump tank shall have a high-water alarm that shall:
- (1) be audible and visible to the system users and the Management Entity;
 - (2) have a silencer button or silencer device that is located on the outside of the panel enclosure;
 - (3) provide for manual testing;
 - (4) automatically reset after testing and when an alarm condition has cleared;
 - (5) remain operable whenever the pump is inoperable;
 - (6) have an enclosure that is watertight, corrosion resistant, and shall be rated NEMA 4X at a minimum; and
 - (7) be mounted outside the facility and accessible.
- (j) For systems designed, inspected, and certified by a PE, alternative panel construction and location criteria may be used if the alternative panel construction and location criteria meet the panel performance criteria, comply with local electrical codes, and are approved by the local electrical inspector.

History Note: Authority G.S. 130A-335(e), (f), and (f1);
Eff. January 1, 2024.

15A NCAC 18E .1104 SIPHON DOSING

Siphons and siphon tanks may be used when a minimum of two feet of elevation drop is maintained between the siphon outlet invert and the inlet invert in the dispersal field distribution system. Siphons and siphon tanks shall meet the following criteria:

- (1) Slope and size of the siphon discharge line shall be sufficient to handle the peak siphon discharge by gravity flow without the discharge line flowing full. Vents for the discharge lines shall be located outside of the siphon tank and shall not serve as an overflow for the tank.
- (2) All siphon parts shall be installed in accordance with the manufacturer's specifications. All materials shall be corrosion-resistant, of cast iron, high-density plastic, fiberglass, stainless steel, or equal as approved by the Department when documentation is provided which shows the materials meet the requirements of this Rule.
- (3) Siphon tanks shall have a functioning trip counter and high-water alarm. The high-water alarm shall be audible and visible by system users and weatherproof if installed outdoors in an enclosure rated as NEMA 4X at a minimum. The high-water alarm shall be set to activate within two inches of the siphon trip level.

History Note: Authority G.S. 130A-335(e), (f), and (f1);
Eff. January 1, 2024.

15A NCAC 18E .1105 TIMED DOSING

(a) Timed dosing systems shall be used with the following:

- (1) when a dosing system is required in accordance with Rule .1101 of this Section in conjunction with an adjusted DDF granted in accordance with Rule .0403 of this Subchapter;
- (2) flow equalization systems;
- (3) advanced pretreatment or dispersal systems, if required by the manufacturer; or
- (4) when specified by the authorized designer.

(b) The timed dosing system shall be integrated with the pump tank control sensors to ensure that the minimum dose volume calculated in accordance with Rule .1101(d) of this Section is present prior to the start of any scheduled dose event and to provide that a full dose is delivered.

(c) The float configuration of a flow equalization system using timed dosing shall be adjusted by the LHD, authorized designer, or PE, to provide for equalization capacity in the system.

History Note: Authority G.S. 130A-335(e), (f), and (f1);
Eff. January 1, 2024.

15A NCAC 18E .1106 PRESSURE DOSED GRAVITY DISTRIBUTION DEVICES

(a) Pressure manifolds for pressure dosed gravity distribution shall meet the following minimum design and performance requirements:

- (1) uniform distribution of flow proportional to lateral length with a minimum of two feet of residual pressure head;
- (2) a pressure regulating valve incorporated in the supply line just prior to the pressure manifold to control pressure to the manifold;

- (3) a mechanism or device for measuring residual pressure head in the manifold;
- (4) a mechanism to stop flow to individual laterals;
- (5) a method to visually verify the flow to each individual lateral;
- (6) the feeder lines from the pressure manifold shall be of sufficient size and slope for effluent to flow by gravity to each lateral; and
- (7) the pressure manifold and appurtenances shall be designed and installed to be accessible for inspection, operation, maintenance, and monitoring.

(b) A distribution box or a drop box may be used to dissipate or distribute flow in a pressure dosed gravity dispersal system for parallel, serial, or sequential distribution. Such devices shall be watertight, corrosion resistant, constructed to withstand active and passive loads, and the volume of the device shall be such that when the dose volume is delivered, the box shall not overflow. The authorized agent shall approve the distribution device when it has been determined to be in accordance with Rule .0901(g)(9) through (11) of this Subchapter.

History Note: Authority G.S. 130A-335(e), (f), and (f1);
Eff. January 1, 2024.

SECTION .1200 – ADVANCED PRETREATMENT SYSTEMS STANDARDS, SITING, AND SIZING CRITERIA

15A NCAC 18E .1201 ADVANCED PRETREATMENT SYSTEM STANDARDS

- (a) Advanced pretreatment systems with a DDF less than or equal to 3,000 gpd shall meet the following conditions:
- (1) have an RWTS or PIA Approval;
 - (2) be designed to comply with the effluent standard specified in the OP and defined in Table XXV prior to effluent dispersal to the soil;
 - (3) comply with the siting and sizing requirements of this Section; and
 - (4) comply with Rules .1302(f) and .1710 of this Subchapter.

TABLE XXV. Effluent standards for advanced pretreatment systems

Constituent	Effluent Standards		
	NSF/ANSI 40	TS-I	TS-II
CBOD	≤ 25 mg/L	≤ 15 mg/L	≤ 10 mg/L
TSS	≤ 30 mg/L	≤ 15 mg/L	≤ 10 mg/L
NH ₃		≤ 10 mg/L or 80% removal of NH ₃ if influent TKN exceeds 50 mg/L	≤ 10 mg/L
TN			≤ 20 mg/L
Fecal Coliform		≤ 10,000 colonies/100 mL	≤ 1,000 colonies/100 mL

(b) The effluent applied to advanced pretreatment systems shall not exceed DSE as specified in Table III of Rule .0402(a) of this Subchapter, unless the system is designed to treat HSE and approved by the Department on a product or project-specific basis in accordance with the rules of this Subchapter and engineering practices.

(c) The effluent standards in Table XXV, or modifications to these effluent standards, may be proposed by a PE for systems with a design flow greater than 3,000 gpd or IPWW. The Department shall review and approve the proposed effluent standards in accordance with Rule .0302(e) of this Subchapter. Documentation shall also be provided that the proposed system meets the requirements of Rule .0510(e) of this Subchapter.

History Note: Authority G.S. 130A-334; 130A-335; 130A-342; 130A-343;
Eff. January 1, 2024.

15A NCAC 18E .1202 SITING AND SIZING CRITERIA FOR ADVANCED PRETREATMENT SYSTEMS WITH A DESIGN DAILY FLOW LESS THAN OR EQUAL TO 1,500 GALLONS/DAY

(a) Wastewater systems utilizing advanced pretreatment with a DDF less than or equal to 1,500 gpd may only use one of the following modifications to system siting and sizing criteria, unless otherwise identified in this Rule:

- (1) reduction in depth to LC or vertical separation to LC in accordance with Paragraph (b) of this Rule;
 - (2) LTAR increase in accordance with Paragraph (c) of this Rule; or
 - (3) setback reductions in accordance with Paragraph (d) of this Rule.
- (b) The minimum required vertical separation to a LC in natural soil may be reduced with the use of advanced pretreatment in accordance with Table XXVI. Table XXVII provides the minimum depths and vertical separation for new and existing fill. A special site evaluation shall be submitted and approved in accordance with Rule .0510 of this Subchapter when a reduction in vertical separation to a LC is proposed in accordance with this Rule.

Table XXVI. Minimum vertical separation to LC based on effluent standards for wastewater systems with a DDF less than or equal to 1,500 gpd

Minimum vertical separation in inches from infiltrative surface to LC					
Soil Group	Distribution Method	Effluent Standard**			
		DSE*	NSF/ANSI 40	TS-I	TS-II
I	Gravity	18	12	12	12
	LPP	12	12	9	6
	Drip	12	12	9	6
II-IV	Gravity	12	12	9	9
	LPP	12	12	9	6
	Drip	12	12	9	6

*For comparison

**12-inch vertical separation shall always be maintained to rock or tidal water

Table XXVII. Minimum depth to LC and vertical separation to SWC in new or existing fill based on effluent standards for wastewater systems with a DDF less than or equal to 1,500 gpd for new fill and less than or equal to 480 gpd for existing fill

Minimum depth in inches from naturally occurring soil surface or existing fill surface to LC					
Type of Fill	Distribution Method		Effluent Standard		
		DSE**	NSF/ANSI 40	TS-I	TS-II
New Fill	Gravity	18 to LC 12 to SWC	18 to LC 12 to SWC	14 to LC 12 to SWC	14 to LC 12 to SWC
	LPP	18 to LC 12 to SWC	18 to LC 12 to SWC	12	12
	Drip	18 to LC 12 to SWC	18 to LC 12 to SWC	12	12
Existing Fill	Gravity LPP Drip	24 of Group I Fill or Soil to LC 18 of Group I Fill or Soil to SWC			
Minimum vertical separation in inches from infiltrative surface to LC*					
Type of Fill	Distribution Method	Effluent Standard			
		DSE**	NSF/ANSI 40	TS-I	TS-II
New Fill	Gravity	24 to LC 18 to SWC	18 to LC 18 to SWC	18 to LC 14 to SWC	18 to LC 14 to SWC
	LPP	18 to LC 12 to SWC	18 to LC 12 to SWC	12 to LC 9 to SWC	9 to LC 6 to SWC
	Drip	18 to LC 12 to SWC	18 to LC 12 to SWC	12 to LC 9 to SWC	9 to LC 6 to SWC
Existing Fill	Gravity	48	36	24	24
	LPP	24	18	12	12 to LC 9 to SWC
	Drip	24	18	12	12 to LC

					9 to SWC
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*Minimum depth after adjustment for slope correction

**For comparison

- (c) The LTAR shall be based on the effluent standard and dispersal field type proposed in accordance with the following:
- (1) The LTAR may be increased by the following factors when compared to the rate assigned by the authorized agent for a new system using DSE:
 - (A) up to 1.33 for NSF/ANSI 40 effluent standards in soils which are Group I or II with suitable structure;
 - (B) up to 2.0 for TS-I or TS-II effluent standards when pressure dispersal is utilized; or
 - (C) up to 2.5 for TS-II effluent standards when all the following conditions are met: minimum of 36 inches of Group I soils from the naturally occurring soil surface; minimum depth to a SWC below the naturally occurring soil surface is 24 inches; space shall be available for an equivalently sized dispersal field repair area; and pressure dispersal shall be utilized.
 - (2) A special site evaluation, if required in accordance with Rule .0510 of this Subchapter, shall be submitted and approved.
 - (3) The LTAR for an aerobic drip system shall be determined in accordance with Rule .1204 of this Section.
 - (4) Trench dispersal products approved for a specific dispersal field reduction in area or trench length when receiving DSE in accordance with this Subchapter or a PIA Approval shall not be reduced by more than 50 percent when any LTAR adjustments are taken in accordance with this Rule.
 - (5) When using pressure dispersal systems, the proposed LTAR increases in Subparagraph (c)(1) of this Rule may be used concurrently with the reduced setbacks for TS-II Systems in Table XXVIII.
 - (6) The DDF shall not be increased by the addition of advanced pretreatment to an existing wastewater system by more than 33 and one-third percent on a site without repair area or by more than 50 percent on a site with 100 percent repair area.
- (d) Advanced pretreatment systems shall meet the following setback requirements:
- (1) minimum setback requirements of Section .0600 of this Subchapter shall be met, except as shown in Table XXVIII; and
 - (2) when any other siting or sizing modifications are applied, such as reduced depth to LC, vertical separation, or increased LTAR, for a TS-I or TS-II system in accordance with Paragraphs (b) and (c) of this Rule, no setback reductions shall be taken except those to artificial drainage systems described in Table XXVII, unless otherwise specified in this Section.

Table XXVIII: Setbacks for wastewater systems meeting NSF/ANSI 40, TS-I, or TS-II effluent standards

Site Features	Setback in feet according to Effluent Standard**			
	DSE*	NSF/ANSI 40	TS-I	TS-II
Surface waters classified WS-I, from ordinary high-water mark	100	70	70	50
Waters classified SA, from mean high-water mark	100	70	70	50
Any Class I or Class II reservoir, from normal water level	100	70	70	50
Any other stream, non-water supply spring, or other surface water, from the ordinary high-water mark	50	35	35	25
Tidal influenced waters, such as marshes and coastal water, from mean high-water mark	50	35	35	25
Lake or pond, from normal water level	50	35	35	25
Groundwater lowering system, as measured on the ground surface from the edge of the feature	25	25	20	15
Downslope interceptor drains and surface water diversions with a vertical cut of more than two feet, as measured on the ground surface from the edge of the feature	15	15	10	10
Upslope and side slope interceptor drains and surface water diversions with a vertical cut of more than two feet, as measured on the ground surface from the edge of the feature	10	10	7	5

A stormwater collection system as defined in 15A NCAC 02H .1002(48), excluding gutter drains that connect to a stormwater collection system, with a vertical cut of more than two feet as measured from the center of the collection system	10	10	7	5
Permanent stormwater retention basin, from normal water level	50	50	35	25
Any other dispersal field, except designated dispersal field repair area for project site	20	20	10	5

*For comparison

**May require a variance from DEQ based on local buffer rules.

*History Note: Authority G.S. 130A-334; 130A-335; 130A-342; 130A-343;
Eff. January 1, 2024.*

15A NCAC 18E .1203 SITING AND SIZING CRITERIA FOR ADVANCED PRETREATMENT SYSTEMS WITH A DESIGN DAILY FLOW GREATER THAN 1,500 GALLONS/DAY AND LESS THAN OR EQUAL TO 3,000 GALLONS/DAY

- (a) Wastewater systems utilizing advanced pretreatment with a DDF greater than 1,500 gpd and less than or equal to 3,000 gpd may utilize the system siting and sizing in this Rule.
- (b) The LTAR shall be based on the effluent standard and dispersal field type proposed in accordance with the following:
 - (1) The LTAR may be increased by the following factors when compared to the rate assigned by the authorized agent for a new system using DSE:
 - (A) up to 2.0 for TS-I or TS-II effluent standards; or
 - (B) up to 2.5 for TS-II effluent standards when there is a minimum of 48 inches of Group I soils from the naturally occurring soil surface and a minimum of 30 inches to a SWC below the naturally occurring soil surface.
 - (2) The LTAR for an aerobic drip system shall be determined in accordance with Rule .1204 of this Section.
- (c) When the LTAR for a system is proposed to be increased in accordance with Paragraph (b) of this Rule, the following conditions shall be met:
 - (1) a special site evaluation required in accordance with Rule .0510 of this Subchapter shall be submitted and approved;
 - (2) pressure dispersal shall be utilized;
 - (3) space shall be available for an equivalently sized dispersal field repair area; and
 - (4) 25-foot setback shall be maintained to all property lines unless a site-specific nitrogen migration analysis for a TS-I system indicates that the nitrate-nitrogen concentration at the property line will not exceed 10 mg/L or a TS-II system is used.
- (d) Trench dispersal products approved for a specific dispersal field reduction in area or trench length when receiving DSE in accordance with this Subchapter or a PIA Approval shall not be reduced by more than 50 percent as a result of increased LTAR in accordance with this Rule.
- (e) The DDF shall not be increased by the addition of advanced pretreatment to an existing wastewater system.
- (f) Wastewater systems utilizing advanced pretreatment with a DDF greater than 3,000 gpd may propose LTAR adjustments in accordance with Paragraphs (a) through (c) of this Rule. The Department shall review and approve the proposed LTAR adjustments in accordance with Rule .0302(e) of this Subchapter. Documentation shall also be provided that the proposed system meets the requirements of Rule .0510(e) of this Subchapter.

