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;

15A NCAC 18A .0133 REFERENCE

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

**15A NCAC 18A .0135 PERMITS**

(a) No person shall operate a processing facility without a permit issued by the Division.
(b) No person shall operate a repacker facility without a repacker permit issued by the Division.
(c) Application for a permit shall be submitted in writing on an application form available from the Division.
(d) No permit shall be issued by the Division until an inspection shows that the facility and equipment comply with applicable rules of this Section.
(e) A permit issued to one person is not transferrable to another person.
(f) The permit shall be posted in a conspicuous place in the facility. All permits shall expire on March 31 of each year.
(g) 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.
(h) A permit may be revoked or suspended pursuant to G.S. 130A-23.
(i) The owner or responsible person shall sign the completed inspection sheet to acknowledge receipt of the inspection sheet.

**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 which has not been transformed into another product. Foreign crustacea meat processed in North Carolina shall comply with all applicable Federal requirements.

**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.
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;
Amended Eff. April 1, 1997.
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; 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;

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;

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;
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;

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;

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.
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.

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.

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.
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;

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;

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=17d119b223f9451322279713ca2e6ab&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;  

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;  

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.
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.

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.

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.
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;

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;

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;

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;

15A NCAC 18A .0173 REPACKING
(a) Crustacea meat for repacking which is processed in North Carolina shall comply with Rules .0134 through .0187 of this Section. Crustacea meat for repacking which is processed outside of North Carolina shall comply with Rule .0182 of this Section. Quarterly bacteriological reports shall be provided to the Division by the repacker of all foreign crustacea meat for repacking.
(b) 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 45°F (7.1°C) during the repacking process.
Repacking shall be conducted separately by time or space from the routine crustacea meat picking and packing process.

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.

Repacked crustacea meat shall be maintained at or below 40°F (4.4°C).

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.

Crustacea meat shall not be repacked more than one time.

All empty containers 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 which has been repacked 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. 130A-230; Eff. October 1, 1992; Amended Eff. August 1, 2002; April 1, 1997.

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;
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;

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;

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;
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;
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;
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. May 1, 2021.

15A NCAC 18A .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;
SECTION .0300 – SANITATION OF SHELLFISH - GENERAL

15A NCAC 18A .0301 DEFINITIONS

The following definitions shall apply throughout Sections .0300 to .0900 of this Subchapter:

(1) "Adulterated" means the following:
   (a) Any shellfish that have been harvested from prohibited areas;
   (b) Any shellfish that have been shucked, packed, or otherwise processed in a plant which has not been permitted by the Division in accordance with these Rules;
   (c) Any shellfish which exceed the bacteriological standards in Rule .0430 of this Subchapter; and
   (d) Any shellfish which are deemed to be an imminent hazard;

(2) "Approved area" means an area determined suitable for the harvest of shellfish for direct market purposes.

(3) "Bulk shipment" means a shipment of loose shellstock.

(4) "Buy boat or buy truck" means any boat which complies with Rule .0419 of this Subchapter or truck which complies with Rule .0420 of this Subchapter that is used by a person permitted under these Rules to transport shellstock from one or more harvesters to a facility permitted under these Rules.

(5) "Certification number" means the number assigned by the state shellfish control agency to each certified shellfish dealer. It consists of a one to five digit number preceded by the two letter state abbreviation and followed by the two letter symbol designating the type of operation certified.

(6) "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.

(7) "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.

(8) "Depuration" means mechanical purification or the removal of adulteration from live shellstock by any artificially controlled means.

(9) "Depuration facility" means the physical structure wherein depuration is accomplished, including all the appurtenances necessary to the effective operation thereof.

(10) "Division" means the Division of Environmental Health or its authorized agent.

(11) "Food safety hazard" means any biological, chemical or physical property that may cause a food to be unsafe for human consumption.

(12) "HACCP plan" means a written document that delineates the procedures a dealer follows to implement food safety controls.

(13) "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 which are likely to occur in shellfish products produced by the dealer.

(14) "Heat shock process" means the practice of heating shellstock to facilitate removal of the shellfish meat from the shell.

(15) "Imminent hazard" means a situation which is likely to cause an immediate threat to human life, and immediate threat of serious physical injury, an immediate threat of serious physical adverse health effects, or a serious risk of irreparable damage to the environment if no immediate action is taken.

(16) "Misbranded" means the following:
(a) Any shellfish which are not labeled with a valid identification number awarded by regulatory authority of the state or territory of origin of the shellfish; or
(b) Any shellfish which are not labeled as required by these Rules.

(17) "Operating season" means the season of the year during which a shellfish product is processed.
(18) "Person" means an individual, corporation, company, association, partnership, unit of government or other legal entity.
(19) "Prohibited area" means an area unsuitable for the harvesting of shellfish for direct market purposes.
(20) "Recall procedure" means the detailed procedure the permitted dealer will use to retrieve product from the market when it is determined that the product may not be safe for human consumption as determined by the State Health Director.
(21) "Relaying or transplanting" means the act of removing shellfish from one growing area or shellfish grounds to another area or ground for any purpose.
(22) "Repacking plant" means a shipper, other than the original shucker-packer, who repacks shucked shellfish into containers for delivery to the consumer.
(23) "Reshipper" means a shipper who ships shucked shellfish in original containers, or shellstock, from permitted shellstock dealers to other dealers or to consumers.
(24) "Sanitary survey" means the evaluation of factors having a bearing on 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.
(25) "Sanitize" means the a bactericidal treatment by a process which meets the temperature and chemical concentration levels in 15A NCAC 18A .2619.
(26) "SELL BY date" means a date conspicuously placed on a container or tag by which a consumer is informed of the latest date the product will remain suitable for sale.
(27) "Shellfish" means oysters, mussels, scallops and all varieties of clams. However, the term shall not include scallops when the final product is the shucked adductor muscle only.
(28) "Shellstock" means any shellfish which remain in their shells.
(29) "Shellstock conveyance" means all trucks, trailers, or other conveyances used to transport shellstock.
(30) "Shellstock dealer" means a person who buys, sells, stores, or transports or causes to be transported shellstock which was not obtained from a person permitted under these Rules.
(31) "Shellstock plant" means any establishment where shellstock are washed, packed, or otherwise prepared for sale.
(32) "Shucking and packing plant" means any establishment or place where shellfish are shucked and packed for sale.
(33) "Wet storage" means the temporary placement of shellstock from approved areas, in containers or floats in natural bodies of water or in tanks containing natural sea water.

History Note: Authority G.S. 130A-230;
Eff. February 1, 1987;
Amended Eff. August 1, 2000; August 1, 1998; February 1, 1997; January 4, 1994; September 1, 1990; December 1, 1987.

15A NCAC 18A .0302 PERMITS
(a) No person shall operate any of the following facilities without a permit issued by the Division:
   (1) Depuration facilities;
   (2) Shellstock plants;
   (3) Shucking and packing plants;
   (4) Repacking plants.
(b) No person shall operate as a shellstock dealer without a permit issued by the Division.
(c) A permit may be issued to a reshipper when required for out of state shipment.
(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 at the Shellfish Sanitation Office, Fisheries Building, Arendell Street, Morehead City, North Carolina, 28557. Application forms are available from the Division.
(f) No permit shall be issued by the Division until an inspection shows that the facilities and equipment comply with all applicable rules of this Subchapter.
(g) All permits shall be posted in a conspicuous place in the facilities. All permits shall expire on April 30 of each year.
(h) Plans and specifications for proposed new construction or remodeling shall be submitted to the Division for review and approval.

(i) A permit may be revoked or suspended pursuant to G.S. 130A-23.