*History Note: Authority G.S. 130A-334; 130A-335; 130A-342; 130A-343;
Eff. January 1, 2024.*

15A NCAC 18E .1204 ADVANCED PRETREATMENT DRIP DISPERSAL SYSTEMS

- (a) This Rule provides for the permitting of drip dispersal systems receiving advanced pretreatment effluent with a DDF less than or equal to 3,000 gpd. Drip dispersal systems shall comply with the provisions of this Rule and Section .1600 of this Subchapter.
- (b) Drip dispersal systems with a DDF less than or equal to 1,500 gpd shall utilize the siting and sizing criteria in this Paragraph when used with advanced pretreatment.
 - (1) The soil and site characteristics shall meet the following criteria based on effluent standards:

- (A) NSF/ANSI 40 Systems
 - (i) a minimum of 18 inches of naturally occurring suitable soil above a LC and 13 inches of naturally occurring suitable soil above a SWC, and the minimum vertical separation to any LC shall be 12 inches;
 - (ii) for new fill, the requirements of Rules .0909(b) and (c) of this Subchapter shall be met; or
 - (iii) for existing fill, the requirements of Rules .0909(d) and (e) of this Subchapter shall be met, except that the minimum vertical separation to any LC shall be 18 inches;
 - (B) TS-I Systems
 - (i) a minimum of 15 inches of naturally occurring suitable soil above a LC and a minimum of 13 inches of naturally occurring suitable soil above a SWC, and the minimum vertical separation to any LC shall be nine inches;
 - (ii) for new fill, the requirements of Rules .0909(b) and (c) of this Subchapter shall be met, except there shall be a minimum of 12 inches of naturally occurring suitable soil above a LC, a minimum of nine inches vertical separation to a SWC, and a minimum of 12 inches vertical separation to a LC; or
 - (iii) for existing fill, the requirements of Rules .0909(d) and (e) of this Subchapter shall be met, except that the minimum vertical separation to any LC shall be 12 inches; or
 - (C) TS-II Systems
 - (i) a minimum of 13 inches of naturally occurring suitable soil above a LC and the minimum vertical separation to any LC shall be six inches;
 - (ii) for new fill, the requirements of Subpart (B)(ii) of this Paragraph shall be met, except there shall be a minimum of nine inches of vertical separation to a LC, and a minimum of six inches of vertical separation to a SWC; or
 - (iii) for existing fill, the requirements of Subpart (B)(iii) of this Paragraph shall be met, except there shall be a minimum vertical separation of nine inches to a SWC.
- (2) Site modifications for advanced pretreatment drip dispersal systems shall meet the following criteria based on effluent standards:
- (A) NSF/ANSI 40 Systems may utilize a groundwater lowering system to comply with the vertical separation requirements to a SWC only when Group I or II soils with suitable structure are present within 36 inches of the naturally occurring soil surface. The minimum vertical separation to the projected, or drained, SWC shall be 12 inches. The addition of fill material shall not be used to comply with this requirement; and
 - (B) TS-I and TS-II Systems may utilize a groundwater lowering system to comply with the vertical separation requirements to a SWC. The minimum vertical separation to the projected, or drained, SWC shall be 12 inches. The groundwater lowering system may be used with the following: Group III soils are present at any depth above the invert elevation of the highest point of the artificial drainage system or within 36 inches of the naturally occurring soil surface, whichever is deeper; or on new fill sites.
- (3) Table XXIX shall be used to determine the LTAR for advanced pretreatment drip dispersal systems based on Soil Group. Limitations in adjustment allowances for NSF/ANSI 40, TS-I, and TS-II systems are listed in Parts (E), (F), and (G) of this Subparagraph.

TABLE XXIX. LTAR for advanced pretreatment drip dispersal systems based on Soil Group

Soil Group	USDA Soil Textural Class		LTAR in gpd/ft ²		
			NSF/ANSI 40	TS-I	TS-II
I	Sands	Sand	0.6 – 1.0	0.8 – 1.2	0.8 – 1.5
		Loamy Sand			
II	Coarse Loams	Sandy Loam	0.4 – 0.6	0.5 – 0.8	0.6 – 1.0
		Loam			
III	Fine Loams	Sandy Clay Loam	0.15 – 0.4	0.2 – 0.6	0.2 – 0.8
		Silt Loam			
		Clay Loam			

		Silty Clay Loam			
		Silt			
IV	Clays	Sandy Clay	0.05 – 0.2	0.05 – 0.2	0.05 – 0.2
		Silty Clay			
		Clay			

- (A) The LTAR shall be based on the most limiting, naturally occurring soil horizon within 18 inches of the naturally occurring soil surface or to a depth of 12 inches below the infiltrative surface.
- (B) The DDF shall be divided by the LTAR, determined from Table XXIX or XXX, to calculate the minimum dispersal field area required. The minimum dripline length shall be calculated by dividing the required area by the maximum line spacing of two feet. The following equations shall be used to calculate the minimum dispersal field area and dripline length required:
- $$MA = DDF / LTAR$$
- $$DL = MA / LS$$
- Where
- MA = minimum dispersal field area, in ft²
- DDF = design daily flow, in gpd
- LTAR = in gpd/ft²
- DL = dripline length, in feet
- LS = two-foot line spacing
- (C) The minimum dripline length calculated in Part (B) of this Subparagraph shall not be less than 0.5 x DDF for Group I soils, 0.83 x DDF for Group II soils, 1.25 x DDF for Group III soils, or 3.33 x DDF for Group IV soils. The dripline spacing may be adjusted in accordance with Rule .1602(e)(3) of this Subchapter and the PIA Approval so that the minimum required dispersal field area calculated in Part (B) of this Subparagraph does not need to be increased.
- (D) Sections of blank tubing without emitters required to comply with site-specific conditions shall not count towards the minimum length of dripline needed when laying out the system or when calculating the linear footage of dripline needed.
- (E) LTAR adjustment limitations for NSF/ANSI 40 Systems
- (i) the LTAR for new fill shall not exceed 0.6 gpd/ft² for Group I soils, 0.4 gpd/ft² for Group II soils, 0.15 gpd/ft² for Group III soils, or 0.05 gpd/ft² for Group IV soils; and
- (ii) the LTAR for existing fill shall not exceed 0.8 gpd/ft².
- (F) LTAR adjustment limitations for TS-I Systems
- (i) the LTAR for new fill shall not exceed 1.0 gpd/ft² for Group I soils, 0.6 gpd/ft² for Group II soils, 0.4 gpd/ft² for Group III soils, or 0.1 gpd/ft² for Group IV soils;
- (ii) the LTAR for existing fill shall not exceed 1.0 gpd/ft²; and
- (iii) the LTAR for sites with less than 18 inches of naturally occurring soil to any unsuitable LC shall not exceed the lowest LTAR for Soil Groups I, II, and III, and 0.1 gpd/ft² for Group IV soils.
- (G) LTAR adjustment limitations for TS-II Systems
- (i) the LTAR for new fill shall not exceed 1.2 gpd/ft² for Group I soils, 0.8 gpd/ft² for Group II soils, 0.5 gpd/ft² for Group III soils, or 0.12 gpd/ft² for Group IV soils;
- (ii) the LTAR for existing fill shall not exceed 1.0 gpd/ft²; and
- (iii) the LTAR for sites with less than 18 inches of naturally occurring soil to any unsuitable LC shall not exceed the lowest LTAR for Soil Groups I, II, and III, and 0.12 gpd/ft² for Group IV soils.
- (4) Table XXX shall be used in determining the LTAR for advanced pretreatment drip dispersal systems installed in saprolite. The LTAR shall be based on the most limiting, naturally occurring saprolite to a depth of 24 inches below the infiltrative surface.

TABLE XXX. LTAR for advanced pretreatment drip dispersal systems based on Saprolite Group

Saprolite Group	Saprolite Textural Class	LTAR, area basis, in gpd/ft ²		
		NSF/ANSI 40	TS-I	TS-II
I	Sand	0.4 – 0.5	0.4 – 0.6	0.4 – 0.8
	Loamy sand	0.3 – 0.4	0.3 – 0.5	0.3 – 0.6

Saprolite Group	Saprolite Textural Class	LTAR, area basis, in gpd/ft ²		
		NSF/ANSI 40	TS-I	TS-II
II	Sandy loam	0.25 – 0.35	0.25 – 0.4	0.25 – 0.5
	Loam	0.2 – 0.25	0.2 – 0.3	0.2 – 0.4
	Silt loam	0.05 – 0.1	0.05 – 0.15	0.05 – 0.2
III	Sandy clay loam	0.05 – 0.1	0.05 – 0.12	0.05 – 0.15

- (5) A special site evaluation shall be required in accordance with Rule .0510 of this Subchapter, as applicable.
- (6) Setbacks allowed in Table XXVIII of Rule .1202(d) of this Section may be used with advanced pretreatment drip dispersal systems when no reduction in the depth to a LC or vertical separation reduction is proposed compared to the requirements for DSE in Table XXVI or Table XXVII of Rule .1202(b) of this Section. A minimum of 18 inches of naturally occurring soil to an unsuitable LC shall be required to take setback reductions. The following LTAR limitations shall be applicable:
 - (A) for NSF/ANSI 40 systems, with the exception of the setback reductions to artificial drainage systems, when reductions are taken in setbacks, the LTAR shall not exceed the lowest LTAR for Soil Groups I, II, and III, and 0.1 gpd/ft² for Group IV soil;
 - (B) for TS-I Systems, with the exception of setback reductions to artificial drainage systems, when reductions are taken in setbacks, the LTAR shall not exceed the mid-range LTAR for Soil Groups I, II, and III, and 0.1 gpd/ft² for Group IV soils;
 - (C) for NSF/ANSI 40 and TS-I Systems, Table XXIX may be used to determine the LTAR when no other setback reductions are taken aside of those to artificial drainage systems; and
 - (D) for TS-II Systems, Table XXIX shall be used to determine the LTAR. The LTAR from Table XXIX and reduced setbacks for TS-II Systems from Table XXVIII of Rule .1202(d) of this Section may be taken concurrently.
- (c) Drip dispersal systems with a DDF greater than 1,500 gpd and less than or equal to 3,000 gpd used with advanced pretreatment may propose an adjusted LTAR if the following criteria are met:
 - (1) no reduction in the depth to a LC, vertical separation, or setback reduction is proposed;
 - (2) proposed LTAR is supported by a special site evaluation in accordance with Rule .0510 of this Subchapter; and
 - (3) 25-foot setback shall be maintained to all property lines, unless one of the following criteria is met:
 - (A) site-specific nitrogen migration analysis for a TS-I system indicates that the nitrate-nitrogen concentration at the property line will not exceed 10 mg/L; or
 - (B) TS-II system is used.
- (d) Drip dispersal installation shall be in accordance with Rule .0908(f) of this Subchapter.

History Note: Authority G.S. 130A-334; 130A-335; 130A-342; 130A-343;
Eff. January 1, 2024.

15A NCAC 18E .1205 ADVANCED PRETREATMENT SAND LINED TRENCH SYSTEMS

- (a) Sand lined trench systems with a DDF less than or equal to 1,500 gpd receiving TS-I or TS-II effluent shall meet the requirements of this Rule.
- (b) The site meets the criteria in Rule .0906(c) of this Subchapter and the receiving permeable horizon may be deeper than 60 inches below the natural grade.
- (c) If a groundwater lowering system is used to comply with the vertical separation to a SWC, the following conditions shall apply:
 - (1) the site shall comply with the requirements of Rule .0906(d) of this Subchapter; and
 - (2) the vertical separation requirement to a SWC shall be reduced to nine inches with pressure dosed gravity distribution or six inches with pressure dispersal.
- (d) Table XXXI shall be used to determine the LTAR for a sand-lined trench system and shall be based on the most limiting, naturally occurring soils overlying the permeable receiving layer. An equivalent trench width of three feet shall be used to determine trench length in accordance with Rule .0901(d) of this Subchapter. The LTAR shall be one of the following:
 - (1) the rate set forth in Table XXXI; or
 - (2) 20 percent of the in-situ Ksat of the receiving permeable horizon, whichever is less.

TABLE XXXI. LTAR for advanced pretreatment sand lined systems based on texture of the most hydraulically limiting overlying soil horizon

Soil Group	Texture of Most Hydraulically Limiting Overlying Soil Horizon	LTAR in gpd/ft ² *
I	Sand	0.9 – 1.4
II	Coarse Loams	0.7 – 1.0
III	Fine Loams	0.4 – 0.8
IV	Clays	0.2 – 0.4

*There shall be no reduction in trench length compared to a conventional gravel trench when Accepted or Innovative gravelless trench product is used.

(e) A Special Site Evaluation in accordance with Rule .0510 of this Subchapter shall be required for the following conditions to field verify the LTAR:

- (1) when the texture of the receiving permeable horizon is sandy loam or loam, and the system DDF is greater than 600 gpd; or
- (2) when the texture of the receiving permeable horizon is silt loam.

(f) Setbacks in accordance with Table XXVIII of Rule .1202(d) of this Section shall be applied to sand lined trench systems.

(g) Sand lined trench system installation shall be in accordance with Rule .0906(h) of this Subchapter.

History Note: Authority G.S. 130A-334; 130A-335; 130A-342; 130A-343;
Eff. January 1, 2024.

15A NCAC 18E .1206 ADVANCED PRETREATMENT BED SYSTEMS

(a) This Rule shall apply to bed systems receiving advanced pretreatment.

(b) Bed systems receiving NSF/ANSI 40 effluent, or better, on sites with a DDF less than or equal to 600 gpd shall meet the following requirements:

- (1) the soil and site shall meet the following criteria:
 - (A) the vertical separation requirements of Rule .0901(g)(2) of this Subchapter;
 - (B) soil texture is Group I, II, or III; and
 - (C) design options for the site are limited by topography or available space;
- (2) Table XVII in Rule .0901(c) of this Subchapter shall be used to determine the LTAR for a bed system. On sites where the soil texture is Group I or II, the initial LTAR shall be increased by a factor of 1.125 with no further reduction in bed size allowed;
- (3) setbacks allowed in Table XXVIII of Rule .1202(d) of this Section shall be used; and
- (4) bed system installation shall be in accordance with Rule .0903(e) of this Subchapter.

(c) Bed systems receiving TS-I or TS-II effluent on sites with a DDF less than or equal to 1,500 gpd shall meet the following requirements:

- (1) The soil and site meet the following criteria:
 - (A) there is a minimum of 30 inches of suitable Group I or II soils below the naturally occurring soil surface and no SWC within the first 36 inches below the naturally occurring soil surface or 36 inches of Group I soils below the naturally occurring soil surface and no SWC exists within the first 12 inches below the naturally occurring soil surface;
 - (B) the requirement for 30 inches of Group I or II soils or 36 inches of Group I soils in Part (A) of this Subparagraph may be reduced to 18 inches when a special site evaluation in accordance with Rule .0510 of this Subchapter is provided;
 - (C) sites shall have a uniform slope not exceeding two percent, unless a special site evaluation submitted and approved in accordance with Rule .0510 of this Subchapter is provided; and
 - (D) the bed system shall be considered to be a fill system if the infiltrative surface is installed less than six inches below the naturally occurring soil surface. For bed systems in fill, the requirements of Paragraph (e) of this Rule shall also be met.
- (2) Table XVII in Rule .0901(c) of this Subchapter shall be used to determine the initial LTAR for a bed system and shall be based on the most limiting, naturally occurring soil horizon within 36 inches of the naturally occurring soil surface or to a depth of 12 inches below the bed bottom, whichever is deeper. The minimum bed size shall be determined in accordance with the following:

- (A) the minimum amount of bottom area square feet shall be determined by dividing the DDF by the LTAR;
 - (B) when the bed is a fill system, the lowest LTAR for the applicable Soil Group shall be used. The LTAR shall not exceed 1.0 gpd/ft²;
 - (C) fill shall not be added to the naturally occurring soil surface in order to increase the LTAR of a bed system;
 - (D) the minimum bed size shall be reduced by up to 25 percent when the system is designed to comply with TS-I or TS-II effluent and is not installed in existing fill; and
 - (E) the minimum bed size may be reduced by up to 40 percent when the following criteria are met: the system is designed to comply with TS-II effluent; Group I Soil is present in the first 36 inches of naturally occurring soil; no SWC exists within the first 30 inches below the naturally occurring soil surface or within 24 inches of the bed bottom; the bed or beds are not located beneath the advanced pretreatment components, and pressure dispersal is used; effluent is distributed to the beds by a pump and timer control system designed to distribute flow evenly over a 24-hour period; and there is 100 percent dispersal field repair area.
- (3) A special site evaluation shall be submitted and approved in accordance with Rule .0510 of this Subchapter when the vertical separation to a LC is reduced and on sites with slopes greater than two percent.
- (4) Setbacks as set forth in Table XXVIII of Rule .1202(d) of this Section shall apply as follows:
- (A) the setbacks shall be measured from the nearest edge of the bed;
 - (B) for bed systems using fill, the setbacks shall be measured from a point five feet from the nearest edge of the bed sidewall, or from the projected toe of the slope that is required to comply with the soil and site limitations, whichever is greater;
 - (C) the minimum separation between initial and repair dispersal field areas serving a single system and facility shall be two feet of naturally occurring soil. Ten feet of naturally occurring soils shall separate the initial and repair dispersal field areas serving separate facilities when these bed systems are on a common site or tract of land; and
 - (D) whenever the bed size is reduced in accordance with this Rule, only reduced setbacks to artificial drainage systems in accordance with Table XXVIII of Rule .1202(d) of this Section shall be allowed.
- (5) Bed system installation shall be in accordance with Rule .0903(e) of this Subchapter and the following:
- (A) pressure dispersal shall be used whenever effluent is distributed to a bed not located beneath the advanced pretreatment component; and
 - (B) when new fill is required for the installation of a bed system, suitable Group I fill material shall be used to comply with the vertical separation requirements from the bed bottom to a LC, when all of the following conditions are met: a groundwater lowering system is not used to comply with the vertical separation requirements; new fill material is sand or loamy sand, containing not more than 10 percent by volume fibrous organics, building rubble, or other debris and does not have discreet layers containing greater than 35 percent of shell fragments by volume; and the requirements of Rule .0909(c)(8) of this Subchapter, for the projected side slope of the fill are met, as determined beginning at a point six inches above the top edge of the bed.
- (d) Bed systems receiving TS-I or TS-II effluent on sites with a DDF greater than 1,500 gpd and less than or equal to 3,000 gpd shall meet the following requirements:
- (1) The soil and site shall meet the minimum following criteria:
 - (A) Group I soils are present for 54 inches below the naturally occurring soil surface;
 - (B) no SWC exists within the first 48 inches below the naturally occurring soil surface; and
 - (C) vertical separation of 24 inches to any SWC is maintained below the bed bottom, unless a site-specific groundwater mounding analysis is performed and demonstrates a 12-inch separation or 18-inch minimum for a fill system in accordance with Rule .0909(c) of this Subchapter shall be maintained.
 - (2) Table XVII in Rule .0901(c) of this Subchapter shall be used to determine the initial LTAR for a bed system and shall be based on the most limiting, naturally occurring soil horizon within 36 inches of the naturally occurring soil surface or to a depth of 12 inches below the bed bottom, whichever is deeper. The minimum bed size shall be determined in accordance with the following:
 - (A) the minimum number of square feet of bed bottom area shall be calculated by dividing the DDF by the LTAR;

- (B) the minimum bed size shall be reduced by up to 25 percent when the system is designed and approved to comply with TS-I or TS-II effluent standards and will be installed in naturally occurring soil; and
- (C) the minimum bed size may be reduced by up to 40 percent when all of the following criteria are met: the system is designed and approved to comply with TS-II effluent standards; the hydraulic assessment demonstrates that a 24-inch minimum vertical separation to a SWC is maintained after accounting for projected groundwater mounding; and there is 100 percent dispersal field repair area.
- (3) A special site evaluation shall be submitted and approved in accordance with Rule .0510 of this Subchapter.
- (4) No setback reductions shall be allowed in accordance with Table XXVIII of Rule .1202(d) of this Section. The following horizontal setbacks shall be met:
 - (A) the minimum setback between initial and repair dispersal field areas serving a single system and facility shall be two feet of naturally occurring soil. Ten feet of naturally occurring soil shall separate the initial and repair dispersal field areas serving separate facilities when these bed systems are on a common site or tract of land;
 - (B) when two beds are used, the minimum separation between two beds shall be 20 feet. When three or more beds are used, the minimum separation between beds shall be 10 feet; and
 - (C) a 25-foot setback shall be maintained from edge of the bed to the property line unless a site-specific nitrogen migration analysis indicates that the nitrate-nitrogen concentration at the property line will not exceed 10 mg/L or TS-II or better effluent is produced by the approved system.
- (5) Bed system installation shall be in accordance with Rule .0903(e) of this Subchapter and the following criteria:
 - (A) two or more equally sized beds shall be used and the beds shall not be located beneath the advanced pretreatment components; and
 - (B) effluent shall be distributed to the beds by a pressure dispersal system. A timed dosed system shall be used to distribute flow evenly to the beds over a 24-hour period.
- (e) Bed systems receiving TS-I or TS-II quality effluent may be proposed for a site with existing fill that meets the requirements of Rule .0909(d) of this Subchapter under the following conditions:
 - (1) no SWC exists within 18 inches of the existing fill surface;
 - (2) 18 inches of vertical separation exists to the SWC;
 - (3) the DDF does not exceed 480 gpd; and
 - (4) pressure dispersal is used. The requirement for pressure dispersal shall not be required if the advanced pretreatment system PIA Approval allows for advanced pretreatment unit(s) to discharge directly to the underlying bed and for multiple units, where applicable, when the advanced pretreatment units are spaced at equal intervals across the entire bed area.

History Note: Authority G.S. 130A-334; 130A-335; 130A-342; 130A-343;
Eff. January 1, 2024.

SECTION .1300 – OPERATION AND MAINTENANCE

15A NCAC 18E .1301 OPERATION AND MAINTENANCE OF WASTEWATER SYSTEMS

- (a) Wastewater systems shall be operated and maintained in accordance with the conditions of the OP, PIA Approval, and the Rules of this Section, including the manufacturer's operation and maintenance instructions, as applicable. Dispersal field repair areas shall be maintained in accordance with the Rules of this Subchapter.
- (b) System management in accordance with Table XXXII shall be required for all systems installed or repaired after July 1, 1992. System management in accordance with Table XXXII shall also be required for all Type V and VI systems installed on or before July 1, 1992.

TABLE XXXII. Management responsibilities based on wastewater system classification type and description

System Classification Type and Description	LHD Compliance Inspection Frequency	Management Entity	Management Entity Minimum Maintenance Inspection Frequency
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Ia – Privy or vault privy	N/A	Owner	N/A
Ib – Chemical toilet	N/A	Owner	N/A
Ic – Incinerating toilet	N/A	Owner	N/A
Id – Composting toilet system	N/A	Owner	N/A
Ie – Other toilet system	N/A	Owner	N/A
IIa – Conventional system for a single family or 480 gpd or less	N/A	Owner	N/A
IIb – Accepted wastewater gravity system	N/A	Owner	N/A
IIIa – Conventional wastewater system greater than 480 gpd excluding single family residences	N/A	Owner	N/A
IIIb – Wastewater system with a single pump or siphon	5 years N/A	Owner or Certified Operator	N/A 5 years
IIIc – Gravity fill system	N/A	Owner	N/A
IIId – Alternating dual fields with gravity distribution	N/A	Owner	N/A
IIIe – PPBPS gravity system	N/A	Owner	N/A
IIIf – LDP gravity system	N/A	Owner	N/A
IIIg – Other non-conventional systems	N/A	Owner	N/A
IIIh – Gravity groundwater lowering system	5 years	Owner	N/A
IVa – LPP distribution	3 years	Private Certified Operator or Public Management Entity with a Certified Operator	2/year
IVb – System with more than one pump or siphon	3 years	Private Certified Operator or Public Management Entity with a Certified Operator	2/year
IVc – Off-site system serving two or more facilities with any components under common or joint control	5 years	Private Certified Operator or Public Management Entity with a Certified Operator	1/year
IVd – Alternating dual fields with pressure dosed gravity distribution including off-site systems	3 years	Private Certified Operator or Public Management Entity with a Certified Operator	1/year
Va – Advanced pretreatment meeting NSF/ANSI 40, TS-I, or TS-II, approved under Section .1700 of this Subchapter, DDF ≤ 3,000 gpd	1/year	Private Certified Operator or Public Management Entity with a Certified Operator	≤ 1,500 gpd - 2/year* > 1,500 gpd and ≤ 3,000 gpd - 4/year
Vb – DSE wastewater systems > 3,000 gpd with dispersal field > 1,500 gpd	1/year	Private Certified Operator or Public Management Entity with a Certified Operator	> 3,000 and ≤ 10,000 gpd - monthly > 10,000 gpd flow - weekly

Vc – RWTS, approved under Section .1500 of this Subchapter, meeting NSF/ANSI 40, DDF ≤ 1,500 gpd	1/year	Private Certified Operator or Public Management Entity with a Certified Operator	≤ 1,500 gpd - 2/year*
Vd – Anaerobic drip dispersal systems	1/year	Private Certified Operator or Public Management Entity with a Certified Operator	≤ 1,500 gpd - 2/year* > 1,500 gpd and ≤ 3,000 gpd - 4/year > 3,000 gpd and ≤ 10,000 gpd - 12/year > 10,000 gpd - 1/week
Ve - Flow equalization	≤ 1,500 gpd – once every three years > 1,500 gpd – 1/year	Private Certified Operator or Public Management Entity with a Certified Operator	Based on equalized flow ≤ 1,500 gpd - 2/year > 1,500 and ≤ 3,000 gpd - 4/year > 3,000 gpd and ≤ 10,000 gpd - 12/year >10,000 gpd – 1/week
Vf – Sand lined trench system with no advanced pretreatment or drip dispersal	1/year	Private Certified Operator or Public Management Entity with a Certified Operator	1/year
Vg – Wastewater system with pump groundwater lowering systems	1/year	Private Certified Operator or Public Management Entity with a Certified Operator	2/year with one visit during the wet season
Vh – IPWW designed by a PE and reviewed by the Department and determined to be IPWW	1/year	Private Certified Operator or Public Management Entity with a Certified Operator	≤ 1,500 gpd - 2/year* > 1,500 gpd and ≤ 3,000 gpd - 4/year > 3,000 gpd and ≤ 10,000 gpd - 12/year > 10,000 gpd – 1/week
Vi – Permanent pump and haul	1/year	Private Certified Operator	1/month
Vla – Advanced pretreatment > 3,000 gpd meeting NSF/ANSI 40, TS-I, or TS-II	6 months	Private Certified Operator or Public Management Entity with a Certified Operator	Media filters > 3,000 gpd and ≤ 10,000 gpd - 12/year >10,000 gpd – 1/week All other advanced pretreatment > 3,000 gpd and ≤ 10,000 gpd - 12/year > 10,000 and ≤ 25,000 gpd - 2/week > 25,000 and ≤ 50,000 gpd - 3/week > 50,000 gpd - 5/week
VIIb – Any system using RCW	6 months	Private Certified Operator or Public Management Entity with a Certified Operator	≤ 3,000 gpd - 12/year > 3,000 and ≤ 10,000 gpd - 1/week > 10,000 and ≤ 25,000 gpd - 2/week > 25,000 and ≤ 50,000 gpd - 3/week

			> 50,000 gpd - 5/week
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*Quarterly Management Entity inspections shall be required for the first year. The quarterly inspections may be reduced to twice a year if the wastewater system is in compliance with all OP conditions after the first year.

- (c) Wastewater systems with multiple components shall be classified by their highest or most complex system classification type in accordance with Table XXXII to determine LHD and Management Entity responsibilities.
- (d) The Department shall classify wastewater systems not identified in Table XXXII after consultation with the Water Pollution Control Systems Operators Certification Commission.
- (e) The site for the wastewater system shall be accessible for monitoring, maintenance, inspection, and repair.
- (f) The system shall be maintained to comply with the effluent standards specified in Table XXV of Rule .1201(a) or Rule .1002 of this Subchapter and the OP, as applicable. Influent and effluent sampling may be required for food preparation or processing facilities, IPWW, and other systems as specified in the PIA Approval or OP.
- (g) The owner may submit a written request to the LHD and Department to reduce the wastewater system effluent sampling frequency, effluent sampling constituents, or Management Entity inspection frequency. The written request shall include documentation showing that the wastewater system is compliant with its OP and Rule .1302(f) of this Section.
- (h) The replacement of a specific component, except tanks and dispersal media, by an identical replacement component, including pipes, blowers, pumps, disinfection components, effluent filters, and control panels and appurtenances, shall be considered maintenance. When the replacement is performed as maintenance by the Management Entity, this activity shall be reported to the owner and LHD within 30 days of when the activity occurs.
- (i) All residuals shall be removed as specified in the OP, the RWTS or PIA Approval, Rule .1303 of this Section, or as otherwise determined to be needed by the Management Entity. Residuals from the wastewater system shall be transported and disposed of in accordance with G.S. 130A, Article 9, and 15A NCAC 13B.

History Note: Authority G.S. 130A-335(e) and (f); S.L. 2015-147, s. 2;
Eff. January 1, 2024.

15A NCAC 18E .1302 OPERATION AND MAINTENANCE OF ADVANCED PRETREATMENT SYSTEMS

- (a) This Rule shall apply to all advanced pretreatment systems approved in accordance with Sections .1500 and .1700 of this Subchapter.
- (b) System management in accordance with Table XXXII of Rule .1301(b) of this Section shall be required for advanced pretreatment systems.
- (c) Prior to the issuance or re-issuance of an OP for an advanced pretreatment system, the owner shall provide to the LHD documentation that a contract for operation and maintenance of the system is in place with a Management Entity. For proprietary advanced pretreatment systems, the contract shall be with either the manufacturer, manufacturer's representative, or a Management Entity authorized in writing by the manufacturer or manufacturer's representative to operate the system. For non-proprietary advanced pretreatment systems, the contract shall be with an operator certified in accordance with Rule .0303(e) of this Subchapter for the classification indicated on the OP.
- (d) Operation and maintenance for advanced pretreatment shall be in accordance with the following:
 - (1) the Management Entity shall evaluate the performance of each system;
 - (2) minimum inspection, sampling, and reporting frequency shall be in accordance with this Section, the RWTS or PIA Approval, and conditions of the OP;
 - (3) the Management Entity shall inspect each system during one or more of the required Management Entity inspections while the system is in operation using a VIP specified by the manufacturer and included in the RWTS or PIA Approval. The VIP shall include the following:
 - (A) a visual inspection and evaluation of all critical treatment components and of the effluent in the field for solids, clarity, color, and odor. The VIP shall also include field tests of pH, turbidity, and dissolved oxygen content and, for TS-II systems, alkalinity, and any other tests proposed by the manufacturer and specified in the RWTS or PIA Approval;
 - (B) compliance criteria to determine system compliance status and proposed responses to conditions observed; and

- (C) for systems serving vacation rentals subject to the North Carolina Vacation Rental Act, G.S. 42A, this visit shall be scheduled during the seasonal high use period and shall coincide with a water quality sampling event if required in accordance with Rule .1709 of this Subchapter;
- (4) the actual flow shall be recorded in accordance with the RWTS or PIA Approval by the Management Entity prior to the visual inspection of the system in accordance with Subparagraph (d)(3) of this Rule and prior to any effluent sampling event required in accordance with Rule .1709 of this Subchapter; and
- (5) sampling and resampling for an approved RWTS or PIA System shall be undertaken as required in accordance with Rule .1709 of this Subchapter and the following:
 - (A) all samples shall be collected, preserved, transported, and analyzed in compliance with 40 CFR 136;
 - (B) samples shall be taken to a certified laboratory, as defined in G.S. 130A-313(2), for analysis;
 - (C) documented chain of custody for each sample collected shall be maintained; and
 - (D) re-sampling at any site shall be performed as required in the RWTS or PIA Approval, Rule .1709 of this Subchapter, or as otherwise directed by the LHD or Department as part of an enforcement action. The owner, manufacturer, or manufacturer's representative may also re-sample a system to verify or refute sample results. A new complete data set for re-sampling conducted within 30 days of receipt of a non-compliant data set may be substituted to demonstrate compliance with the designed effluent quality standard in accordance with Table XXV of Rule .1201(a) of this Subchapter. All sample results collected shall be reported.
- (e) The results of all sampling shall be reported by the Management Entity to the owner, LHD, Department, and the proprietary advanced pretreatment manufacturer.
- (f) An individual advanced pretreatment system at a single site shall be considered compliant when the following conditions are met:
 - (1) annual VIP specified in the RWTS or PIA Approval indicates that the results of the VIP meet the requirements specified in the RWTS or PIA Approval; and
 - (2) the arithmetic mean for BOD₅, TSS, TKN, and TN and the geometric mean for Fecal Coliform from three or more consecutive sampling dates does not exceed the designated effluent standard in Table XXV in Rule .1201(a) of this Subchapter. A new complete data set for re-sampling conducted within 30 days of receipt of a non-compliant data set may be substituted to demonstrate compliance with the designed effluent quality standard in accordance with Table XXV of Rule .1201(a) of this Subchapter.
- (g) Mass loading for BOD₅, TSS, or TN may be used to demonstrate site compliance with Subparagraph (f)(2) of this Rule for a wastewater system with a DDF less than or equal to 3,000 gpd. The mass loading to the wastewater system shall be based on site-specific water use data and effluent sampling results. At least one year of water use data shall be used in this calculation. The mass loading to the wastewater system shall be calculated as follows:

$$\begin{aligned} \text{EML} &= \text{Flow} \times \text{EFF} \\ \text{AML} &= 0.6 \times \text{DDF} \times \text{TS} \\ \text{If } \text{EML} &\leq \text{AML}, \text{ the site is compliant} \end{aligned}$$

Where

 - EML = effective mass loading
 - AML = allowable mass loading
 - Flow = average daily flow during the peak water use month or the average of the peak 30 consecutive day period during the prior year, in gpd
 - EFF = average of the results for the constituent from at least the two most recent complete data sets, in mg/L
 - TS = the effluent limit based on the constituent and effluent standard in mg/L, from Table XXV in Rule .1201(a) of this Subchapter
- (h) The Management Entity may record daily wastewater flow and may sample influent to the advanced pretreatment system as needed to determine compliance with this Rule and OP conditions.

History Note: Authority G.S. 130A-335(e) and (f);
Eff. January 1, 2024.