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

15A NCAC 18A .0303 RELAYING PERMITS

If a person is granted a relaying permit by the Division and the Division of Marine Fisheries, shellfish may be removed from certain designated prohibited areas for conditioning and purification prior to marketing and marketed after relaying in a large body of clean water, but only under the following conditions:

1. Application for relaying must be received by the North Carolina Division of Marine Fisheries and the Division 15 days prior to relaying.
2. Removal and relaying shall be under the supervision of the Division and the Division of Marine Fisheries.
3. Shellfish relaid from a prohibited area to a designated area of approved water shall remain down for a period of not less than fourteen days when the water in which shellfish are relaid has a temperature above 50°F (10°C). When the water temperature is below 50°F (10°C), shellfish shall not be relaid.

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

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

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

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

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 and all other businesses and persons that buy, sell, transport, or ship shellfish. These Rules do not apply to persons possessing shellfish for personal use.

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

15A NCAC 18A .0402 GENERAL REQUIREMENTS FOR OPERATION
(a) During the operating season the plant shall be used for no purpose other than the handling of shellfish. All unnecessary equipment and materials shall be removed from the plant and the floors kept clear for thorough cleaning.
(b) All floors, walls, shucking benches and stools, shucking blocks, tables, skimmers, blowers, colanders, buckets, or any other equipment or utensils used in the processing operation shall be cleaned and sanitized daily, or more frequently as may be necessary during the day's operation to prevent the introduction of undesirable microbiological organisms and filth into the shellfish product.
(c) Ceilings and windows shall also be kept clean. Refrigerators, refrigeration rooms, and ice boxes shall be washed and sanitized.
(d) 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 and stored in the shellstock room when not in use.

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

15A NCAC 18A .0403 SUPERVISION
The owner shall personally supervise or shall designate an individual whose principal duty shall be to supervise and be responsible for compliance with the Rules of this Subchapter. No unauthorized persons shall be allowed in the plant during periods of operation.

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

15A NCAC 18A .0404 CONSTRUCTION
Shellfish plants shall be adequate in size and construction to permit compliance with the operational provisions of this Subchapter.

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

15A NCAC 18A .0405 PLANT LOCATION
Shellfish plants shall be located so that they will not be subject to flooding by high tides.

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

15A NCAC 18A .0406 FLOORS
Floors shall be of concrete or other equally impervious material, constructed so that they may be easily and thoroughly cleaned and shall be sloped so that water drains completely and rapidly. For new construction, the joints between walls and floors shall be rounded to expedite cleaning.

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

15A NCAC 18A .0407 WALLS AND CEILINGS
Walls to a height of at least two feet above the floor shall be constructed of smooth concrete or other equally impervious material. The remainder of the walls and ceilings shall be smooth concrete, cement plaster, or other material approved by the Division and shall be painted with a light color washable paint.

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

15A NCAC 18A .0408 LIGHTING
Natural or artificial lighting shall be provided in all parts of the plant. Light bulbs, fixtures, or other glass suspended within the plant shall be safety type or otherwise protected to prevent contamination in case of breakage. Lighting intensities shall be a minimum of 25 foot candles on working surfaces in packing and shucking rooms.
15A NCAC 18A.0409 VENTILATION
Ventilation shall be provided to eliminate odors and condensation.

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

15A NCAC 18A.0410 FLY CONTROL
All outside openings shall be screened, provided with wind curtains or be provided with other fly control methods approved by the Division. 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 guidelines.

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

15A NCAC 18A.0411 RODENT AND ANIMAL CONTROL
The plant shall be constructed to prevent entrance of rodents and other vermin. The storage and use of rodenticides shall comply with all applicable state and federal guidelines. No animals shall be allowed in the plant at any time.

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

15A NCAC 18A.0412 PLUMBING
All plumbing shall be in compliance with applicable plumbing codes.

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

15A NCAC 18A.0413 WATER SUPPLY
(a) The water supply shall be from a source approved by the Division.
(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 Division.

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

15A NCAC 18A.0414 TOILET FACILITIES
Separate and convenient toilet facilities shall be provided for each sex employed and shall comply with the N.C. State Building Code, Volume 2, Plumbing. Floors, walls, and ceilings shall be smooth, easily cleanable and kept clean. Fixtures shall be kept clean. All toilet wastes and other sewage shall be disposed of in a public sewer system or in the absence of a public sewer system, by an on site sewage disposal system approved by the Department in accordance with G.S. 130A-335.

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

15A NCAC 18A.0415 WASTE DISPOSAL
Shells, washings, and other wastes shall be disposed of in a sanitary landfill or in a sanitary manner approved by the Division.

History Note: Authority G.S. 130A-230;
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. Signs to this effect shall be posted in conspicuous places in the plant by the operator.
(b) All persons handling shucked shellfish shall sanitize their hands before beginning work and again after each interruption.
(c) All persons employed or engaged in the handling, shucking, or packing of shellfish shall wear clean, washable outer clothing. Clean plastic or rubber aprons, overalls, and rubber gloves shall be considered satisfactory.
(d) Employees shall not use tobacco in any form in the rooms where shellfish are stored, processed, or handled.
(e) All persons known to be a carrier of any disease which can be transmitted through the handling of shellfish or who have an infected wound or open lesion on any exposed portion of their bodies shall be prohibited from handling shellfish.

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

15A NCAC 18A .0417 LOCKERS
A separate room or locker shall be provided for storing employees' street clothing, aprons, gloves, and personal articles.

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

15A NCAC 18A .0418 SUPPLY STORAGE
Storage room shall be provided for storing shipping containers, tags, and other supplies.

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

15A NCAC 18A .0419 HARVEST BOATS
All boats used in the harvesting and handling of shellstock shall be kept clean and repaired such that the shellstock thereon shall not be subject to adulteration by bilge water, by leakage of water from prohibited areas, or by other means. Decks, holds, or bins used for shellstock on boats shall not be washed with water from prohibited areas. Human wastes shall not be discharged into shellfish waters.

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

15A NCAC 18A .0420 TRANSPORTING SHELLSTOCK
(a) All shellstock storage areas in trucks, buy boats, buy trucks, trailers, and other conveyances used for transporting shellstock shall be enclosed, tightly constructed, painted with a light color washable paint, kept clean, and shall be subject to inspection by the Division.
(b) Shellstock shall be shipped under temperature and sanitary conditions in accordance with these Rules which will keep them alive and clean and will prevent adulteration or deterioration. All shellstock shall be kept under mechanical refrigeration at a temperature of 45°F (7.1°C) or below. All conveyances used to transport shellstock shall be equipped with an operating thermometer.
(c) Buy boats and buy trucks shall be kept clean with water from a source approved by the Division under Rule .0413 of this Subchapter. Buy boats and buy trucks shall provide storage space for clean shipping containers, identification tags, and records.

History Note: Authority G.S. 130A-230; Eff. February 1, 1987; Amended Eff. May 1, 1994.

15A NCAC 18A .0421 DAILY RECORD
All permitted persons who conduct any business of buying, selling, or shipping shellfish shall keep an accurate, daily record which shall show the names and addresses of all persons 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. These records shall be recorded and shall be kept on file for one year. All records shall be open to inspection by the Division at any time during business hours.

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

15A NCAC 18A .0422  SHELLSTOCK CLEANING
No person shall offer for sale any shellstock which have not been washed free of bottom sediments and detritus.

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

15A NCAC 18A .0423  SALE OF LIVE SHELLSTOCK
Only live shellstock shall be offered for sale.

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

15A NCAC 18A .0424  SHELLFISH RECEIVING
No person shall receive or accept any shellfish unless the container or package bears the tag or label required by these Rules.