15A NCAC 18E .1303 OWNER RESPONSIBILITIES FOR WASTEWATER SYSTEM OPERATION AND MAINTENANCE

- (a) Any person owning or controlling the property upon which a wastewater system is installed shall be responsible for the following items regarding the operation and maintenance of the system:

- (1) the wastewater system shall be operated and maintained to protect North Carolina ground and surface water quality standards and to prevent the following conditions:
 - (A) discharge of sewage or effluent to the surface of the ground, surface waters, or into groundwater at any time;
 - (B) back-up of sewage or effluent into the facility, building drains, collection system, freeboard volume of the tanks, or distribution system; or
 - (C) effluent within three inches of finished grade over one or more trenches based on two or more observations made not less than 24 hours apart, and greater than 24 hours after a rainfall event;
- (2) the system shall be considered to be malfunctioning when one or more of the conditions of Subparagraph (a)(1) of this Rule occur or if it is necessary to remove the contents of the tank(s) at a frequency greater than once per month in order to prevent one or more of the conditions of Subparagraph (a)(1) of the Rule. The owner shall contact the LHD when the wastewater system is malfunctioning and implement remedies as directed by the LHD in accordance with Rule .1306 of this Section. If the system was permitted under an EOP or AOWE permit, the owner shall contact the PE or AOWE when the wastewater system is malfunctioning;
- (3) wastewater systems shall be inspected, and the entire contents of all septic tank compartments shall be removed whenever the depth of both the scum and sludge is found to be more than one-third of the liquid depth in any compartment. The effluent filter shall be rinsed to remove accumulated solids that can cause the wastewater to back up into the facility or clog the system, or replaced as needed;
- (4) residuals from the wastewater system shall be transported and disposed of in accordance with G.S. 130A, Article 9, and 15A NCAC 13B;
- (5) grease traps and grease tanks shall be pumped as needed to prevent discharge of FOG from the trap or tank to the next treatment component, but no less than yearly. Grease traps and grease tanks shall be maintained in accordance with Rule .0803(h) of this Subchapter and the owner shall maintain a contract with a septage management firm. All pumping records shall be maintained on-site;
- (6) site-specific vegetation shall be established and maintained over the wastewater system and repair area to stabilize slope and control erosion;
- (7) activities that result in soil disturbance or soil compaction shall not occur over the initial and repair dispersal field area;
- (8) maintaining the wastewater system in accordance with Rule .1301(a) of this Section; and
- (9) turning the effluent flow diversion valve for alternating dual dispersal fields once a year or as specified by the PE, AOWE, or authorized designer.

(b) A contract for operation and maintenance of a wastewater system required to be maintained by a Management Entity, as specified in Table XXXII of Rule .1301(b) of this Section, shall be in effect for as long as the system is in use. A contract shall be executed between the system owner and a Management Entity prior to the issuance of an OP, unless the system owner and Management Entity are the same. The contract shall include:

- (1) specific requirements for operation, maintenance, and associated reporting;
- (2) responsibilities of the owner;
- (3) responsibilities of the Management Entity;
- (4) provisions for notification to the LHD by the owner and Management Entity upon termination of the contract; and
- (5) other requirements for the continued performance of the system, as determined by the Management Entity, LHD, and Department, as applicable.

History Note: Authority G.S. 130A-335(e) and (f);
Eff. January 1, 2024.

15A NCAC 18E .1304 MANAGEMENT ENTITY RESPONSIBILITIES FOR WASTEWATER SYSTEM OPERATION AND MAINTENANCE

(a) When a Management Entity is required to be or to employ a certified operator as specified in Table XXXII in Rule .1301(b) of this Section, the operator shall, at a minimum, be certified as a subsurface operator in accordance with G.S. 90A, Article 3, and 15A NCAC 08G. Operators of systems classified as Type V or VI in Table XXXII in Rule .1301(b) of this Section may be required to have additional certifications by the Department in accordance with Rule .1301(d) of this Section and upon consultation with the Water Pollution Control Systems Operator Certification Commission, if required by G.S. 90A, Article 3.

- (b) The Management Entity shall inspect the wastewater system at the frequency specified in Table XXXII in Rule .1301(b) of this Section or in accordance with the RWTS or PIA Approval.
- (c) The Management Entity shall provide a copy of the inspection report, including results of the VIP with respect to compliance criteria as specified in the RWTS or PIA Approval and effluent sampling, to the owner, LHD, and manufacturer within 30 days of the system inspection.
- (d) When inspections indicate the need for system repairs, the Management Entity shall notify the LHD within 48 hours.
- (e) The Management Entity shall be responsible for conducting routine maintenance procedures and monitoring requirements in accordance with the conditions of the OP and the contract.
- (f) The Management Entity shall notify the LHD and the proprietary advanced pretreatment manufacturer, as applicable, when the owner or the Management Entity chooses not to renew an operation and maintenance contract executed in accordance with this Rule.
- (g) The Management Entity shall submit the inspection report to the Department centralized data management system.

*History Note: Authority G.S. 130A-335(e) and (f);
Eff. January 1, 2024.*

15A NCAC 18E .1305 LOCAL HEALTH DEPARTMENT RESPONSIBILITIES FOR WASTEWATER SYSTEM OPERATION AND MAINTENANCE

- (a) No IP, CA, or OP shall be issued for Type IV, V, or VI systems, unless a Management Entity of the type specified in Table XXXII in Rule .1301(b) of this Section is authorized and operational to carry out operation and maintenance requirements for the wastewater system as set forth in these Rules and the OP.
- (b) An LHD may be the Management Entity only for systems classified Type IV, Va, Vb, Vc, Vd, Ve, Vf, and Vg and only when authorized by the local board of health.
- (c) An authorized agent shall review the performance and inspection reports submitted in accordance with Rule .1304(c) of this Section and perform an on-site compliance inspection of the systems as required in Table XXXII in Rule .1301(b) of this Section. More frequent inspections may be performed by an authorized agent if requested by the system owner or the Management Entity, or specified in the PIA approval or OP.
- (d) The LHD may provide the owner with the option for a private Management Entity, who is not the owner, to perform the on-site compliance inspection for Type IIIb and IIIh systems in accordance with Table XXXII in Rule .1301(b) of this Section instead of the LHD. The Management Entity shall provide to the owner and LHD a written compliance inspection report every five years. The report shall document that the wastewater system is compliant with this Subchapter, the performance standards in the OP or ATO, and conditions in the OP or the ATO.
- (e) The authorized agent shall issue a written notice of non-compliance to the owner when the wastewater system is not malfunctioning in accordance with Rule .1303(a)(2) of this Section, but non-compliant with this Subchapter, the performance standards in the OP or ATO, or conditions in the OP or the ATO.
- (f) The LHD shall investigate malfunctions in accordance with Rule .1306 of this Section.

*History Note: Authority G.S. 130A-335(e) and (f);
Eff. January 1, 2024.*

15A NCAC 18E .1306 SYSTEM MALFUNCTION AND REPAIR

- (a) This Rule identifies the responsibilities of the LHD and the owner when a system is malfunctioning or otherwise determined to require repair.
- (b) The LHD or Department shall issue a written NOV to the wastewater system owner in accordance with Rule .0302(c) of this Subchapter.
- (c) The wastewater system shall be repaired within 30 days of the date on the NOV issued by the Department or LHD unless the NOV specifies a different time frame for the repair based on site-specific factors, such as the severity of the repair, wastewater backing up into a restaurant or discharging into SA waters, or adverse weather that delays construction of the repair. The following steps shall be followed to remedy a malfunctioning wastewater system:
 - (1) The owner shall apply for a repair in accordance with Section .0200 of this Subchapter, unless only maintenance is required to bring the wastewater system into compliance.
 - (2) After investigating the malfunction, the Department or LHD shall require that the wastewater system be repaired to correct the malfunction and eliminate any public health hazard. The wastewater system shall be repaired so that it meets G.S. 130A, Article 11 and this Subchapter. When it is not possible to bring the wastewater system into compliance with G.S. 130A, Article 11 and this Subchapter, the authorized agent

- shall use their best professional judgement, based on education and experience, to require a repair that should enable the wastewater system to function in a manner that complies with Rule .1303(a)(1) of this Section. The LHD shall document that the repair uses best professional judgement on the CA and OP.
- (3) When necessary to protect the public health, the Department or LHD shall require the owner of a malfunctioning system to pump and haul sewage to an approved wastewater system during the time needed to repair the wastewater system. This requirement shall be included in the NOV issued to the owner.
- (d) If no repair options are available for the wastewater system in accordance with Paragraph (c), the LHD may issue a CA and OP for a permanent pump and haul system. The applicant shall submit an application to the LHD for the permanent pump and haul system. The application and permanent pump and haul system shall meet the following conditions:
- (1) The owner shall provide the following information as part of the application:
 - (A) a report that the system cannot be repaired by connection to a system approved under this Section or a system approved under G.S. 143, Article 21;
 - (B) a contract with a septage management firm permitted in accordance with G.S. 130A-291.1 to pump and haul the sewage;
 - (C) documentation that the wastewater system has been approved under this Subchapter or in accordance with 15A NCAC 02H or 15A NCAC 02T to accept sewage; and
 - (D) documentation from the facility receiving the sewage confirming that the facility has the capacity for the additional sewage and agrees to accept it.
 - (2) The LHD shall design the pump and haul system based on the following criteria:
 - (A) tankage with a minimum of five days storage capacity and two days emergency storage capacity;
 - (B) high-water alarm set to go off with two days of emergency storage capacity left in the tankage; and
 - (C) telemetry unit that contacts the septage management firm.
 - (3) The owner of a non-residential facility may request a reduction in the five day storage requirement, if the owner can document the ability to have the tanks pumped out with only 24 hours' notice. The total tank capacity shall never be less than the minimum required septic tank and pump tank capacity required by Section .0800 of this Subchapter.
 - (4) Tanks shall be approved by the LHD for permanent pump and haul if shown to be structurally sound, watertight, and of a capacity needed based on the DDF and projected pumping frequency. Existing tanks may be used for permanent pump and haul if the tanks meet the requirements in this Subparagraph.
 - (5) Prior to issuing the OP, the LHD shall receive from the owner a contract with a Management Entity for inspection and maintenance of the system.
 - (6) A non-transferrable OP, valid for a period of five years, shall be issued to the pump and haul system owner.
- (e) A malfunctioning wastewater system that has been disconnected from the facility for any reason shall be repaired prior to reuse.
- (f) If the dispersal field in a malfunctioning wastewater system is found to be nonrepairable, the dispersal field shall not be used. The system owner shall be required to abandon the system to protect the public health and safety as specified in Rule .1307 of this Section.
- (g) For facilities with a malfunctioning wastewater system installed prior to July 1, 1977, the authorized agent shall use their best professional judgement, based on education and experience, to repair the system.
- (h) For facilities with a wastewater disposal method installed prior to July 1, 1977, which has been in continual use and acts as the sole source of wastewater disposal, the authorized agent shall use their best professional judgement, based on education and experience, to repair the wastewater disposal method.
- (i) Legal remedies may be pursued, in accordance with G.S. 130A, Article 1, Part 2, after an authorized agent has observed and documented one or more malfunctioning conditions and issued an NOV.

History Note: Authority G.S. 130A-291.1; 130A-291.2; 130A-335(e) and (f);
Eff. January 1, 2024.

15A NCAC 18E .1307 WASTEWATER SYSTEM ABANDONMENT

If a wastewater system is abandoned or is otherwise no longer in use, the tanks shall:

- (1) have the contents removed by a septage management firm permitted in accordance with G.S. 130A-291.1;
- (2) be removed, collapsed, or otherwise rendered unable to retain liquid, and backfilled; and
- (3) have the electrical components de-energized and above ground components removed.

*History Note: Authority G.S. 130A-335;
Eff. January 1, 2024.*

SECTION .1400 – APPROVAL OF TANKS, RISERS, EFFLUENT FILTERS, AND PIPE PENETRATION BOOTS

15A NCAC 18E .1401 PLANS FOR PREFABRICATED TANKS

(a) All tanks proposed for use in a wastewater system described in this Subchapter shall be approved by the Department. Tanks shall be approved as follows:

- (1) The tank design shall be approved based on the plans and specifications submitted in accordance with Subparagraphs (c)(1) through (c)(8) of this Rule. After the tank design has been approved, a temporary identification number shall be assigned for tracking purposes.
- (2) The tank shall pass a structural load test as described in Subparagraph (c)(9) of this Rule. The test shall be performed and certified by a third-party. The test shall be observed in person by the Department, LHD, PE, or a third-party testing organization. If the tank passes the structural load test, then the tank shall be assigned a permanent identification number. Tanks shall not be sold for use in a wastewater system without a permanent identification number.
- (3) The structural design verification shall be required for new tanks, modifications to tank design, and when tank forms are sold to a different tank manufacturer.
- (4) Pump tanks may be tested and approved with a baffle wall, without a baffle wall, or with a partial baffle wall. The most limiting design produced by the manufacturer shall be tested.

(b) The tank manufacturer shall submit three copies of the plans and specifications for the initial design of each tank to the Department for approval.

(c) Plans and specifications for tanks with a total liquid capacity less than or equal to 4,000 gallons shall include the following:

- (1) all tank dimensions in inches, including:
 - (A) top, bottom, and sidewall thickness and variations;
 - (B) minimum and maximum dimensions on tanks with tapered or ribbed walls;
 - (C) baffle wall location and minimum and maximum thickness and variations;
 - (D) location and dimension of all openings in baffle wall for gas and liquid movement; and
 - (E) dimensions of all compartments;
- (2) material type and strength, including reinforcement material and location, as applicable, specified by the manufacturer;
- (3) method for fastening the baffle wall to the tank interior;
- (4) liquid depth and operating capacity in gallons;
- (5) pipe penetration boot locations and pipe penetration boots approved in accordance with Rule .1404 of this Section;
- (6) methods and material for sealing sections and forming watertight joints in tanks with multiple sections;
- (7) drawings showing access openings, tank lids, access manhole risers, and other proposed appurtenances to the tank;
- (8) tank manufacturer and PE requirements for installation, including bedding, additional sealing methods, and leak testing procedures; and
- (9) documentation of proof of design. The tank shall withstand a minimum uniform live load of 150 pounds per square foot in addition to the dead weight of the material and all geostatic and hydrostatic loads to which an underground tank is normally subjected, such as active soil pressure on tank walls and the uplifting force of groundwater. The documentation shall be one of the following:
 - (A) a vacuum test of 4.24 inches of mercury held for five minutes meeting the following criteria:
 - (i) no loss in vacuum greater than two-fifths of an inch of mercury during the test;
 - (ii) no deformation or deflection greater than two percent along any dimension unless shown by measurement or calculation to result in a reduction in volume no greater than two percent;
 - (iii) no distortion of the access openings occurs during the testing that prevents removal and replacement of the access opening lids at the conclusion of the test; and
 - (iv) for tanks constructed with integral risers, no distortion of the riser during the testing and the riser lid can be removed and replaced at the conclusion of the test;

- (B) calculations from a PE that the tank can withstand the loading requirements of this Subparagraph and the performance requirements of Part (A) of this Subparagraph shall be met; or
- (C) the tank shall be either IAPMO/ANSI Z1000 or CSA B66 certified and the tank manufacturer enrolled in a third-party quality assurance and quality control program, which includes material testing and unannounced annual manufacturing facility audits.

(d) Plans and specifications for tanks with a total liquid capacity greater than 4,000 gallons and all tanks designed for traffic loads shall be designed by a PE in accordance with ASTM C890. Plans shall show the design, including all the information listed in Paragraph (c) of this Rule and engineering calculations showing the minimum and maximum soil burial depth, water table, and traffic load the tank is designed to support.

(e) Plans for tanks not proposed for general use and issued an identification number under this Section shall meet the minimum requirements of this Section and shall be approved by the Department.

(f) The Department or LHD may inspect approved tanks at the place of manufacture, the inventoried sites of the distributors, or at the installation of the tank in a wastewater system for compliance with the approved plans and specifications.

(g) Tanks found to be out of compliance shall be brought back into compliance by the tank manufacturer or the installer as directed by the Department or LHD. Tanks that are not or cannot be brought into compliance shall not be used in a wastewater system and the imprints identified in Rule .1402(d)(15) or (e)(8) of this Section shall be permanently marked over by the authorized agent.

*History Note: Authority G.S. 130A-335(e), (f), and (f1);
Eff. January 1, 2024.*

15A NCAC 18E .1402 TANK DESIGN AND CONSTRUCTION

(a) Tanks shall be watertight, structurally sound, and not subject to corrosion or decay.

(b) Septic tanks and grease tanks shall have effluent filters and access devices approved in accordance with Rule .1404 of this Section. An effluent filter and support case shall be installed level in the outlet end of the septic tank or grease tank and shall meet the following criteria:

- (1) solvent welded to a minimum of three-inch PVC Schedule 40 outlet pipe;
- (2) be installed in accordance with filter manufacturer's specifications and effluent filter approval; and
- (3) be accessible and removable without entering the septic tank or grease tank.

(c) Septic tanks installed where the access openings on the top of the tank are deeper than six inches below finished grade shall have an access riser over each compartment with a cover that extends to within six inches of the finished grade. The opening of the access riser shall be large enough to accommodate the removal of the septic tank lid. When the top of the septic tank or access riser is below the finished grade, the location of the tank shall be visible at finished grade. When access risers are used they shall be installed in accordance with the Rules of this Subchapter, the manufacturer's specifications, and the Department's approval.