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

15A NCAC 18A .0425  TAGGING
(a) In order that information may be available to the Division with reference to the origin of shellstock, containers holding shellstock shall be identified with a uniform tag or label. The tag shall be durable, waterproof and measure at least 2-5/8 by 5-1/4 inches (6.7 by 13.3 centimeters). The tag shall contain legible information arranged in 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;
   (4) the harvest location, including the country or state abbreviation;
   (5) when the shellstock has been in wet storage, the statement "THIS PRODUCT WAS IN WET STORAGE AT (FACILITY CERTIFICATION NUMBER) FROM (DATE) TO (DATE)";
   (6) the type and quantity of shellfish;
   (7) the following statement shall appear in bold capitalized type "THIS TAG IS REQUIRED TO BE ATTACHED UNTIL CONTAINER IS EMPTY AND THEREAFTER KEPT ON FILE FOR 90 DAYS.";
   and
   (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."

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

(c) All shellstock from a depuration facility must be identified as having been cleansed by a depuration facility identified by a name and permit number on the tag.

History Note:  Authority G.S. 130A-230;  
Eff. February 1, 1987;  
Amended Eff. April 1, 1997; January 4, 1994; December 1, 1987;
15A NCAC 18A .0426   BULK SHIPMENTS
Shipment in bulk shall not be made except where the shipment is from only one consignor to one consignee and accompanied by the uniform shipping tag.

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

15A NCAC 18A .0427   SHELLSTOCK STORAGE
Shellstock held in wet or dry storage must be kept so that they will not become adulterated. All shellstock held in dry storage shall be kept under mechanical refrigeration at a temperature of 45°F (7.1°C) or below. All refrigerated shellstock storage areas shall be equipped with an operating thermometer.

History Note:    Authority G.S. 130A-230;
Eff. February 1, 1987;
Amended Eff. May 1, 1994; December 1, 1987.

15A NCAC 18A .0428   SAMPLING AND TESTING
Samples of shellfish may be taken and bacteriologically examined for any public health reason by agents of the Division at any time or place. Samples of shellfish shall be furnished, upon request, by operators of plants, trucks, carriers, stores, restaurants, and other places where shellfish are sold.

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

15A NCAC 18A .0429   TOPSALE OR DISPOSAL OF SHELLFISH
(a) When it has been determined by the Division that shellfish have not been grown, harvested, stored, treated, transported, handled, shucked, packed or offered for sale in compliance with 15A NCAC 18A .0300 through .0900 of this Subchapter, those shellfish shall be deemed adulterated.
(b) Shellfish or shellfish products processed or prepared for sale to the public determined to be adulterated or misbranded shall be subject to stop sale or disposal by the Division. The Division may temporarily or permanently issue an order to stop sale or condemn, destroy, or otherwise dispose of all shellfish or shellfish containers found to be adulterated or misbranded.
(c) All shellfish shall be disposed of in a manner prescribed by the Division or by a court of appropriate jurisdiction.

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

15A NCAC 18A .0430   BACTERIOLOGICAL STANDARDS
Shellfish shucked or in the shell and intended or offered for sale in North Carolina that exceed an Escherichia coli Most Probable Number of 230 per 100 grams of sample or a total bacteria count of more than 500,000 per gram or contain pathogenic organisms in sufficient numbers to be hazardous to the public health shall be deemed adulterated by the Division. Shellfish contaminated by any other substance which renders it unsafe for human consumption shall be deemed adulterated by the Division.

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

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 facilities and persons permitted in Rule .0302 of this Subchapter and all other businesses and persons that sell raw shellfish shall post in a conspicuous place where it may be readily observed by the public 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-230;

15A NCAC 18A .0433 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 shellfish 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. 130A-230;

15A NCAC 18A .0434 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 and updated, if necessary, at least annually. 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. 130A-230;

15A NCAC 18A .0435 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 shellfish, shellfish 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. 130A-230;

15A NCAC 18A .0436 MONITORING RECORDS
Monitoring records of critical control points and general sanitation requirements shall be recorded, as specified in the plan, signed and dated when recorded. The records shall be reviewed by the owner or designee within one week of recording.
SECTION .0500 - OPERATION OF SHELLSTOCK PLANTS AND RESHIPPERS


15A NCAC 18A .0501  GENERAL REQUIREMENTS
The rules in Section .0400 shall apply for the operation of shellstock plants and repackers.

15A NCAC 18A .0502  GRADING SHELLSTOCK
(a) The grading of shellstock shall be conducted only in a permitted shellstock plant.
(b) A separate grading room or area shall be required for the grading of shellstock.

15A NCAC 18A .0503  GRADER
The grader used to grade shellstock, and any other accessories or tables used in the grading operation, shall be constructed for ease of cleaning and shall be properly maintained.

15A NCAC 18A .0504  RESHIPPERS
(a) Reshippers shall meet all applicable requirements for shellstock plants. When shucked shellfish are reshipped, they shall be obtained from a permitted shipper. The shucked shellfish shall be received in approved shipping containers at a temperature of 40°F (4°C) or below. The temperature of the shellfish shall not exceed 40°F (4°C) during the holding and shipping periods.
(b) Reshippers shall keep adequate and accurate records indicating the source from which shellfish were purchased, the date purchased, the name of the waters from which the shellfish were harvested, and the names and addresses of persons to whom the shellfish were sold for a period of one year.

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


15A NCAC 18A .0601  GENERAL REQUIREMENTS
The rules in Section .0400 shall apply for the operation of shucking and packing plants and repacking plants.
15A NCAC 18A .0602  SEPARATION OF OPERATIONS
A shucking and packing plant shall provide separate rooms for shellstock storage, shucking, heat shock, and general storage. A separate packing area with delivery shelf shall be required.

15A NCAC 18A .0603  HOT WATER SYSTEM
An automatically regulated hot water system shall be provided which has sufficient capacity to furnish water at a temperature of at least 130°F (54°C) during all hours of plant operation.

15A NCAC 18A .0604  HANDWASHING FACILITIES
Handwashing facilities, including lavatories, hot and cold running water (combination supply faucet), soap, and individual towels shall be provided in a convenient place in the shucking and packing rooms. Signs requiring handwashing shall be conspicuously displayed within the plant.

15A NCAC 18A .0605  DELIVERY WINDOW OR SHELF
A delivery window or a non-corrosive shelf shall be installed in the partition between the shucking room and packing area. No shuckers or unauthorized personnel shall be allowed in the 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 for such purpose, sloped to drain towards the shucking room.

15A NCAC 18A .0606  NON-FOOD CONTACT SURFACES
All non-food contact surfaces of equipment shall be non-absorbent, and constructed to be easily cleaned.

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 non-absorbent material, free from cracks and pits, and so constructed that drainage is complete and rapid 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.

15A NCAC 18A .0608  EQUIPMENT CONSTRUCTION
(a) All pails, skimmers, measures, tanks, tubs, blowers, paddles, and other equipment, which 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; and there shall be no V-type threads in the food-product zone of the blower.

(c) The blower and skimmer drain shall not be directly connected with the sewer. There shall be an air gap, approved by the Division, 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. 130A-230; Eff. February 1, 1987; Amended Eff. September 1, 1990.

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 plant shall be provided in a section of the plant convenient to 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.


15A NCAC 18A .0610 EQUIPMENT SANITATION
All utensils and tools, such as opening knives, shucking pails, measures, skimmers, colanders, tanks, tubs, paddles, and containers which come in contact with the shellfish shall be thoroughly cleaned and then sanitized:

1. by 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 (76°C) for at least 15 minutes, or to a temperature of 200°F (93°C) for at least five minutes;
2. by immersion in hot water at a temperature of 170°F (76°C) for at least two minutes (a thermometer is required);
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 parts per million chlorine residual. Utensils and equipment which have to be washed in place will require washing, rinsing, and sanitizing; or
4. by a bactericidal treatment method which will provide equivalent sanitization to that provided by the methods authorized in (1), (2), or (3), as determined by the Division. If the bactericidal immersion or spray treatment is employed, testing kits shall be used to ensure that minimum solution strengths are maintained throughout the cleaning process.

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

15A NCAC 18A .0611 EQUIPMENT STORAGE
Equipment and utensils which have been cleaned and given bactericidal treatment shall be stored to protect against contamination.

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

15A NCAC 18A .0612 ICE
Ice shall be obtained from a water supply approved by the Division pursuant to Rule .0413 of this Subchapter and shall be stored and handled in a sanitary manner.

History Note: Authority G.S. 130A-230; Eff. February 1, 1987.
15A NCAC 18A .0613 SHELLFISH SHUCKING
(a) Shellfish shall be shucked in a manner that they are not subject to adulteration. Shellstock shall be reasonably free of mud when shucked. Only live shellstock shall be shucked.
(b) Shucking of shellstock shall only be permitted on approved shucking tables or benches. Floors used by shuckers 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 possible adulteration 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, when washed, shall be thoroughly washed on a skimmer or a container approved by the Division with cold running water from a source approved by the Division under 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 leaving 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 its actual length. Before packing into containers for shipment or delivery for consumption, the shellfish shall be drained and packed without any added substance.
(h) Pre-cooling of shucked shellfish shall be done in equipment which meets National Sanitation Foundation standards or the equivalent.

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

15A NCAC 18A .0614 CONTAINERS
(a) Containers used for transporting shucked shellfish shall be made from food safe materials approved by the United States Food and Drug Administration. These containers shall not be reused for packing shellfish.
(b) Shucked shellfish shall be packed and shipped in containers, sealed so that tampering can be detected. Each individual container shall have permanently recorded on the container, so as to be conspicuous, the shucker-packer's, repacker's, or distributor's name and address, and the shucker-packer's or repacker's certification number.
(c) Any container of shucked shellfish which has a capacity of 64 fluid ounces or more shall be dated as of the date shucked on both the lid and sidewall or bottom. Any container of shucked shellfish which has a capacity of less than 64 fluid ounces shall indicate a SELL BY date.
(d) No person shall use containers bearing a certification number other than the number assigned to him.

History Note: Authority G.S. 130A-230;
Eff. February 1, 1987;
Amended Eff. August 1, 1998; February 1, 1997; December 1, 1987.

15A NCAC 18A .0615 SHELLFISH COOLING
Shucked shellfish shall be cooled to an internal temperature of 45°F (7°C) or less within two hours after delivery to the packing room. Storage temperatures shall be 40°F (4°C) or below. No ice or other foreign substance shall be allowed to come into contact with the shellfish after processing has been completed.

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

15A NCAC 18A .0616 SHELLFISH FREEZING
(a) If shellfish are to be frozen, they shall be frozen within three days of shucking and packing and the shucked date shall be preceded by the letter (F).
(b) A temperature of 0°F (-18°C) or less shall be maintained in the frozen storage rooms.
15A NCAC 18A .0617 SHIPPING
(a) Shucked shellfish shall be stored and shipped at 40°F (4°C) or below.
(b) Shipments shall be tagged or labeled to show the name and address of the consignee, the name and address of the shipper, the name of the state or territory of origin, and the permit number of the shipper.

15A NCAC 18A .0618 HEAT SHOCK METHOD OF PREPARATION OF SHELLFISH
(a) Facilities. 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) Tank construction. The heat shock tank shall be constructed of smooth, non-corrosive metal, designed to drain quickly and completely and to be easily and thoroughly cleaned.
(c) Booster heaters. All heat shock tanks shall be equipped with booster heaters that are thermostatically controlled.
(d) Shellstock washing. All shellstock subjected to the heat shock process shall be thoroughly washed with flowing potable water immediately prior to the heat shock operation.
(e) Water temperature. During the heat shock process the water shall be maintained at not less than 140°F (60°C) or more than 150°F (65°C). An accurate thermometer shall be available and used to determine the temperature during the heat shock process. The heat shock tanks shall be drained and cleaned at the end of each day's operation.
(f) Alternatives to heat shock method. Nothing in these Rules shall be construed to prohibit any other process which has been found equally effective.
(g) Water requirements. 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 under Rule .0413 of this Subchapter.
(h) Cooling. Immediately after the heat shock process, all treated shellstock shall be subjected to a cool-down with potable tap water. All heat shocked shellstock shall be handled in a manner to prevent adulteration of the product. Shellfish which have been subjected to the heat shock process shall be cooled to an internal temperature of 45°F (7°C) or below within two hours after this process and shall be placed in storage at 40°F (4°C) or below.
(i) Cleaning. At the close of each day's operation, the heat shock tank shall be completely emptied of all water, mud, detritus, and thoroughly cleaned and then rinsed with flowing potable water.
(j) Sanitizing. All heat shock tanks shall be sanitized immediately before starting each day's operation.

15A NCAC 18A .0619 REPACKING OF SHELLFISH
(a) If repacking is practiced, it shall be done strictly in accordance with all the requirements stipulated for shucking and packing plants except those related to shucking.
(b) The shucked shellfish to be repacked shall be received at the repacking plant in approved shipping containers at a temperature of 32°F - 40°F (0°C - 4°C) or less.
(c) Shellfish shall not be repacked more than one time.
(d) The temperature of the shellfish shall not exceed 45°F (7°C) during the repacking process.
(e) Containers with a capacity of 64 fluid ounces or less in which shucked shellfish are repacked shall indicate a SELL BY date preceded by the letter R. Containers with a capacity above 64 fluid ounces in which shucked shellfish are repacked shall be dated to show the original shucking date and repacking date, which will be preceded by the letter (R).
(f) Repackers shall keep accurate records indicating source from which shellfish were purchased, the date packed, the date of purchase, the area within the state or territory from which the shellfish were harvested, and the names and addresses of persons to whom the shellfish were sold.
**15A NCAC 18A .0620 SHELLFISH THAWING AND REPACKING**

(a) Frozen shellfish shall be thawed under temperatures not to exceed 45° F (7° C).
(b) Shellfish held for thawing shall be separated from other shellfish.
(c) Thawed shellfish shall not exceed 45° F (7° C) 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, which 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.

**15A NCAC 18A .0621 RECALL PROCEDURE**

Each owner of a shellfish facility shall keep on file a written shellfish recall procedure. A copy of this procedure shall be provided to the Division.

**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 GENERAL REQUIREMENTS**

The Rules in Section .0400 shall apply for the operation of depuration facilities.

**15A NCAC 18A .0702 FACILITY SUPERVISION**

(a) The owner shall either personally supervise or designate an individual to be responsible for compliance with the rules of this Subchapter.
(b) The depuration facility shall be used for no purpose other than the treatment of shellfish and research activities related thereto. No unauthorized persons shall be allowed in the depuration facility.

**15A NCAC 18A .0703 FACILITY DESIGN AND SANITATION**

(a) The plant layout shall be designed to physically separate undeprated shellstock from depurated shellstock and be approved by the Division.
(b) Tank design and construction. The tank shall be designed to allow for good water circulation. The tank shall be of sufficient size to allow at least eight cubic feet of sea water per bushel of shellstock in the tank except for soft clams (Mya arenaria), which requires at least five cubic feet of sea water per bushel. If the tank is rectangular in shape, length to width ratio shall be from two to one (2:1) to four to one (4:1).
(c) The tank shall be designed so that scum and sludge (shellfish feces, pseudo feces, sand grit, etc.), can be easily removed or flushed out. The bottom shall be sloped longitudinally at least one fourth to one half inch per foot toward the outlet end.
(d) To facilitate proper cleaning and sanitation, as well as proper depuration of shellfish, tanks shall be constructed from impervious, non-toxic, and inert materials. Coatings, when used, shall be approved by the Division. Pipes conveying process water throughout the plant shall be so constructed as to be easily disassembled to facilitate cleaning and sanitizing.