(d) Septic tanks shall meet the following minimum design standards:

- (1) a minimum liquid depth of 36 inches;
- (2) a minimum of nine inches freeboard, measured as the air space between the top of the liquid and the bottom of the tank top. Venting of the tank shall be provided to prevent the buildup of gases;
- (3) the approved septic tank capacity shall be determined as the liquid volume below the outlet invert to the bottom of the tank;
- (4) the length of the tank shall be a minimum of twice as long as the width, as measured by the longest axis and widest axis based on the internal tank dimensions;
- (5) there shall be three inlet openings in the tank, one on the tank end and one on each sidewall of the inlet end of the tank;
- (6) outlet openings shall have a cast or manufactured penetration point and include a watertight, sealed, non-corrodible, and flexible connective sleeve. A flexible connective sleeve shall be able to bend without breaking. The connective sleeve shall meet ASTM C1644 for precast concrete tanks or ASTM C1644, C923, or C564 for thermoplastic or glass-fiber-reinforced polyester tanks and be approved by the Department if it meets the requirements of this Subparagraph and Rule .1404 of this Section;
- (7) inlet penetrations shall be greater than or equal to four inches in diameter and outlet penetrations shall be greater than or equal to three inches in diameter;
- (8) there shall be no openings below the septic tank operating liquid level;
- (9) the outlet shall be through an effluent filter approved in accordance with Rule .1404 of this Section, and secured in place in an effluent filter support case. The effluent filter case inlet shall extend down to between

25 and 50 percent of the liquid depth measured from the top of the liquid level. Other methods of supporting the effluent filter case and for making pipe penetrations shall be approved by the Department on a case-by-case basis upon a showing that the performance is identical to those designed in accordance with this Rule;

- (10) the invert of the outlet shall be a minimum of two inches lower in elevation than the invert of the inlet;
 - (11) all septic tanks shall be designed with a partition so that the tank contains two compartments. The following conditions shall be met:
 - (A) the partition shall be located at a point not less than two-thirds or more than three-fourths the length of the tank from the inlet end;
 - (B) the partition shall be designed, manufactured, installed, and maintained to remain in position when subjected to a liquid capacity in one compartment that corresponds with the lowermost elevation of the water passage slot or holes;
 - (C) the partition shall be designed to create a gas passage, not less than the area of the inlet pipe, and the passage shall not extend lower than seven inches from the bottom side of the tank top;
 - (D) the top and bottom sections of the partition shall be designed to create a water passage slot four inches high for the full interior width of the tank, or a minimum of two four- or five-inch openings, or one four- or five-inch opening per 30 horizontal linear inches of baffle wall, whichever is greater, may be designed into the partition instead of the four-inch slot;
 - (E) the partition shall be designed, manufactured, and installed to create an average opening not greater than one-half inch between the partition and the tank wall below the liquid level, with a tolerance of one-half inch;
 - (F) the entire liquid passage in the partition wall shall be located between 25 and 50 percent of the liquid depth of the tank, as measured from the top of the liquid level; and
 - (G) other methods for designing the partition shall be approved by the Department on a case-by-case basis upon a showing that the performance is identical to those designed in accordance with this Rule;
 - (12) access openings shall be provided in the top of the tank, located over each compartment, and have a minimum opening of 15 inches by 15 inches or 17 inches in diameter. The opening shall allow for maintenance and removal of internal devices of the septic tank;
 - (13) access risers and covers shall be designed and manufactured to prevent surface water infiltration;
 - (14) tank lids and riser covers shall be locked, secured with fasteners, or weigh a minimum of 40 pounds, but no more than 80 pounds; and
 - (15) all septic tanks shall bear an imprint or embossment identifying the manufacturer, the septic tank serial number assigned to the manufacturer's plans and specifications approved by the Department, and the liquid or working capacity of the tanks. The imprint or embossment shall be located to the right of the knockout made for the outlet pipe on the top or end of outlet end of the tank.
- (e) Pump tanks shall meet the design requirements of Paragraph (d) of this Rule with the following modifications:
- (1) a watertight access riser with removable cover shall be located over the pump. The access riser shall extend to a minimum of six inches above finished grade and shall be designed and maintained to prevent surface water infiltration;
 - (2) the access opening over the pump shall have a minimum opening of 24 inches in diameter or equidimensional opening;
 - (3) when two or more pumps are required in accordance with Rule .1101(b) of this Subchapter the access openings shall be sized to allow for pump removal, operation, and maintenance;
 - (4) tanks may be designed with a single compartment. If a partition is provided, the partition shall be designed to contain a minimum of two four-inch diameter circular openings, or openings with an equivalent area, located no more than 12 inches above the tank bottom;
 - (5) there shall be no requirement as to tank length, width, or shape, provided the tank satisfies all other requirements of the rules of this Section;
 - (6) the invert of the inlet openings shall be located within 12 inches of the tank top. No freeboard shall be required in the pump tank;
 - (7) tanks shall be vented if located more than 50 feet from the facility, and accessible for routine maintenance;
 - (8) all pump tanks shall bear an imprint or embossment identifying the manufacturer, the pump tank serial number assigned to the manufacturer's plans and specifications by the Department, and the liquid or

working capacity of the tank. The imprint or embossment shall be located to the left of the blockout made for the outlet pipe on the top or end of outlet end of the tank; and

(9) the pump tank working capacity shall be the entire internal tank volume.

(f) Grease tanks shall be septic tanks approved in accordance with Paragraph (d) of this Rule with the following modifications:

- (1) the liquid passage between chambers shall be located between 40 and 60 percent of the operating liquid depth measured from the top of the liquid level. The liquid passage between chambers may be made using a sanitary tee extending down between 40 and 60 percent of the liquid depth measured from the top of the liquid level;
- (2) when sanitary tees are used as the liquid passage through an interior compartment partition, an access opening and riser to grade over the tees shall be provided for servicing and routine maintenance;
- (3) when two or more tanks are used in series, a sanitary tee shall be provided in the outlet end of each interconnected tank extending down between 40 and 60 percent of the liquid depth;
- (4) the final chamber shall contain an effluent filter and support case extending down between 40 and 60 percent of the liquid depth. The effluent filter shall be approved by the Department for use in grease tanks. The grease rated effluent filter shall be sized for the DDF and have openings of 1/32-inch or less; and
- (5) access risers shall extend to finished grade and be capped with cast iron manhole rings and covers. Lockable aluminum hatches may be substituted for cast iron manhole rings and covers in non-traffic areas. Aluminum hatches or manhole rings and covers shall be designed and maintained to prevent surface water infiltration. Locks shall be the responsibility of the person owning or controlling the system.

(g) Siphon tanks shall meet the design requirements of Paragraph (e) of this Rule and shall:

- (1) be designed in accordance with the construction requirements of this Rule and Rule .0804 of this Subchapter;
- (2) provide three inches of freeboard;
- (3) have the invert of the inlet pipe three inches above the siphon trip level; and
- (4) have a watertight access opening over each siphon with an opening of 24 inches, extending to finished grade, and designed to prevent surface water inflow.

History Note: Authority G.S. 130A-335(e), (f), and (f1); 130A-335.1; Eff. January 1, 2024.

15A NCAC 18E .1403 TANK MATERIAL REQUIREMENTS

(a) Tanks approved in accordance with this Section shall be constructed of materials capable of resisting corrosion from sewage and sewage gases, structurally sound, and watertight.

(b) Reinforced precast concrete tanks shall meet the following minimum material and construction requirements:

- (1) the ends and sides of the tank shall have a minimum thickness of two and one-half inches. The top and bottom of the tanks shall be a minimum of three inches thick;
- (2) the top, bottom, end and sides of the concrete tank and tank lid shall be reinforced by using a minimum reinforcing of six-inch by six-inch No. 10 gage welded steel reinforcing wire. Reinforcement shall be placed to maximize the structural integrity of the tank;
- (3) alternative reinforcement designs may be used when they perform in a manner equal to or more effective than the reinforcement design described in Subparagraph (2) of this Paragraph;
- (4) when the concrete tank, tank lid, riser, or riser cover are subjected to vehicular traffic, the tank shall be designed by a PE to handle the traffic load in accordance with ASTM C890;
- (5) any tank installed deeper than three feet shall be designed by a PE for the proposed tank burial depth. The tank design shall be submitted to the Department for review. The design shall be approved when documentation is provided to show that the proposed tank design can withstand all active and passive loads on the tank, including the additional soil weight from a deeper burial depth.
- (6) the concrete shall achieve a minimum 28-day compressive strength of 4,000 psi. The concrete shall meet a compressive strength of 3,500 psi prior to removal of the tank from the place of manufacture. It shall be the responsibility of the manufacturer to certify that the tank meets this condition;
- (7) tanks manufactured in multiple sections shall be joined and sealed at the joint by using butyl rubber or other pliable sealant meeting ASTM C990 or other material that has been approved by the Department when documentation has been provided to show that the material meets all performance requirements of

ASTM C990. Documentation shall also be provided to the Department to show that the material is waterproof and corrosion resistant; and

- (8) tank lids and riser covers shall have a durable handle made of corrosion-resistant materials and capable of pull capacity sufficient for the weight of the lid or cover.
- (c) Thermoplastic tank materials shall conform with IAPMO/ANSI Z1000 or CSA B66 requirements.
- (d) Glass-fiber-reinforced polyester tanks shall meet the following requirements:
 - (1) top, bottom, ends, and sides of the tank shall have a minimum thickness of one-fifth inches. The baffle wall shall be a minimum of 3/16-inches thick;
 - (2) material and laminate requirements specified in IAPMO/ANSI Z1000 or CSA B66 for glass-fiber-reinforced polyester tanks; and
 - (3) enrolled in a third-party quality assurance and quality control program, which include material testing and unannounced annual audits.
- (e) Cast or manufactured in place tanks shall be designed by a PE, if required by G.S. 89C, and approved by the Department when the tank design, construction, and materials meet the criteria set forth in this Rule and Rule .1402 of this Section.

History Note: Authority G.S. 130A-335(e), (f), and (f1);
Eff. January 1, 2024.

15A NCAC 18E .1404 PLANS AND SPECIFICATIONS FOR RISERS, EFFLUENT FILTERS, AND PIPE PENETRATION BOOTS

- (a) All risers, effluent filters, and pipe penetration boots proposed for use in a wastewater system shall be approved by the Department prior to being offered for sale or use in North Carolina.
- (b) Three copies of the plans and specifications for the initial design of each riser, effluent filter, or pipe penetration boot shall be submitted to the Department. Plans for risers, effluent filters, and pipe penetration boots shall be approved by the Department and an approval letter issued when the design is found to comply with this Section. All changes or modifications to risers, effluent filters, or pipe penetration boots shall be approved by the Department when the changes or modifications comply with the requirements of this Rule.
- (c) Risers and riser lids shall be able to withstand a minimum uniform live loading of 300 pounds per square foot or a minimum 1,500 pound load applied in a 10 inch by 10 inch area centered on the lid, in addition to all loads to which a riser is normally subjected, such as dead weight of the material and soil cover and active soil pressure on riser walls.
- (d) Riser plans and specifications submitted to the Department for review and approval shall show the design of the riser and include the following information:
 - (1) manufacturer's name, mailing address, phone and fax numbers, email address, and name of manufacturer's point of contact;
 - (2) physical dimensions of the riser and riser cover, including wall thickness, internal diameter, proposed casting or installation details and methods, and pipe penetrations;
 - (3) material type and strength, including reinforcement material and location as required;
 - (4) documentation from a third-party showing that the riser meets the load requirements specified in Paragraph (c) of this Rule;
 - (5) plans for septic tank risers of a secondary lid, concrete plug, or other safety device that shall be provided inside the riser for security and to prevent accidental entry;
 - (6) plans for pump tank risers of primary and secondary safety mechanisms that shall be provided with the riser. The primary safety mechanism shall be a locking riser lid, ring and lock, or other riser lid locking or tamper-resistant mechanism. The secondary safety mechanism shall be a secondary lid, concrete plug, or other safety device to be provided inside the pump tank riser; and
 - (7) specifications for application, installation, operation, and maintenance for both new and retrofit applications for single and multiple riser sections.
- (e) Effluent filter plans and specifications submitted to the Department for review and approval shall show the design of the effluent filter and include the following information:
 - (1) manufacturer's name, address, phone and fax numbers, and contact name;
 - (2) documentation and a written statement from the manufacturer that the effluent filter is designed, constructed, and performs in compliance with G.S. 130A-335.1(a);
 - (3) capacity and wastewater strength for all models of proposed filters to be approved; and
 - (4) specifications for application, installation, operation, and maintenance.

(f) Pipe penetration boot plans and specifications submitted to the Department for review and approval shall show the design of the pipe penetration boot and include the following information:

- (1) manufacturer's name, address, phone and fax numbers, and contact name;
- (2) design specifications and materials used in the manufacture of pipe penetration boot components;
- (3) applicable testing results from third-party verification showing pull and flexibility testing;
- (4) documentation of a watertight seal around the piping and any component or device needed to ensure the seal, such as non-corrodible adjustable bands;
- (5) documentation that the pipe penetration boot meets the requirements of ASTM C1644 for precast concrete tanks or ASTM C1644, C923, or C564 for thermoplastic or glass-fiber-reinforced polyester tanks; and
- (6) specifications for application, installation, operation, and maintenance of the pipe penetration boot.

(g) Plans for prefabricated risers, effluent filters, and pipe penetration boots, other than those approved for general use and issued an approval letter under this Rule, shall be considered for approval on a case-by-case basis. The riser, effluent filter, or pipe penetration boot shall be approved if it is determined that it meets the requirements of this Rule based on information provided by the manufacturer to the Department.

History Note: Authority G.S. 130A-335(e), (f), and (f1); 130A-335.1; Eff. January 1, 2024.

15A NCAC 18E .1405 RISERS, EFFLUENT FILTERS, AND PIPE PENETRATION BOOTS APPROVAL RENEWAL

(a) All riser, effluent filter, and pipe penetration boot approvals shall expire on December 31 of each year. Riser, effluent filter, and pipe penetration boot manufacturers who wish to continue product approval shall submit annually a proprietary product renewal form provided by the Department no later than November 30 of each year.

(b) The approval renewal form shall include the following elements:

- (1) manufacturer's name, mailing address, phone and fax numbers, email address, and manufacturer's point of contact;
- (2) model number(s) approved; and
- (3) a notarized statement that the product has not changed from the previous year without prior approval from the Department.

(c) The Department shall notify the manufacturer of the pending riser, effluent filter, and pipe penetration boot Approval expiration in writing no later than September 30 of each year. The notification shall include information on how to request riser, effluent filter, and pipe penetration boot renewal.

(d) The riser, effluent filter, and pipe penetration boot approval shall be deemed renewed upon receipt of a renewal form that contains all of the elements set out in Paragraph (b) of this Rule.

History Note: Authority G.S. 130A-335(e) and (f); 130A-343; Eff. January 1, 2024.

15A NCAC 18E .1406 MODIFICATION, SUSPENSION, AND REVOCATION OF APPROVALS

The Department shall modify, suspend, or revoke the approval for tanks, risers, effluent filters, or pipe penetration boots upon a finding that:

- (1) the approval is determined to be based on false, incomplete, or misleading information;
- (2) the product has been altered;
- (3) the product fails to perform in compliance with performance standards established for the product in accordance with the rules of this Section; or
- (4) the product fails to meet conditions of its approval or comply with G.S. 130A, Article 11, Rule .1405 of this Section, this Subchapter, or conditions of the approval.

History Note: Authority G.S. 130A-335(e), (f), and (f1); Eff. January 1, 2024.

SECTION .1500 – APPROVAL AND USE OF RESIDENTIAL WASTEWATER TREATMENT SYSTEMS

15A NCAC 18E .1501 GENERAL

- (a) RWTS that comply with NSF International Standard 40 for Class I residential wastewater treatment systems shall be designed, constructed, and installed in accordance with this Section to serve facilities with a DDF less than or equal to 1,500 gpd.
- (b) RWTS shall only be used with DSE.
- (c) RWTS shall bear one of the following to certify that the product is in accordance with NSF/ANSI Standard 40:
 - (1) the NSF mark and the NSF listed model number; or
 - (2) the certification mark and listed model number of a third-party certification program accredited by ANSI to certify RWTS in accordance with NSF/ANSI Standard 40.
- (d) For approval of an RWTS as a PIA System, a manufacturer shall apply in accordance with Section .1700 of this Subchapter.

History Note: Authority G.S. 130A-342;
Eff. January 1, 2024.

15A NCAC 18E .1502 APPLICATION

An application shall be submitted for RWTS approval in writing to the Department and shall include the following:

- (1) manufacturer's name, mailing address, phone number, email address, plant location(s), and contact information for distributors;
- (2) verification of NSF/ANSI Standard 40 Class I system approval and listing by NSF International or other ANSI-accredited third-party certification program;
- (3) manufacturer's identifying name or logo, listed model number(s) and treatment capacity in gpd to be imprinted on unit;
- (4) three copies of plans and specifications, including information required to evaluate any tanks as required in accordance with Rule .1401 of this Subchapter; and
- (5) fee payment as required by G.S. 130A-343(k)(6), by corporate check, money order or cashier's check made payable to: North Carolina On-Site Water Protection Account or North Carolina OSWW System Account, and mailed to the Department.

History Note: Authority G.S. 130A-342;
Eff. January 1, 2024.

15A NCAC 18E .1503 DESIGN AND CONSTRUCTION STANDARDS

RWTS shall meet the following design and construction standards:

- (1) No blockouts or openings shall be permitted below the liquid level of the RWTS.
- (2) RWTS shall be watertight, corrosion resistant structures, with all components requiring maintenance accessible to the Management Entity. Access openings shall be provided in the RWTS top. Access shall be provided for:
 - (a) cleaning or rodding out the inlet pipe;
 - (b) cleaning or clearing the air or gas passage space above any partition;
 - (c) pumping of each compartment required to be pumped;
 - (d) sampling the effluent; and
 - (e) repairing and maintaining any system components.
- (3) Tanks used in RWTS designed to hold sewage or effluent shall comply with all tank requirements in accordance with Section .1400 of this Subchapter.
- (4) RWTS shall bear an imprint identifying the manufacturer, the RWTS serial number assigned to the manufacturer's model approved by the Department, and the liquid or working capacity of the unit. The imprint shall be located on the outlet end of the tank within 24 inches of the top of the tank.
- (5) The design, construction, and operation of RWTS shall prevent bypass of wastewater.
- (6) The manufacturer shall ensure that the system can be sampled in compliance with 40 CFR 136 and shall specify the recommended method for effluent sampling.
- (7) Control panels provided by the manufacturer shall comply with the requirements for control panels in accordance with Rule .1103 of this Subchapter.
- (8) The RWTS shall have an alarm device or devices to warn the user or Management Entity of a unit malfunction or a high-water condition in accordance with Rule .1103 of this Subchapter.

- (9) The control panel shall include a method to automatically measure and record daily wastewater flow dispersed to the dispersal field in accordance with Rule .1702(a)(2)(I) of this Subchapter.
- (10) The blower location shall be shown on the plans and detail proposed corrosion-resistant blower enclosures, if applicable.
- (11) A settling tank shall be required prior to or as an integral part of the design of the RWTS. The liquid capacity of the settling tank shall be a minimum of half of the DDF of the RWTS, or as otherwise specified by the manufacturer, whichever is larger. The settling tank may either be an integral chamber of the RWTS tank, a septic tank approved in accordance with Section .1400 of this Subchapter, or another tank designed for an individual system and approved by the Department as a part of the plans for the RWTS.

History Note: Authority G.S. 130A-342;
Eff. January 1, 2024.

15A NCAC 18E .1504 SAMPLING REQUIREMENTS FOR RESIDENTIAL WASTEWATER TREATMENT SYSTEMS

Effluent from an approved RWTS shall be grab or 24-hour composite sampled annually for all effluent standards listed in Table XXV of Rule .1201(a) of this Subchapter for NSF/ANSI 40 systems, unless adjusted sampling requirements have been requested and granted in accordance with Rules .1301 and .1709 of this Subchapter.

History Note: Authority G.S. 130A-342;
Eff. January 1, 2024.

15A NCAC 18E .1505 RESIDENTIAL WASTEWATER TREATMENT SYSTEM APPROVAL RENEWAL

- (a) All RWTS Approvals shall expire on December 31 of each year. RWTS manufacturers who wish to continue product approval shall submit annually a proprietary product renewal form provided by the Department no later than November 30 of each year.
- (b) The renewal form shall include the following updated elements:
 - (1) manufacturers' name, mailing address, phone and fax numbers, email address, and manufacturer's point of contact;
 - (2) model number(s) approved;
 - (3) a notarized statement that the product has not changed from the previous year without prior approval from the Department; and
 - (4) verification of the manufacturer's continued certification and listing by a nationally recognized certification body, including compliance with NSF/ANSI Standard 40.
- (c) The Department shall notify the manufacturer of the pending RWTS Approval expiration in writing no later than September 30 of each year. The notification shall include information on how to request RWTS Approval renewal.
- (d) The RWTS approval shall be deemed renewed upon receipt of a renewal form that contains all of the elements set out in Paragraph (b) of this Rule.
- (e) The Department shall suspend or revoke a system approval upon a finding that the system fails to perform in compliance with established effluent standards in Table XXV of Rule .1201(a) of this Subchapter or as provided for in Rule .1708(b) of this Subchapter.

History Note: Authority G.S. 130A-342;
Eff. January 1, 2024.

SECTION .1600 – APPROVAL OF PRE-ENGINEERED PACKAGE DRIP DISPERSAL SYSTEMS

15A NCAC 18E .1601 GENERAL

- (a) Drip dispersal systems for DDF less than or equal to 3,000 gpd shall be configured as a package and approved as a PIA System in accordance with Section .1700 of this Subchapter.
- (b) The integrated system package shall be provided from a single source manufacturer or system integrator, comprised of catalogued standardized design components that have been coordinated and tested by the manufacturer or integrator. Components shall include:
 - (1) dispersal field pump(s) and floats;
 - (2) headworks assemblies;

- (3) dispersal field piping network, drip tubing, and appurtenances; and
 - (4) system controls that provide for automatic filter cleaning, timed field dosing, field flushing, alarm notification, and recording of system operation.
- (c) All components shall be integrated and designed to operate together. The system manufacturer or integrator shall provide system design information including:
- (1) head loss charts, tables, or formulas for various drip tubing lateral lengths during a dosing and flushing cycle;
 - (2) minimum and maximum zone size and design;
 - (3) design plans and specifications for all components;
 - (4) installation specifications; and
 - (5) operation and maintenance manuals.
- (d) The system manufacturer shall provide support to train and authorize designers, installers, Management Entities, regulators, and users.
- (e) Drip dispersal system performance, siting, sizing, installation, operation, monitoring, maintenance and reporting requirements shall comply with Rules .0908, .1204, and Section .1300 of this Subchapter, as applicable, and the rules of this Section.
- (f) Drip dispersal systems that are not pre-engineered packages approved in accordance with Section .1700 of this Subchapter shall be designed on a project specific basis by a PE and shall comply with Rules .0908, .1204, and Section .1300 of this Subchapter, as applicable, and the rules of this Section.
- (g) Drip dispersal systems for DDF greater than 3,000 gpd shall comply with the design and performance requirements of this Section and shall be designed on a project specific basis by a PE. The system design shall be reviewed and approved by the Department in accordance with Rule .0302 of this Subchapter, unless the system is permitted in accordance with Rule .0207 of this Subchapter.

*History Note: Authority G.S. 130A-343;
Eff. January 1, 2024.*

15A NCAC 18E .1602 DESIGN AND CONSTRUCTION STANDARDS

- (a) Drip dispersal systems shall be preceded by pretreatment designed to comply with one of the following effluent standards: DSE, NSF/ANSI 40, TS-I, TS-II, or RCW as specified in Table III of Rule .0402(a), Table XXV of Rule .1201(a), or Rule .1002, of this Subchapter, as applicable.
- (b) The pump tank shall meet one of the following conditions:
- (1) a separate pump tank sized in accordance with Rule .0802 of this Subchapter; or
 - (2) a pump tank or compartment that is part of an advanced pretreatment system approved in accordance with Section .1700 of this Subchapter.
- Pump tank operating levels shall not result in effluent backing up into a part of any pretreatment component designed for free gravity flow drainage. All pump submergence, dose volume, flow equalization, and emergency storage capacity requirements for the dosing system shall be met without interfering in the performance of the pretreatment components.
- (c) Pumps shall meet the following conditions:
- (1) have sufficient capacity to accommodate projected flow and total dynamic head conditions;
 - (2) deliver 15 to 60 psi of pressure during dosing events;
 - (3) provide minimum flow and pressure as required to backwash or forward flush headworks filter;
 - (4) maintain velocities of two feet per second at the distal end of each drip lateral line during automatic field flushing for DSE; and
 - (5) maintain velocities of one foot per second at the distal end of each drip lateral line during automatic field flushing for advanced pretreatment effluent. Valving shall be provided to achieve flushing velocities of two feet per second at the distal end of each dripline with manual flushing.
- Pump manufacturer requirements shall be followed to protect the pump intake from solids that may accumulate in the pump tank and for pump cooling during operation.
- (d) Headworks assemblies shall contain filtration, totalizing flow meter, provisions for filter cleaning, and field flushing valves. Zone and isolation valves may be located in the headworks assembly or in the drip dispersal field. The headworks assemblies shall meet the following conditions:
- (1) filters shall remove particles greater than 115 microns at the peak operating flow rate, during network forward flushing. Filter number and size shall operate during both dosing and flushing conditions at a pump operating flow rate within the filter manufacturer's specified acceptable operating range;

- (2) filters for drip dispersal systems receiving DSE shall be configured with two independently backwashed disk filters;
 - (3) for drip dispersal systems receiving advanced pretreatment effluent, single or multiple screens or disc filters may be used, designed to be cleaned by either backwashing or forward washing;
 - (4) filter cleaning and field flushing residuals shall be returned to the head of the septic tank or settling tank prior to being returned to the pretreatment unit;
 - (5) a totalizing flow meter shall be used to record total flow through the system. The meter shall also be used to monitor pump operating flow rates during dosing and flushing events; and
 - (6) the headworks and associated components shall be in a separate enclosure that is freeze protected, UV and corrosion resistant, and accessible for routine operation, maintenance, monitoring and servicing. Design shall facilitate access to all internal components.
- (e) The drip dispersal field shall consist of one or more separately dosed zones comprised of a supply and return manifold, manifold to lateral connections, laterals containing drip tubing with emitters, blank sections of tubing, and associated field appurtenances. Drip emitter and associated field appurtenances design shall meet the following:
- (1) drip emitters shall be designed and demonstrated to uniformly distribute wastewater effluent at a pre-determined rate when operated in accordance with manufacturer's specified pressure range for emitter operation. Emitter design coefficient of variation, Cv, shall be five percent or less. Emitters shall be designed to be self-cleaning and to resist root intrusion. Hydraulic design of a drip dispersal zone shall be based upon achieving no more than a 10 percent variation in flow from any emitter over the entire zone, regardless of emitter elevation or position along the lateral including any effluent redistribution due to drainback;
 - (2) drip emitters shall be pressure compensating unless the manufacturer and designer provide documentation and calculations that a maximum 10 percent flow variance allowance can otherwise be achieved with non-pressure compensating emitters in a PIA Approval or on a project-specific basis. Drip tubing shall be marked to identify the emitter type and flow rate;
 - (3) drip emitters shall be spaced at uniform intervals along the tubing on 24-inch centers or less, and drip tubing with emitters shall be spaced an average of 24 inches on centers or less, in accordance with the proposed system design. Spacing shall be chosen as needed to ensure a sufficient number and density of emitters are present to achieve uniform distribution and instantaneous emitter loading rates that do not exceed the hydraulic capacity of the receiving infiltrative surfaces;
 - (4) connections between supply and return manifolds, and between runs or drip lateral sections installed at varying elevations or locations shall be made with solvent welded solid Schedule 40 PVC or flexible PVC;
 - (5) blanking sections of tubing without drip emitters shall be used where unfavorable site conditions, such as rocks, trees, or roots, are encountered along a drip run. Blanking tubing shall be a different color from the drip tubing or marked tubing of the same material, specification, and diameter as the connecting dripline, or flexible PVC;
 - (6) the manufacturer shall specify methods for drainback prevention; and
 - (7) field appurtenances shall include the following:
 - (A) air or vacuum relief valve at the highest elevation of each zone;
 - (B) cleanout at both ends of the supply and return manifolds;
 - (C) pressure monitoring fittings at the zone inlet and outlet points;
 - (D) pressure regulating valve where needed;
 - (E) for two or more zones: solenoid valves for each zone in the headworks or at the field, with an isolation valve on the supply line side; and a check valve with an isolation valve for each zone between the return manifold and the common return line; and
 - (F) valves, vents, cleanouts, and pressure monitoring fittings shall be provided with protective vaults or boxes that are decay resistant, ultraviolet rated, and accessible to the Management Entity from the ground surface.
- (f) An integrated controller shall be provided that meets the following conditions:
- (1) enable each drip dispersal field or zone to be time-dosed at equal intervals throughout the day, at a projected average flow, and to accommodate the DDF. The controller shall allow for adjustable and variable dose volumes between or among zones;
 - (2) adjust pump dosing and resting cycles to comply with system design and the projected range of operating conditions;

- (3) provide a minimum dose volume per zone that is a minimum of five times the liquid capacity of the drip laterals or so 80 percent of each dose is delivered when the minimum pressure in the field network is 10 psi;
- (4) provide for automatic cleaning of headworks filter(s);
- (5) provide for adjustable automatic forward flushing, or field flushing, of the drip laterals with filtered effluent, at designer and manufacturer-specified frequency and duration;
- (6) provide for monitoring of pump cycles and run times;
- (7) include telemetry, in accordance with Rule .1103(c) of this Subchapter, for systems with a DDF greater than 1,500 gpd or as required in conjunction with an advanced pretreatment system;
- (8) for systems with a DDF greater than 3,000 gpd the controller shall monitor flow volume to each zone and provide a flow variance indication when flow is plus or minus 20 percent of design. The telemetry system and alarm shall be designed to be functional during power outages;
- (9) for multi-zone systems, the system controller shall provide for a zone to be rested or taken out of service manually. The controller shall have the capability to bypass zones and dose the next available zone with the normal dosing sequence continuing; and
- (10) controls and floats are to be configured to ensure the minimum dose is available prior to initiating a dosing cycle and to ensure that a full dose is delivered.

(g) Alternatives to the design criteria in this Rule may be proposed by the manufacturer during the PIA approval process or by a PE on a project-specific basis. These alternatives shall be reviewed and approved by the Department on a case-by-case basis when documentation is provided that the system will meet the performance standards of this Section.

History Note: Authority G.S. 130A-343;
Eff. January 1, 2024.

15A NCAC 18E .1603 DRIP DISPERSAL SYSTEM TESTING

(a) The drip dispersal system field testing shall include system designer requirements and the following items:

- (1) all leaks in the pipe network or from emitters exhibiting emission rates greater than 20 percent of the emitter design flow rate shall be repaired; and
- (2) after the system is pressurized, dosing and flushing flow rates and pressures for each zone shall be measured and confirmed to be in accordance with the design parameters as follows:
 - (A) dosing pressure shall be measured at the lowest point in the supply manifold and highest point in the return manifold;
 - (B) minimum and maximum emitter pressure shall be verified to be within emitter design parameters;
 - (C) flushing pressures shall be measured at the ends of each supply and return manifold within each zone;
 - (D) dosing and flushing flow rates shall be measured with the flow meter after the system is pressurized; and
 - (E) all dosing and flushing flow rates and pressures shall be recorded.

(b) All components shall be demonstrated to be operable and in accordance with their design during the inspection by the LHD.

History Note: Authority G.S. 130A-343;
Eff. January 1, 2024.

SECTION .1700 – APPROVAL AND PERMITTING OF WASTEWATER SYSTEMS, TECHNOLOGIES, COMPONENTS, OR DEVICES

15A NCAC 18E .1701 GENERAL

PIA Systems are any wastewater systems, system components, or devices as defined by G.S. 130-343(a) that are not described in other Sections of this Subchapter and systems for which any of the following are proposed:

- (1) reduced setbacks;
- (2) reduced depth to LC or vertical separation requirements; or
- (3) increased LTAR.

This Section shall provide for the approval and permitting of PIA Systems.