(e) Facility sanitation. The general sanitation requirement of the facility, physical structure, equipment and utensils, and the sanitary requirements for operations, processes, and personnel shall be approved by the Division.

(f) Material. The equipment in the food product zone shall be made of smooth, corrosion resistant, impervious, non-toxic material and shall meet National Sanitation Foundation standards or the equivalent.

(g) Plumbing and related facilities. Plumbing shall be installed in compliance with state and local plumbing ordinances. Lavatories shall have running hot and cold water. Lavatories, other than those located in restrooms, shall be located so that their use by personnel can be readily observed. An automatically regulated hot water system shall be provided which has sufficient capacity to furnish water at a temperature of at least 130°F (54°C) during all hours of plant operation. Signs shall be posted in toilet rooms and near lavatories, directing employees to wash their hands before starting work and after each interruption. Pump volutes and impellers shall be of material which is non-toxic. The facilities domestic sewage shall be discharged into a sewage disposal system constructed in accordance with state and local requirements.

(h) Floors. Floors of rooms in which shellstock are handled or stored shall be constructed of concrete or other material impervious to water; shall be graded to drain quickly; shall be free from cracks and uneven surfaces that interfere with proper cleaning or drainage; and shall be maintained in good repair.

(i) Walls and ceilings. The interior surfaces of rooms in which shellstock are handled or stored shall be smooth, washable, a light color, and kept in good repair.

(j) Lighting. Natural or artificial light shall be provided in all working and storage rooms. Light bulbs, fixtures, or other glass suspended within the facility shall be of safety-type or otherwise protected to prevent contamination in case of breakage. The water surface of the depuration tanks shall not be subjected to direct sunlight.

(k) Heating and ventilation. Working rooms shall be ventilated. Working rooms shall be equipped with heating equipment for use as necessary during the months of September to April.

(l) Water supply. The water supply for non-depuration uses shall be from a source approved by the Division under Rule .0413 of this Subchapter.

(m) Rodent control. The depuration facility shall comply with the provisions of Rule .0411 of this Subchapter.

(n) General cleanliness. The depuration facility shall be kept clean and free of litter and rubbish. Miscellaneous and unused equipment and articles which are not necessary to the facility operations shall not be stored in rooms used for depuration or shellstock storage. Culled shellstock shall be removed promptly from the facility.

(o) Health of personnel. Any person known to be infected with any disease in a communicable form, or to be a carrier of any disease which can be transmitted through the handling of shellfish, or who has an infected wound or open lesion on any exposed portion of his body, shall be excluded from handling shellfish in the facility.

(p) Disposal of all waste water shall be permitted by the appropriate agency.

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

15A NCAC 18A .0704 LABORATORY PROCEDURES

(a) 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).

(b) All methods for the analysis of depuration process water and shellfish that are used to evaluate the effectiveness of the depuration process 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.
(c) The laboratory shall conduct examinations of depuration process water and shellfish and conduct special examinations if necessary or required, in accordance with Rules .0706 through .0709 of this Section.

History Note:  
Authority G.S. 130A-230;  
Eff. February 1, 1987;  
Amended Eff. December 1, 1987; 

15A NCAC 18A .0705  FACILITY OPERATIONS
(a) Source of shellfish. Shellfish shall be accepted for treatment at a shellfish depuration facility only from areas designated for this purpose by the Division and the Division of Marine Fisheries. A detailed description of all areas from which shellfish may be taken for depuration purposes, updated as necessary, shall be prepared by the Division and the Division of Marine Fisheries, and kept on file by the facility owner or operator. The facility operator shall inspect all containers of raw shellstock upon arrival at the facility to verify that they contain the shellfish species and quantity stated on the surveillance officer's reports.

(b) Shellstock containers. Shellstock shall be accepted for treatment and released after depuration in clean containers only. All containers shall be constructed of non-absorbent and rust-proof material, and kept clean and free from foreign matter. Burlap bags or similar absorbent material shall not be used for transporting shellstock to the depuration facility nor for the removal of shellstock from the facility.

(c) Culling. All untreated shellstock prior to, or upon arrival at the facility, shall be thoroughly inspected and culled. All dead shellfish, or shellfish in broken or cracked shells shall be disposed of in a manner approved by the Division. The owner or operator shall be held responsible for suitable culling and for the removal and disposal of dead shellfish or shellfish in broken or cracked shells after depuration.

(d) Washing shellstock. Before and after depuration all shellstock shall be thoroughly washed or hosed with water taken from a source approved by the Division under Rule .0413 of this Subchapter. Immersion of shellstock for washing purposes is prohibited.

(e) Depuration Baskets. All baskets used in the depuration process shall be made of impervious material and shall not be more than four inches deep. Baskets shall be of a design to allow water to flow freely over the shellstock in the depuration tanks. Shellstock shall not be placed more than three inches deep in the baskets. Baskets shall be stacked in a manner to allow free circulation of water. There shall be at least three inches clearance separating containers of shellfish in tanks and between the containers and the bottom and sides of the tank. Containers used for depuration purposes shall not be used for any other purpose and no containers or other equipment shall be placed in the depuration tanks.

(f) Depuration. All shellstock upon receipt at the depuration facility, shall be immediately placed in depuration or placed in controlled storage. Shellstock shall be depurated for a period of 48 hours or longer as required to meet the bacteriological standards established in Rule .0709 of this Subchapter.

(g) Washing depuration tanks. After each 24 hours the sea water in the tanks shall be drained out and the shellstock hosed down thoroughly with water from a supply approved by the Division under Rule .0413 of this Subchapter. All waste matter must be flushed out of the tank. Immediately after hosing, the tanks shall again be filled with treated sea water.

(h) Scheduled process. A scheduled control purification process shall be established outlining the critical parameters for each depuration facility. This scheduled process shall be written and posted conspicuously at the depuration site.

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

15A NCAC 18A .0706  SHELLFISH SAMPLING PROCEDURES
(a) Start-up phase. When shellfish are delivered to the depuration facility, the following schedule shall be followed:

(1) One or more shellfish samples (12 or more shellfish per sample) shall be collected for bacterial examination before the shellfish are submitted to the depuration process.

(2) Three or more shellfish samples, randomly selected from three or more locations in each tank, shall be collected for bacterial examination after 24 hours of depuration.

(3) Three or more shellfish samples, randomly selected from three or more locations in each tank, shall be collected for bacterial examination after the shellfish have completed the depuration process.

(b) The above schedule shall be followed until the time that the Division and the facility operator, after review of the results, determine that the shellfish from the area(s) are responding properly to the depuration process, and that the depuration process
is successfully reducing bacterial levels. After the determination, the routine sampling procedures shall be followed. A routine sampling procedure defining a program of daily sampling shall be established by the Division. Written permission from the Division must be obtained before the initiation of routine monitoring procedures.

(c) Any change in laboratory equipment, operators, or procedures, shall be approved by the Division.

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

15A NCAC 18A .0707 DEPURATION PROCESS WATER CONTROL - SAMPLING PROCEDURES
The treatment of shellfish is a controlled process designed to reduce bacterial contamination to an acceptable level. To insure the continuing effectiveness of the shellfish depuration process, the minimum sampling procedure as described below shall be followed:

(1) Incoming sea water;
   (a) type of test: temperature, turbidity, salinity, dissolved oxygen, bacteriological;
   (b) frequency: each time sea water is withdrawn;

(2) Tank water;
   (a) type of test: bacteriological;
   (b) frequency: once per day per tank.

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

15A NCAC 18A .0708 DEPURATION TREATMENT PROCESS WATER - STANDARDS
(a) Water Source. Depuration process water shall not exceed fourteen fecal coliform Most Probable Number (MPN) per 100 milliliters of water prior to treatment.
(b) Bacteriological. All water to be used in shellfish depuration tanks shall be subjected to ultraviolet light treatment. The tank water bacterial quality shall not exceed one total coliform Most Probable Number (MPN) per 100 milliliters of water.
(c) Dissolved oxygen. The amount of dissolved oxygen in the water in the depuration tanks shall be at least five milligrams per liter and shall be measured daily.
(d) Temperature. Depuration tank temperature shall be measured daily during the depuration process. Temperatures of sea water used in the depuration process shall not be below 50°F (10°C) nor above 77°F (25°C).
(e) Turbidity. Turbidity in the depuration water shall not exceed 20 Jackson Turbidity Units or other equivalent methods and shall be measured daily.
(f) Salinity. Salinity of the depuration water shall deviate no more than plus or minus 20 percent of the value of the harvest area and shall be measured daily.
(g) pH. pH of the depuration water shall range from 7.0 to 8.4 and shall be measured daily.
(h) Metallic ions and compounds. Levels of metallic ions and compounds shall not exceed levels found in approved shellfish harvesting areas and shall be measured if required by the Division.
(i) Pesticides, detergents, and radionuclides. Levels of pesticides, detergents, and radionuclides shall not exceed levels found in approved harvesting areas and shall be measured if required by the Division.
(j) Marine toxins. Levels of marine toxins in the incoming sea water and in the source water shall not exceed levels found in approved shellfish harvesting areas and shall be measured if required by the Division.

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

15A NCAC 18A .0709 DEPURATION - SHELLFISH MEAT STANDARDS
Shellfish shall not be released for sale if the geometric mean of the fecal coliform MPN of the treated shellfish samples exceeds 20 per 100 grams of sample, or if more than 10 percent of the samples exceed a fecal coliform MPN of 70 per 100 grams of sample, or if any sample fecal coliform MPN exceeds 100 per 100 grams of sample.

(1) The use of the Elevated Temperature Coliform Plate Count is authorized for the bacteriological evaluation of hard clams, Mercenaria species, and soft clam, Mya arenaria.
(2) Should the Division suspect adulteration of shellfish by metallic ions and compounds, pesticides, detergents, radionuclides, marine toxins, or any toxic substance or adulterate, the Division shall require that shellfish meats be analyzed for these adulterants before suspect shellfish are released for sale.

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

15A NCAC 18A .0710 ULTRAVIOLET UNIT
Any ultraviolet unit which provides the required treatment and desired results may be used for the purification of water to be used in the depuration process. The unit shall be designed to deliver, at peak load, at least one gallon per minute of treated water per bushel of shellfish, measured by an approved measuring device or method.

(1) Cautions and maintenance. Ultraviolet tubes shall be checked for intensity on a monthly basis and shall be replaced when they reach a point of 60 percent efficiency. A log of intensity shall be kept and an orderly numbering procedure for units and bulb established.

(2) Ultraviolet tubes and reflectors shall be cleaned as necessary. Cleaning may be done with a clean damp cloth or sponge.

(3) Signs stating "Ultraviolet Light Danger to Eyes - Do Not Look at Bulbs Without Eye Protection" shall be displayed in full view of personnel and authorized visitors. Skin protection, especially for the face and hands, shall be provided for personnel monitoring the bulbs. Eye protection may be accomplished by use of ordinary glasses with solid side pieces or special goggles made for this purpose. Protection for the head may be afforded by a hat and hand protection may be accomplished by the use of gloves. Face protection may be afforded by the use of certain clear plastics.

(4) An automatic shutoff switch shall be provided to break the electric current, this shutting off the current to the ultraviolet bulb when the lid of the ultraviolet unit is raised.

(5) A clock, off-on current recorder, or other device approved by the Division, shall be installed in line with all ultraviolet units to measure continuity of operation as well as to measure bulb life.

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

15A NCAC 18A .0711 SHELLSTOCK STORAGE
(a) Refrigeration of shellstock. Treated shellstock shall be placed in cold storage if they are not released immediately. The temperature for cold storage shall be 50°F (10°C) or lower. A refrigerated storage room shall be provided for depurated shellstock. All untreated shellstock shall be kept in a separate shellstock storage room. Measures shall be taken to prevent the unauthorized removal of any shellstock. All shellstock shall be handled and stored under sanitary conditions in accordance with the rules in this Subchapter.

(b) Controlled storage. Shellstock which is received at the depuration facility which cannot be processed immediately shall be placed in controlled storage. In controlled storage the temperature shall be 50°F (10°C) or lower. A gradual change of temperature from the storage temperature to the depuration water temperature may then be necessary to insure proper treatment. Any shellstock which has been held under refrigeration at a depuration facility for more than 48 hours shall not be depurated.

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

15A NCAC 18A .0712 DEPURATION - TAGGING AND RELEASE OF SHELLFISH
No shellstock shall be removed from the depuration facility until approved for release by the operator of the facility as provided in these Rules. All containers of depurated shellstock shall be tagged before being released from the shellstock depuration facility. The tag shall contain the name and permit number given the depuration facility by the Division, the quantity of shellstock, and the date the shellstock were released from the depuration facility.

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

15A NCAC 18A .0713 DEPURATION - RECORDS
Records containing the following information shall be available at the depuration facility at all times:

(1) For shellstock presently undergoing the depuration process:
   (a) name and location of harvesting area(s);
   (b) depuration harvesting permit number(s);
   (c) date received;
   (d) quantity of shellstock in tank(s); and
   (e) date and time of initiation of depuration.

(2) For each lot of shellstock which have completed the depuration process:
   (a) name and location of harvesting area(s);
   (b) depuration harvesting permit number(s);
   (c) date received into facility;
   (d) date released from the facility;
   (e) date and time of initiation of depuration;
   (f) date and time of termination of depuration;
   (g) number of hours depurated; and
   (h) all laboratory results as specified.

(3) Every two weeks the facility operator shall send to the Division a copy of the daily records required under this Rule and the results of all shellfish and water samples analyzed during that biweekly period.

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

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 GENERAL REQUIREMENTS
The rules in Section .0400 shall apply for wet storage of shellstock.

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

15A NCAC 18A .0802 PLANT DESIGN: SANITATION: AND WET STORAGE
Plant design, sanitation, and wet storage shall be approved by the Division.

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

15A NCAC 18A .0803 WET STORAGE WATER
Water used for wet storage shall be approved by the Division.

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

15A NCAC 18A .0804 SHELLSTOCK CLEANING
Shellstock shall be thoroughly washed with water from an approved source and culled to remove dead, broken, or cracked shellstock prior to wet storage in tanks.

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

15A NCAC 18A .0805 WET STORAGE TANKS
Wet storage tanks shall be constructed of smooth, impervious materials approved by the Division and shall be kept clean.
15A NCAC 18A .0806 SHELLSTOCK CONTAINERS
All containers used during wet storage shall be constructed of non-absorbant and rust-proof material, and shall be kept clean.

15A NCAC 18A .0900 - CLASSIFICATION OF SHELLFISH GROWING WATERS

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 are subject to predictable intermittent pollution but 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, 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 cooperative federal-state-industry program for the sanitary control of shellfish that is adequate to ensure that the shellfish produced in accordance with the NSSP Guide For The Control Of Molluscan Shellfish will be safe and sanitary.

(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.
"Public health emergency" means any condition that may immediately cause shellfish waters to be unsafe for the harvest of shellfish for human consumption.

"Restricted" means shellfish growing waters from which shellfish may be harvested only by permit and are subjected to a treatment process through relaying or depuration that renders the shellfish safe for human consumption.