*History Note: Authority G.S. 130A-335(e) and (f); 130A-343;
Eff. January 1, 2024.*

15A NCAC 18E .1702 APPLICATION

(a) An application shall be submitted in writing to the Department for a PIA System. All applications shall include the information required by G.S. 130A-343(d), (f), (g), (g1), and (h), and the following, as applicable:

- (1) identification of the type of PIA Approval requested:
 - (A) Provisional;
 - (B) Innovative;
 - (C) Functionally Equivalent;
 - (D) Accepted; or
 - (E) a combination of any of the above;
- (2) plans and specifications for the system, including the following:
 - (A) description of the system;
 - (B) materials used in construction;
 - (C) proposed use of system;
 - (D) system design criteria;
 - (E) system design and drawings;
 - (F) installation manual;
 - (G) operation and maintenance manual, including a checklist for documentation of inspection and maintenance activities and the VIP;
 - (H) influent and effluent sampling locations for advanced pretreatment systems while the system remains in operation;
 - (I) method for automatically measuring and recording daily wastewater flow dispersed to the dispersal field for advanced pretreatment systems; and
 - (J) start-up requirements and information;
- (3) the following information:
 - (A) product specific literature;
 - (B) published research; and
 - (C) previous experience and performance with the system;
- (4) results of any available testing, research or monitoring of pilot systems or full-scale operational systems including:
 - (A) identification of the third-party research or testing organization that conducted the testing, research, or monitoring provided;
 - (B) documentation that the protocol or evaluation used in the testing, research, or monitoring is:
 - (i) established by a nationally recognized certification body;
 - (ii) a listed protocol that has been approved by the Department in accordance with G.S. 130A-343(d);
 - (iii) a comparable evaluation protocol used for system approval in other states. The comparable evaluation protocol shall include information on relevant conditions such as wastewater system design, soil types, climate, and hydrology and be reviewed by the Department; or
 - (iv) in accordance with an alternative performance evaluation protocol proposed by the manufacturer for approval;
 - (C) documentation that the system is tested, certified, and listed by a nationally recognized certification body and complies with an ongoing verification program administered by that certification body, as applicable; and
 - (D) documentation that the system can be sampled in compliance with 40 CFR 136 and that the method for system sampling monitors system compliance with effluent standards;
- (5) verification that the product submitted for PIA Approval is the same as the certified, listed, or tested product, and if not, identification of any modifications made to the submitted product;
- (6) notification of any proprietary or trade secret information, system, component, or device. All documents received are considered Public Records in accordance with G.S. 132-1, unless they meet the criteria for classification as a trade secret as defined in G.S. 66-152(3);

- (7) draft written PIA Approval that includes criteria for site selection, installation requirements, operation and maintenance procedures including a VIP protocol with compliance criteria, system classification, frequency of system inspection and monitoring in accordance with Table XXXII of Rule .1301(b) of this Subchapter, and minimum certification or licensing requirements as set forth in applicable certification and licensing rules and statutes for designers, installers, and Management Entities; and
 - (8) fee payment as required by G.S. 130A-343(k), by corporate check, money order or cashier's check made payable to: North Carolina On-Site Water Protection System Account or North Carolina OSWW System Account, and mailed to the Department. Fees received are non-refundable.
- (b) Innovative System applications shall include the information listed in Paragraph (a) of this Rule.
- (c) Provisional System applications shall include the information listed in Paragraph (a) of this Rule and an evaluation protocol containing all information set forth in G.S. 130-343(f), including:
- (1) identity and qualifications of the proposed third-party evaluator, including documentation of their third-party status;
 - (2) description of the evaluation protocol, including any proposed laboratory and field testing;
 - (3) number of systems to be installed;
 - (4) site selection criteria;
 - (5) system monitoring and reporting procedures, and proposed duration of evaluation; and
 - (6) any other information needed for the system to be able to achieve Innovative status upon completion of the Provisional System evaluation protocol.
- (d) Functionally Equivalent Trench System Innovative applications shall include the information listed in Paragraph (a) of this Rule and documentation that the manufacturer has petitioned the Commission for Public Health in accordance with G.S. 130A-343(g1).
- (e) Accepted System applications shall include the information listed in Paragraph (a) of this Rule and documentation that the manufacturer has petitioned the Commission for Public Health in accordance with G.S. 130A-343(h).

*History Note: Authority G.S. 130A-335(e) and (f); 130A-343;
Eff. January 1, 2024.*

15A NCAC 18E .1703 DEPARTMENT AND COMMISSION APPLICATION REVIEW

- (a) The Department shall review all applications submitted to determine if the information listed in Rule .1702 of this Section is included and determine whether additional information is needed to continue the review.
- (b) Within 30 days of receipt of the initial application, the Department shall notify the manufacturer of any items necessary to complete the application or notify the manufacturer that the application is complete. This determination shall not constitute a qualitative review of the information provided, nor the approval or denial of the proposed system designation. Specified additional information shall be received within 180 days or the application file shall be closed.
- (c) Upon receipt of a complete application, the Department shall conduct a qualitative review in accordance with PIA Approval criteria identified in Rules .1704, .1705, and .1706 of this Section, as applicable.
- (d) For systems that are certified and listed by a nationally recognized certification body, the Department shall complete its review and determine whether to approve or deny Provisional System applications within 90 days of receipt of a complete application.
- (e) The Department shall complete its review and determine whether to approve or deny Innovative System applications within 90 days of publication in the North Carolina Register of the notice of receipt of a complete application.
- (f) The Department shall prepare and submit its findings and recommendations for a Functionally Equivalent Trench System or an Accepted System to the Commission within 120 days of receipt of a complete application.
- (g) Upon request by the petitioner, the Commission may modify the 180-day time frame for receipt of additional information specified by the Department for a Functionally Equivalent Trench System or Accepted System petition based on a determination that a petition is incomplete and additional information is needed. The petitioner may also request Commission review of the Department's determination that a petition is incomplete or additional information request.
- (h) The Department shall notify the applicant and LHDs of the approval or denial of a PIA System. The PIA Approval shall include conditions for permitting, siting, installation, use, monitoring, operation and maintenance, and number of systems that can be installed. When an application is denied, the Department shall inform the applicant in writing of the reason for denial. The Department shall assign a unique code to the approved products for tracking purposes.
- (i) An applicant may reapply in accordance with this Section. When reapplying, a new application shall be required and the applicant shall make a new fee payment as required by G.S. 130A-343(k).
- (j) Denials issued under this Rule shall include notice of the right to appeal under G.S. 130A-24 and 150B.

*History Note: Authority G.S. 130A-335(e) and (f); 130A-343;
Eff. January 1, 2024.*

15A NCAC 18E .1704 APPROVAL CRITERIA FOR PROVISIONAL SYSTEMS

(a) A dispersal system shall be approved for use as a Provisional System when the following criteria have been met:

- (1) documentation of one of the following is provided:
 - (A) a minimum of 50 installations that have been in use for a minimum of 12 months, with available information indicating comparable hydraulic performance and rate of malfunction to a conventional trench system;
 - (B) the system's design is functionally similar to another approved system described elsewhere in this Subchapter, or to a PIA System approved in accordance with this Section. The system's design and functional similarity shall be equal or superior to the approved comparable system for the following: material physical properties and chemical durability; field installed permeable sidewall area and bottom infiltrative area; method and manner of function for conveyance and application of effluent; structural integrity; and field installed storage volume;
 - (C) the system has been certified and listed by a nationally recognized certification body, as defined by G.S. 130A-343(a)(6), for a period that exceeds one year; or
 - (D) the system has complied with a comparable evaluation protocol used for system approval in other states. The comparable evaluation protocol shall include information on relevant conditions such as wastewater system design, soil and site conditions, climate, and hydrology and be reviewed by the Department;
- (2) documentation of load testing is provided that demonstrates the structural integrity to be comparable to a conventional trench system, including subjecting the trench system to the following without collapsing, fracturing, or breaking when installed in a trench with the proposed product configuration and width:
 - (A) an axle load of 16,000 pounds when covered with 12 inches of compacted soil; and
 - (B) an axle load of 4,000 pounds when covered with six inches of compacted soil; and
- (3) a proposed evaluation protocol to be overseen by a third-party evaluator is submitted to the Department for review. The evaluation protocol shall ensure that all information necessary to satisfy the criteria to achieve Innovative Approval, as specified in G.S. 130A-343(f) and Rule .1705 of this Section, is collected. The protocol shall include the following:
 - (A) a minimum of 100 installations operational and in use for a minimum of 12 months; and
 - (B) sufficient information collected to evaluate the system's hydraulic performance, structural integrity and rate of malfunction compared with a conventional trench system.

(b) Advanced pretreatment systems shall be approved for use as a Provisional System when the following criteria have been met:

- (1) documentation of one of the following is provided for designs complying with TS-I, TS-II, or RCW effluent standards:
 - (A) a minimum of 50 complete third-party field verification data sets from a minimum of 15 sites that have been in use for six months, including all constituents necessary to verify compliance with the applicable effluent standard. Two to five data sets may be from the same site if collected a minimum of three months apart, with no data excluded from the field sampling sites. The data sets shall demonstrate compliance with TS-I, TS-II, or RCW effluent standards in accordance with Rule .1710 of this Section;
 - (B) the system's design is functionally similar to another approved system described elsewhere in this Subchapter, or to a Provisional or Innovative System approved in accordance with this Section. The system's design and functional similarity shall be equal or superior to the comparable system for all of the following: material physical properties and chemical durability; structural integrity; biological, chemical, or physical treatment processes; method and manner of function for conveyance and application of effluent through the system; and number and size of system compartments;
 - (C) the system has been certified and listed by a nationally recognized certification body, as defined by G.S. 130A-343(a)(6), for a period that exceeds one year; or
 - (D) the system has complied with a comparable evaluation protocol used for system approval in other states. The comparable evaluation protocol shall include information on relevant conditions such

- as wastewater system design, soil types, climate, and hydrology and be reviewed by the Department; and
- (2) a proposed evaluation protocol to be overseen by a third-party evaluator is submitted to the Department for review. The evaluation protocol shall ensure that all information necessary to satisfy the criteria to achieve Innovative Approval, as specified in G.S. 130A-343(f) and Rule .1705 of this Section, is collected. The protocol shall include one of the following:
 - (A) for a system that has been certified and listed by a nationally recognized certification body, as defined by G.S. 130A-343(a)(6) for a period that exceeds two consecutive years, a minimum of 50 complete third-party field verification data sets from a minimum of 15 sites in operation for a minimum of six months, including all constituents necessary to verify compliance with the applicable effluent standard. Two to five data sets may be from the same site if collected a minimum of three months apart, with no data excluded from the field sampling sites. The data may be collected from systems in-state or out-of-state. The data sets shall show compliance with TS-I, TS-II, or RCW effluent standards in accordance with Rule .1710 of this Subchapter, as applicable; or
 - (B) a minimum of 150 complete third-party field verification data sets from a minimum of 50 sites in operation for a minimum of six months, including all constituents necessary to verify compliance with the applicable effluent standard. Two to five data sets may be from the same site if collected a minimum of three months apart, with no data excluded from the field sampling sites. The data may be collected from systems in-state or out-of-state. The data sets shall demonstrate compliance with TS-I, TS-II, or RCW effluent standards in accordance with Rule .1710 of this Section, as applicable.
- (c) Manufacturers requesting Provisional Approval as both an advanced pretreatment and dispersal system shall meet the requirements for advanced pretreatment and dispersal as described in this Rule.

History Note: Authority G.S. 130A-335(e) and (f); 130A-343;
Eff. January 1, 2024.

15A NCAC 18E .1705 APPROVAL CRITERIA FOR INNOVATIVE SYSTEMS

- (a) A dispersal system shall be approved for use as an Innovative System when the following criteria have been met:
- (1) the performance requirements for an Innovative System identified in G.S. 130A-343(a)(5) and (g) have been met;
 - (2) materials used in construction are equal or superior in physical properties, chemical durability, and structural integrity compared to materials used for similar proposed systems described in other Sections of this Subchapter;
 - (3) the system has been demonstrated to perform equal or superior to a system that is described in other Sections of this Subchapter or to an Innovative or Accepted System previously approved in accordance with this Section, based upon controlled pilot-scale research studies or statistically valid monitoring of full-scale operational systems;
 - (4) the system has met one of the following criteria:
 - (A) the system has completed an evaluation protocol as a Provisional System in accordance with Rule .1704 of this Section;
 - (B) the manufacturer has provided comparable third-party research and testing conducted in other states, with the data and findings of all evaluations of the system performance, that support the proposed use of the system. The comparable research shall include information on relevant conditions, such as wastewater system design, soil and site conditions, climate, and hydrology; or
 - (C) the system has been evaluated in accordance with G.S. 130A-343(g)(3); and
 - (5) the following documentation is provided:
 - (A) load testing that demonstrates the structural integrity to be comparable to a conventional trench system, including subjecting the trench system to an axle load of 16,000 pounds when covered with 12 inches of compacted soil and an axle load of 4,000 pounds when covered with six inches of compacted soil without collapsing, fracturing, or breaking;
 - (B) a minimum of 100 installations operational and in use for a minimum of one year. The 100 installations sites may include any combination of systems installed in conjunction with an

- approved Provisional System evaluation completed in North Carolina and systems in other states; and
 - (C) system hydraulic performance and rate of malfunction is equal or superior to the demonstrated performance of a conventional trench system.
- (b) Advanced pretreatment systems complying with TS-I, TS-II, or RCW effluent standards shall be approved for use as an Innovative System when the following information is provided:
- (1) information required in Subparagraphs (a)(1) through (a)(4) of this Rule; and
 - (2) documentation of one of the following:
 - (A) for a system that has been certified and listed by a nationally recognized certification body, as defined by G.S. 130A-343(a)(6) for a period that exceeds two consecutive years, a minimum of 50 complete third-party field verification data sets from a minimum of 15 sites in operation for a minimum of six months, including all constituents necessary to verify compliance with the applicable effluent standard. Two to five data sets may be from the same site if collected a minimum of three months apart, with no data excluded from the field sampling sites. The data may be collected from systems in-state or out-of-state. The data sets shall demonstrate compliance with TS-I, TS-II, or RCW effluent standards in accordance with Rule .1710 of this Section; or
 - (B) a minimum of 150 complete third-party field verification data sets from a minimum of 50 sites in operation for a minimum of six months, including all constituents necessary to verify compliance with the applicable effluent standard. Two to five data sets may be from the same site if collected a minimum of three months apart, with no data excluded from the field sampling sites. The 50 sites may include a combination of sites monitored in conjunction with an approved Provisional System evaluation completed in North Carolina and sites in other states. The data sets shall demonstrate compliance with TS-I, TS-II, or RCW effluent standards in accordance with Rule .1710 of this Section.
- (c) Manufacturers requesting Innovative Approval as both an advanced pretreatment and dispersal system shall meet the requirements for advanced pretreatment and dispersal as described in this Rule.

History Note Authority G.S. 130A-335(e) and (f); 130A-343; Eff. January 1, 2024.

15A NCAC 18E .1706 APPROVAL CRITERIA FOR ACCEPTED SYSTEMS

- (a) The Commission shall designate a wastewater dispersal system as an Accepted System when it finds based on the information provided in accordance with this Rule that the standards set forth by G.S. 130A-343(a)(1) and G.S. 130A-343(h) have been met.
- (b) The following information shall be provided by the petitioner and reviewed by the Commission prior to granting Accepted System status:
- (1) documentation of a minimum of 300 systems installed statewide and in use for more than five years as an approved Innovative System or a wastewater dispersal system identified in the rules of this Subchapter;
 - (2) data and findings of all prior evaluations of the system performance as provided by the manufacturer;
 - (3) results of prior performance surveys of the systems in use in North Carolina for at least the five-year period immediately preceding the petition, including any information available to the manufacturer pertinent to the accuracy and validity of performance surveys not completed under their control;
 - (4) review(s) of records on system use and performance reported by LHDs, authorized designers, installers, and Management Entities documenting the experiences with performance of the system in North Carolina, including information collected and reported in accordance with Rules .1711 and .1713 of this Section. The Department, in consultation with the manufacturer, shall evaluate the accuracy and validity of performance data and surveys considered for inclusion in the review. LHDs and other stakeholders shall be invited to participate in the discussion; and
 - (5) the results of a statistically valid survey of system performance in North Carolina in accordance with Paragraphs (d) or (g) of this Rule.
- (c) The manufacturer shall propose a plan for the statistically valid survey for review and approval by the Department prior to the survey being performed. The Department shall approve a statistically valid survey plan when it meets the requirements of Paragraphs (d) or (g) of this Rule and includes the following information:
- (1) number of systems to be evaluated;
 - (2) period of evaluation;

- (3) method to randomly select systems to be evaluated;
 - (4) methods of field and data evaluation; and
 - (5) proposed survey team members, including proposed cooperative arrangements to be made with Department and LHD staff.
- (d) The proposed survey shall meet one of the following survey protocols:
- (1) a field survey of test and control systems that compares the failure rates between the systems. Statistical analysis of the survey results using a one-sided test shall document at the 95 percent confidence level that there is a five percent or less chance that a difference in failure rates of five percentage points or more would occur by chance. The field survey shall meet the following criteria:
 - (A) a minimum of 250 randomly selected test and control systems that have been in operation for at least two years and are currently in use, for a total of at least 500 systems that are surveyed;
 - (B) a minimum of 40 percent of both test and control systems shall have been in operation for at least five years;
 - (C) systems surveyed shall be distributed among the Soil Groups in the Coastal, Piedmont, and Mountain regions of the State in approximate proportion to their use across the State;
 - (D) systems shall be evaluated from February 1 through April 15; and
 - (E) similar numbers of test and control systems of similar ages shall be surveyed during similar time periods across the State; or
 - (2) a field survey of test systems only. The failure rate determined by the field survey shall not exceed seven percent at the 95 percent confidence level. The field survey for test systems only shall meet the following criteria:
 - (A) the system is identified in the rules of this Subchapter and the manufacturer provides documentation that there have been at least 3,000 operational systems installed in the state in more than one county. The systems shall have been installed over at least an eight-year period with a total reported failure rate statewide of less than two percent. The statewide failure rate is based on records provided by the manufacturer and monthly activity reports from the LHD;
 - (B) a minimum of 250 randomly selected systems that are currently in operation are surveyed; and
 - (C) the survey criteria in Subparagraph (d)(1) of this Rule are met.
- (e) The Department shall facilitate LHD participation with any performance review or survey to identify sites and systems for evaluation based on the LHD's permit records.
- (f) The Department shall utilize the Division of Public Health's State Center for Health Statistics for assistance in evaluating the statistical validity of the proposed evaluation protocols.
- (g) Alternative survey protocols, which evaluate different numbers of test and control systems or test systems only, may be submitted by the petitioner to the Department for approval. The alternative survey protocol shall be approved by the Department when the survey protocol is designed to verify equal or superior performance of the test system when compared to the control system under actual field conditions in North Carolina and when the alternative survey protocol has comparable statistical validity as described in Subparagraph (d) of this Rule. The Department's review and approval of proposed alternative survey protocols shall be subject to review and concurrence by the Commission, which shall use the same approval criteria as the Department as set forth in in this Paragraph.
- (h) The Commission shall impose any use, design, installation, operation, maintenance, monitoring, and management conditions in accordance with G.S. 130A-343 and the rules of this Subchapter.
- (i) If there is a conflict between approvals or between an approval and the Rules of this Subchapter, then an Accepted System approval shall take precedence, followed by an Innovative System Approval, and then the Rules of this Subchapter.