"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.

"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.

"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.

"Shellfish growing waters" means marine or estuarine waters that support or could support shellfish life.

"Shellstock" means live molluscan shellfish in the shell.

"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.

"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.

### 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;  

15A NCAC 18A .0906  RESTRICTED AREAS

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

1. a sanitary survey indicates there are no significant point sources of pollution; 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) Relaying of shellfish shall be conducted in accordance with all applicable rules, including 15A NCAC 03K and 15A NCAC 18A .0300.

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

(d) 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;  

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;  

15A NCAC 18A .0908  UNSURVEYED AREAS

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

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**15A NCAC 18A .0910 RECLASSIFICATION**

**History Note:**

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

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**15A NCAC 18A .0911 MARINAS: DOCKING FACILITIES: OTHER MOORING AREAS**

Classification of shellfish growing waters with respect to marinas, docking facilities, and other mooring areas shall be done in accordance with the following:

(1) All waters within the immediate vicinity of a marina shall be classified as prohibited to the harvesting of shellfish for human consumption. Excluded from this classification are marinas with less than 30 slips, having no boats over 24 feet in length, no boats with heads and no boats with cabins. Marinas permitted prior to the effective date of this Rule may continue to have boats up to 21 feet in length with cabins and not be subject to the mandatory water classification of prohibited in the immediate vicinity of the marina.

(2) Owners of marinas conforming to the exclusion provisions in Item (1) of this Rule shall make quarterly reports to the Division. These reports shall include the following information:

(a) number of slips;

(b) number and length of boats;

(c) number and length of boats with cabins;

(d) number of boats with heads; and

(e) number of boats with "porta-potties."

Reports to the Division shall cover the occupancy of the marina on the fifth day of the first month of each quarter of the calendar year and shall be post marked on or before the fifteenth day of the reporting month.

(3) The minimum requirement for the prohibited area beyond the marina shall be based on the number of slips and the type of marina (open or closed system). The prohibited area shall extend beyond the marina from all boat slips, docks, and docking facilities, according to the following:

<table>
<thead>
<tr>
<th>Number of Slips in Marina</th>
<th>Size of Prohibited Area (Feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Open System</td>
</tr>
<tr>
<td>11 - 25</td>
<td>100</td>
</tr>
<tr>
<td>26 - 50</td>
<td>150</td>
</tr>
<tr>
<td>51 - 75</td>
<td>175</td>
</tr>
<tr>
<td>76 - 100</td>
<td>200</td>
</tr>
</tbody>
</table>

Open system marinas exceeding 100 slips shall require an additional 25 feet for each 25 slips or portion thereof over 100. A closed system marina shall require 50 feet for each 25 slips or portion thereof over 100. Closed system private or residential marinas with more than 75 slips shall require a prohibited area of the number of feet determined above, or 100 feet outside the
entrance canal, whichever is greater. Closed system commercial marinas with more than 50 slips shall require a prohibited area of the number of feet determined above, or 100 feet outside the entrance canal, whichever is greater.

(4) After a marina is put in use water quality impacts of marina facilities may require a change in classification. In determining if a change in classification is necessary, marina design, marina usage, dilution, dispersion, bacteriological, hydrographic, meteorological, and chemical factors will be considered.

(5) Areas, other than marinas, where boats are moored or docked may be considered on a case-by-case basis with respect to sanitary significance relative to actual or potential contamination and classification shall be made as necessary.

(6) The cumulative impacts of multiple marinas, entrance canals, or other mooring areas, in close proximity to each other are expected to adversely affect public trust waters. When these situations occur the Division will recommend closures exceeding those outlined in Item (3) of this Rule. The following guides will be used in determining close proximity:

(a) marina entrance canals within 225 feet of each other;
(b) open system marinas within 450 feet of each other (Mooring areas shall be considered open system marinas);
(c) where closure areas meet or overlap; and
(d) open system marinas within 300 feet of a marina entrance canal.

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

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;

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.
SECTION 1000 - SANITATION OF SUMMER CAMPS


15A NCAC 18A .1001 DEFINITIONS

The following definitions shall apply throughout this Section:

1. "Summer camp" includes those camp establishments which provide food or lodging accommodations for groups of children or adults engaged in organized recreational or educational programs. It also includes day camps, church assemblies, and retreats.

2. "Department" shall mean the Secretary of the Department of Environment and Natural Resources or his authorized representative.

3. "Sanitarian" shall mean a person authorized to represent the Department on the local or state level in making inspections pursuant to state laws and regulations.

4. "Person" means an individual, firm, association, organization, partnership, business trust, corporation, or company.

5. "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.

6. "Sanitize" means the approved bactericidal treatment by a process which meets the temperature and chemical concentration levels in 15A NCAC 18A .2619.

15A NCAC 18A .1002 FIELD SANITATION

Summer camps or other organizations may conduct overnight hikes or similar primitive camping activities if accepted field sanitation standards are maintained.

15A NCAC 18A .1003 INVESTIGATION AND APPROVAL

(a) The sponsor of a proposed site for a summer camp may make an advance appointment with a sanitarian from the health department of the county in which the site is located for a joint visit to the site by representatives of the sponsor and the health department. During the site visit, the sponsor's preliminary plans for development of needed structures and facilities will be evaluated, including water supply, sewage disposal, swimming facilities, solid waste disposal, and insect and rodent control.
If it is determined that the proposed site and facilities, if properly developed and operated, will comply with this Section, the sponsor should proceed to develop final plans and specifications.

(b) Plans and specifications for camp buildings and equipment, water supply system, sewerage system, and swimming pool or other swimming facility shall be submitted in duplicate to the health department of the county in which the site is located. 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. February 1, 1976; 
Readopted Eff. December 5, 1977; 
Amended Eff. September 1, 1990.

**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 permit to operate shall be issued until an inspection by a sanitarian shows that the establishment complies with this Section. Permits or transitional permits are issued by and inspections made by the Department.

(b) If camp food service is provided by a caterer, the overall responsibility for food service sanitation remains with the camp management.

(c) Upon transfer of ownership of an existing summer camp, the Department shall evaluate the facility to determine compliance with the rules. 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. However, if the Department determines that the noncompliant items are construction or equipment problems that do not represent an immediate threat to the public health, a transitional permit may be issued. The transitional permit shall expire 90 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 summer 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. 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.
8. Any other conditions necessary for the summer camp to remain in compliance with this Section.

(e) A 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. A new permit to operate shall be issued only after the establishment 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 request is made by the operator.

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

**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;
15A NCAC 18A .1006   REINSPECTIONS
Upon receipt of a request from the management for a reinspection for the purpose of raising the posted grade, the sanitarian shall make an unannounced inspection after the lapse of a reasonable period of time.

History Note: Authority G.S. 130A-248;
Eff. February 1, 1976;

15A NCAC 18A .1007   INSPECTION FORMS
The grading of summer camps 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. name and address of each facility,
2. length of season,
3. number of residents,
4. signature of authorized representative,
5. score,
6. standards of construction and operation as listed in .1009 to .1029 of this Section.

History Note: Authority G.S. 130A-248;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. September 1, 1990; June 30, 1980;

15A NCAC 18A .1008   GRADING
The sanitation grading of all summer camps shall be based on a system of scoring wherein all summer camps receiving a score of at least 90 percent shall be awarded Grade A; all summer camps receiving a score of at least 80 percent and less than 90 percent shall be awarded Grade B; all summer camps receiving a score of at least 70 percent and less than 80 percent shall be awarded Grade C; and no summer camp receiving a score of less than 70 percent, or Grade C, shall operate.

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

15A NCAC 18A .1009   STANDARDS
The grading of summer camps shall be based on the standards of construction and operations set out in .1010 to .1029 of this Section.