History Note: Authority G.S. 130A-335(e) and (f); 130A-343; S.L. 2014-120, s. 47; S.L. 2019-151, s. 13; Eff. January 1, 2024.

15A NCAC 18E .1707 DESIGN AND INSTALLATION CRITERIA FOR PROVISIONAL, INNOVATIVE, AND ACCEPTED APPROVALS

All products approved under this Section shall be designed and installed in accordance with the requirements of the PIA Approval.

History Note: Authority G.S. 130A-335(e) and (f); 130A-343; Eff. January 1, 2024.

15A NCAC 18E .1708 MODIFICATION, SUSPENSION, AND REVOCATION OF APPROVALS

(a) The Department may modify the PIA Approval of a system as provided for in G.S. 130A-343(c) and as follows:

- (1) to comply with subsequent changes in laws or rules which affect their approval;
- (2) based upon a written application from the manufacturer of an approved Provisional or Innovative System that seeks to modify their system or its conditions of approval, including siting or sizing criteria. If the manufacturer demonstrates that the modified system will perform in a manner equal or superior to the approved system in terms of structural integrity, chemical durability, hydraulic performance, and wastewater treatment, the Department shall approve the modified system with the same status as the previously approved system; or
- (3) based upon a written application from the manufacturer of an approved Accepted System that seeks to modify their system or its conditions of approval, including siting or sizing criteria. The manufacturer shall demonstrate that the modified system will perform in a manner equal or superior to the approved system in terms of structural integrity, chemical durability, hydraulic performance, and wastewater treatment. The Commission shall approve proposed modifications to Accepted Systems when it finds based on the information provided in accordance with this Rule that the standards set forth by G.S. 130A-343(a)(1) and G.S. 130A-343(h) have been met.

(b) The Department shall suspend or revoke the PIA Approval of a system as provided for in G.S. 130A-343(c) and as follows:

- (1) the advanced pretreatment system fails to comply with the compliance criteria in Rule .1710 of this Section;
- (2) the modified system fails to perform in a manner equal or superior to the previously approved PIA System;
- (3) the system fails to comply with the conditions of its PIA Approval or comply with applicable laws and rules; or
- (4) the manufacturer loses their approval or discontinues their listing by any nationally recognized certification body, if applicable. The manufacturer shall notify the Department in writing within 30 days of any changes in their approval status with a nationally recognized certification body.

(c) The Commission shall modify, suspend, or revoke its approval of a modified Accepted System if the modified system or component fails to perform in a manner equal or superior to the previously approved system. The Department shall notify the Commission of any action required for Commission approval of any modifications to the status of an Accepted System.

(d) Modification, suspension, or revocation of a PIA Approval shall not affect systems previously installed in accordance with the approval.

(e) All modifications, suspensions, and revocations of approvals shall include notice of the right to appeal under G.S. 130A-24 and 150B.

History Note: Authority G.S. 130A-335(e) and (f); 130A-343; S.L. 2014-120, s. 47; Eff. January 1, 2024.

15A NCAC 18E .1709 WASTEWATER SAMPLING REQUIREMENTS FOR ADVANCED PRETREATMENT SYSTEMS

(a) Wastewater sampling requirements shall vary in accordance with wastewater system classification, designated effluent standard, DDF, and performance history.

- (1) Provisional Systems shall be grab or composite sampled quarterly for all applicable influent and effluent constituents listed in Table XXV of Rule .1201(a) of this Subchapter until the system receives Innovative Approval.
- (2) When the DDF is less than or equal to 1,500 gpd, Innovative Systems shall be grab or composite sampled annually for all applicable influent and effluent constituents from Table XXV of Rule .1201(a) of this Subchapter.
- (3) When the DDF is greater than 1,500 gpd and less than or equal to 3,000 gpd, Innovative Systems shall be grab or composite sampled twice a year for all applicable influent and effluent constituents listed in Table XXV of Rule .1201(a) of this Subchapter.
- (4) Sampling for Fecal Coliforms shall not be required for Innovative Systems at any site that is found to be compliant with all other constituents in Table XXV of Rule .1201(a) of this Subchapter.
- (5) Innovative Systems serving vacation rentals subject to the North Carolina Vacation Rental Act, G.S. 42A, shall be sampled during the seasonal high use period.
- (6) Effluent may be re-sampled within 30 days of receipt of laboratory results indicating non-compliance with Table XXV of Rule .1201(a) of this Subchapter if requested by the owner, manufacturer, or manufacturer's

representative, or required in a PIA Approval. Complete data sets from resampling may be substituted to comply with the minimum number of compliant data sets required for PIA Approval. Data sets from resampling may be used by a manufacturer as part of a reduced effluent sampling request in accordance with Paragraph (d) of this Rule.

- (7) The Management Entity may record daily wastewater flow and sample influent to the advanced pretreatment system as needed to determine compliance with Rule .1302(f) of this Subchapter.
- (8) A manufacturer of a Provisional or Innovative System may apply for adjusted sampling requirements in accordance with this Rule.

(b) The manufacturer of a Provisional System may apply to the Department in accordance with Rule .1701 of this Section to request adjusted effluent sampling requirements for Fecal Coliforms. The Department shall approve the request when the documentation submitted to the Department includes the following information:

- (1) data from a minimum of five separate North Carolina sites in operation for a minimum of six months after the Provisional Approval has been issued;
- (2) a minimum of 25 data sets, including results for Fecal Coliforms. No data sets shall be excluded. Data sets may be from the same site if collected a minimum of three months apart; and
- (3) analysis indicating compliant system performance in accordance with Rule .1710 of this Section.

(c) If an effluent sample for a Provisional or Innovative System that is not required to sample for Fecal Coliforms is determined to be non-compliant with Table XXV of Rule .1201(a) of this Subchapter, the effluent may be re-sampled in accordance with Rule .1302(f)(2) of this Subchapter. If re-sampled, the effluent shall also be sampled for Fecal Coliforms in addition to all other applicable constituents. If re-sampling indicates compliance with Table XXV of Rule .1201(a) of this Subchapter, no further Fecal Coliform sampling is required from that site, unless an effluent sample is again determined to be non-compliant for one or more constituents.

(d) The manufacturer of an Innovative System may apply to the Department in accordance with Rule .1701 of this Section to request an adjustment in sampling requirements for constituents or frequency, including reducing to field parameters only. The Department shall approve the request when one of the following conditions are met:

- (1) documentation submitted to the Department includes the following information:
 - (A) data from a minimum of 25 separate North Carolina sites in operation for a minimum of six months after the Innovative Approval has been issued;
 - (B) written reports summarizing results of the VIP inspections for all North Carolina sites submitted as part of this Rule;
 - (C) a minimum of 50 complete data sets, with no data excluded. Data sets may be from the same site if collected a minimum of three months apart;
 - (D) analysis indicating compliant system performance in accordance with Rule .1710 of this Section; and
 - (E) identification of the constituents for which the manufacturer requests a reduced sampling frequency;
- (2) the proprietary advanced pretreatment system is also certified and listed by a nationally recognized certification body and is in compliance with the ongoing verification program of such body, and the manufacturer is requesting a reduction in data set requirements set forth in Rule .1705 of this Section by up to 50 percent only; or
- (3) the manufacturer has demonstrated compliant system performance in accordance with Rule .1710 of this Section and is only requesting to replace the requirement for routine effluent sampling as set forth in Rule .1705 of this Section for all individual sites with routine field constituent testing that is included as part of the VIP.

(e) Systems approved for field parameters shall only be required to sample the field parameters listed in Table XXXIII at the site during a VIP Management Entity inspection. The PIA Approval may specify other field parameters or alternative field parameter effluent criteria. The results shall be recorded in the written report. If the field parameters fall outside the range specified in the PIA Approval, an effluent sample shall be collected and analyzed for all parameters as necessary to demonstrate system compliance with the site's applicable effluent standard specified in Table XXV of Rule .1201(a) of this Subchapter.

TABLE XXXIII. Field parameters advanced pretreatment systems

Field Parameter	Effluent Criteria
pH	5 - 9

Turbidity	≤ 10
DO	≥ 2

(f) While routine sampling of individual sites may no longer be required in accordance with Paragraph (d) of this Rule, effluent sampling may still be determined to be necessary during the visual inspection of the system in accordance with Rule .1302(d) of this Subchapter or if required as part of an enforcement action by the LHD or the Department.

(g) Alternative sampling requirements may be proposed by the manufacturer for a Provisional or Innovative System and approved by the Department when determined to provide an equal or more reliable indication of system compliance with effluent standards.

History Note: Authority G.S. 130A-335(e) and (f); 130A-343;
Eff. January 1, 2024.

15A NCAC 18E .1710 COMPLIANCE CRITERIA FOR ADVANCED PRETREATMENT SYSTEMS

An approved system shall be considered in compliance with the effluent standards of Rule .1002 or Table XXV of Rule .1201(a) of this Subchapter when all the following conditions are met:

- (1) the arithmetic mean for BOD₅, TSS, TKN, and TN and the geometric mean for Fecal Coliform for all data collected from all sites does not exceed the designated effluent standard;
- (2) no more than 20 percent of all data from all sites shall exceed the designated effluent standard for any applicable constituent. A new complete data set for re-sampling conducted within 30 days of receipt of a non-compliant data set may be substituted to demonstrate compliance with the designed effluent quality standard in accordance with Table XXV of Rule .1201(a) of this Subchapter;
- (3) fifty percent of all complete data sets from all sites shall comply with the designated effluent standard for all applicable constituents;
- (4) when determining compliance with system effluent standards in Items (1), (2), and (3) of this Rule, no data sets shall be excluded from individual advanced pretreatment systems except at single sites found to be out of compliance in accordance with Rule .1302(f) of this Subchapter and that have been documented to have been subjected to abuse, such as hydraulic or organic overloading, physical damage to the system, or discharge of deleterious substances; and
- (5) results of influent samples from all sites shall be provided to demonstrate compliance with percent reduction effluent criteria in accordance with Table XXV in Rule .1201(a) of this Subchapter.

History Note: Authority G.S. 130A-335(e) and (f); 130A-343;
Eff. January 1, 2024.

15A NCAC 18E .1711 PROVISIONAL AND INNOVATIVE APPROVAL RENEWAL

(a) All PIA Approvals shall expire on December 31 of each year. PIA manufacturers or other parties who wish to continue product approval shall submit annually a product renewal form provided by the Department no later than November 30 of each year.

(b) The renewal form shall include the following updated elements:

- (1) company or organization's name, mailing address, phone and fax numbers, email address, and manufacturer's point of contact;
- (2) model number(s) approved; and
- (3) a notarized statement that the product(s) has not changed from the previous year without prior approval from the Department.

(c) The Department shall notify the manufacturer of the pending PIA Approval expiration in writing no later than September 30 of each year. The notification shall include information on how to request PIA Approval renewal.

(d) Manufacturers of proprietary products with Provisional Approvals shall additionally submit with its renewal form an annual report to the Department with the following information:

- (1) list of all systems installed under the Provisional Approval;
- (2) results of all effluent samples collected, as applicable;
- (3) copies of all Management Entity inspection reports, as applicable;
- (4) assessment of system performance in relation to this Subchapter;
- (5) summary of progress made to complete installations, research, and testing as outlined in the approved evaluation protocol;

- (6) any conditions and limitations related to the use of the system; and
 - (7) a list of all authorized designers, installers, and management entities.
- (e) Manufacturers of products that are approved as an RCW system shall submit with the product renewal form an annual report to the Department with the following information for RCW systems:
- (1) list of all systems installed under the PIA Approval;
 - (2) results of all effluent samples collected; and
 - (3) documentation that the effluent samples meet the compliance criteria in Rule .1710 of this Section.
- (f) A PIA Approval shall be deemed to be renewed upon receipt of a renewal form that contains all of the elements set out in Paragraph (b) of this Rule and annual report in accordance with Paragraph (d) of this Rule.
- (g) The Department shall review all annual reports for Provisional Approvals for compliance with its PIA approval conditions, including its approved evaluation protocol, and determine whether any action to modify, suspend, or revoke the approval is warranted in accordance with Rule .1708 of this Section.
- (h) The Department shall review all annual reports for manufacturers approved as an RCW system and determine whether the RCW effluent samples meet the compliance criteria in Rule .1710 of this Section. If the compliance criteria are not met the Department may modify, suspend, or revoke the approval in accordance with Rule .1708 of this Section.

*History Note: Authority G.S. 130A-335(e) and (f); 130A-343;
Eff. January 1, 2024.*

15A NCAC 18E .1712 AUTHORIZED DESIGNERS, INSTALLERS, AND MANAGEMENT ENTITIES

- (a) Designers, installers, and Management Entities shall be authorized in writing by the manufacturer when required in the PIA Approval based on product specific factors, such as wastewater system classification, designated effluent standard, DDF, wastewater strength, complexity, and operation and maintenance.
- (b) Manufacturers of proprietary systems approved under this Section shall provide a list of manufacturer's authorized designers, installers, and Management Entities, as specified in the PIA Approval, to the Department and LHDs. The manufacturers shall update this list annually and include it with the product renewal form required in accordance with Rule .1711(a) of this Section.

*History Note: Authority G.S. 130A-335(e) and (f); 130A-343;
Eff. January 1, 2024.*

15A NCAC 18E .1713 LOCAL HEALTH DEPARTMENT RESPONSIBILITIES

To implement this Section the LHD shall:

- (1) When a Provisional System is proposed, confirm that the designated repair system complies with the provisions of Rule .0508 of this Subchapter and with individual PIA Approval requirements, except:
 - (a) when an existing wastewater system is available for immediate use, including connection to a public or community wastewater system;
 - (b) when the Provisional System is used as a repair to an existing malfunctioning system when there are no other approved Innovative or Accepted repair options; or
 - (c) as provided in G.S. 130A-343(f) for Provisional Systems.
- (2) Notify the Department of all IPs, CAs, and OPs issued for Provisional Systems.
- (3) Notify the Department of all OPs issued for Innovative Systems.
- (4) Permit systems designated as Accepted Systems in an equivalent manner to a conventional system at the owner's request. The Accepted System shall be sited and sized in accordance with Section .0900 of this Subchapter or PIA Approval. The type of Accepted System installed shall be indicated on the OP. The owner shall re-apply to the LHD and receive a new or revised IP or CA for any of the following before system installation:
 - (a) location of any part of the dispersal field outside of the approved initial dispersal field area;
 - (b) changes to the trench depth, and slope correction if applicable, specified on the IP or CA;
 - (c) changes to the effluent distribution method; or
 - (d) changes to the DDF or wastewater strength.
- (5) Grant permit reductions in total trench length less than or equal to 25 percent for Innovative or Accepted Systems only to dispersal fields receiving DSE or better quality. A facility with a full kitchen shall not be granted a permit reduction in total trench length.

- (6) Grant facilities generating HSE the 25 percent reduction allowed for Innovative or Accepted Systems if the system includes an approved advanced pretreatment system designed to ensure effluent strength equal to or better than DSE.
- (7) Prohibit issuance of an OP for a proprietary system installed by a person not authorized by the manufacturer, unless the manufacturer of the proprietary system approves the installation in writing.
- (8) Inform the Department, as well as the manufacturer or their authorized representative, of any system determined to be malfunctioning. If the system has been permitted in accordance with G.S. 130A-336.1 or G.S. 130A-336.2 and Rule .0207 of this Subchapter, the LHD shall instruct the owner to contact the PE or AOWE for determination of the reason and the malfunction and development of an NOI for repairs.
- (9) Issue a NOV to the owner when the system is determined to be malfunctioning in accordance with Rule .1303(a)(1) and (2) of this Subchapter or when an individual advanced pretreatment system at a single site is out of compliance in accordance with Rule .1302(f) of this Subchapter. The notice shall identify the violations and steps necessary to remedy the problems, including modification of the system, established time frame to achieve compliance, other follow-up requirements, and specify further enforcement possibilities if compliance is not achieved.
- (10) Include in its monthly activity report submitted to the Department the following information identified by unique codes:
 - (a) number of new system OPs issued for PIA Systems;
 - (b) number of new system OPs issued for Accepted Systems;
 - (c) number of CAs issued for Provisional Systems, including system type;
 - (d) number of CAs issued for repairs of PIA Systems, including system type being repaired;
 - (e) number of CAs issued for repairs of Accepted Systems, including system type being repaired; and
 - (f) repair system type.

History Note: Authority G.S. 130A-335(e) and (f); 130A-343;
Eff. January 1, 2024.