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

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;
15A NCAC 18A .1011 WATER SUPPLY
(a) Water supplies shall meet the requirements in 15A NCAC 18A .1700.
(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. At least once a year, a sample of water shall be collected by the Department and submitted to the Division of Laboratory Services or other laboratory certified by the Department to perform bacteriological examinations. A sample of water from a private or public non-community water supply serving a summer camp shall be collected by the sanitarian and submitted at least once a year to the laboratory section of the Department or other approved laboratory for bacteriological examination.
(c) Cross-connections with unapproved water supplies are prohibited. All plumbing fixtures for potable water 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.
(d) Hot water heating facilities shall be provided. Hot and cold running water under pressure shall be provided to food preparation areas, and any other areas in which water is required for cleaning.

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

15A NCAC 18A .1012 RECREATIONAL WATERS
(a) A natural or artificial body of water may be approved by the Department for the recreational purposes based upon the results of inspections, bacteriological examinations of the water, and sanitary surveys.
(b) Swimming Pools shall meet the requirements in 15A NCAC 18A .2500.

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

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;  

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 adequate, conveniently located and readily accessible. These facilities, and laundry facilities when provided, shall comply with the North Carolina State Building Code, Volume II.
(b) A sufficient number of water closets or privies approved by the Department shall be provided.
(c) Adequate lavatories supplied with running water shall be provided and located convenient to all flush toilet facilities. At least one lavatory supplied with hot and cold running water through mixing faucets and with soap and towels shall be provided in the kitchen and any other food preparation areas.
(d) Bathing facilities shall be provided and located convenient to sleeping quarters.
(e) Laundry facilities, if provided, shall be kept clean and in good repair.

History Note:  
Authority G.S. 130A-248;  
Eff. February 1, 1976;
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;

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;

15A NCAC 18A .1017  FOOD SERVICE FACILITIES
Food service facilities shall include a kitchen of adequate size and of completely enclosed, permanent construction, and a dining hall providing protection from the elements.

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

15A NCAC 18A .1018  FOOD SERVICE UTENSILS AND EQUIPMENT
(a) All equipment and utensils shall be so designed and of such material and workmanship as to be smooth, easily cleanable and durable, and shall be kept clean and in good repair; and 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 equivalent may be used for bakers' tables and cutting blocks and boards.
(b) All multi-use eating and drinking utensils shall be thoroughly cleaned and sanitized after each usage. 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 acceptable when found effective. All single service articles shall be stored, handled, and dispensed in a sanitary manner, and shall be used only once. All cloths used by chefs and other employees in the kitchen shall be clean.
(d) 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.
(e) Facilities and methods for the cleaning and sanitizing of utensils and equipment shall comply with "Sanitation of Restaurants and Other Foodhandling Establishments," 15A NCAC 18A .2600.

History Note:  Authority G.S. 130A-248;
15A NCAC 18A .1019  FOOD SUPPLIES
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. All meat and meat food products and all poultry and poultry products shall have been inspected for wholesomeness under an official inspection program; and, in all cases, the source shall be identifiable from labeling on carcasses, cuts, unit packages, bulk packages, or from bills of sale.

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

15A NCAC 18A .1020  SHELLFISH
(a) All shellfish and crustacea meat shall be obtained from sources in compliance with 15A NCAC 18A .0100 -.0900. 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. If the source of cooked crustacea meat is outside the state, the establishment in which the crustacea meat was packed 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 unit container shall be clearly identified with the name and address of the packer, repacker, or distributor; the certificate number of the packer or repacker; and the abbreviated name of the state. The re-use of single-service shipping containers and the storage of shucked shellfish in other containers are not permitted.

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

15A NCAC 18A .1021  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. Milk and milk products shall be served in the individual, original containers in which they were received from the distributor, so that the name and grade of the contents and the name of the milk distributor may be readily observed by the consumers; provided that approved sanitary bulk milk dispensers may be used if so located and so labeled that the name and grade of the contents and the name of the distributor may be observed readily by the consumers; provided further, that the milk dispenser may be installed in the food serving area of the kitchen if the label information required by this item is displayed or posted so as to be observed readily by the consumer.
(b) An exception may be made in the case of cream served with coffee, cereals, etc., as the distributor cannot deliver cream in the unit sizes that would be required. For such service, transferring to individual service units from the original container of not more than one-half gallon capacity, or from pumps, or other approved dispensers is permissible. The mixing of cream and milk or the pouring of either into jars, bottles, or other containers for storage therein shall be 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. Such pouring shall be done by the counselor at each table or by responsible food service personnel of the summer camp immediately before the milk is to be consumed. The milk remaining in the container shall be immediately refrigerated and used for cooking purposes only. The transfer of milk from its original one gallon 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 properly sealed, labeled with the name and grade of the contents and identity of the distributor, and 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.
(e) Dry milk and milk products may be reconstituted in the establishment if used for cooking purposes only.
15A NCAC 18A .1022 FOOD PROTECTION
(a) All food while being stored, prepared, displayed, and served shall be protected from contamination. All perishable foods 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).
(b) 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 foods 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 to a person shall not be served again.
(c) Conveniently located refrigeration facilities, hot food storage and display facilities, and effective insulated facilities, shall be provided as needed to assure the maintenance of all food at required temperatures during storage, preparation, display, and serving. 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.
(d) 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.

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.

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.


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.


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.

15A NCAC 18A .1027   FOOD SERVICE EMPLOYEES
(a) All employees shall wear clean outer clothing and shall be clean as to their person and methods of foodhandling. 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 thoroughly in an approved handwashing lavatory before starting work, after each visit to the toilet, and as often as may be necessary to remove soil and contamination.
(c) Employees engaged in the preparation, handling, or serving of food shall wear hairnets, caps, or other effective hair restraints to prevent the contamination of food or food contact surfaces. Wigs and hairspray do not constitute compliance with this Rule.
(d) Cooks and other kitchen employees shall wear clean outer clothing or other special dress (uniforms) when on duty.
(e) 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.

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

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;

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;

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;
SECTION .1100 - SANITATION OF FOOD AND BEVERAGE VENDING MACHINES


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 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 in the interpretation and enforcement of this Section:

(1) "Disinfect" means a process used on inanimate surfaces to destroy or irreversibly inactivate infectious fungi and bacteria but not necessarily their spores.

(2) "Environmental Health Specialist" means a person authorized by the Department of Environment and Natural Resources under G.S. 130A-6 to enforce environmental health rules adopted by the Commission for Public Health.

(3) "Institution" includes the following establishments providing room or board and for which a license or certificate of payment must be obtained from the Department of Health and Human Services, other than those operated exclusively by the State of North Carolina:

(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) sanitarium, sanatorium, and any similar establishment, other than hospital and nursing home, for the recuperation and treatment of 13 or more persons suffering from physical or mental disorders;
(d) adult care home, providing custodial care on a 24-hour basis for 13 or more persons, including homes for the aged;
(e) orphanage, or children's home providing care on a 24-hour basis for 13 or more children.
However, the term shall not include a child day care facility, an adult day service facility as defined in 15A NCAC 18A .3300 or a residential care facility as defined in 15A NCAC 18A .1600.

(4) "Department of Environment and Natural Resources" shall mean the Secretary, or his authorized representative.

(5) "Local health director" shall mean local health director as defined in G.S. 130A-2(6) or his authorized representative.

(6) "Patient" means a patient or resident living in an institution as defined in this Section.

(7) "Person" shall mean an individual, firm, association, organization, partnership, business trust, corporation, or company.

(8) "Personal Hygiene" means maintenance of personal health, including grooming, brushing teeth, showering, applying makeup, or washing/drying face, hands, and body.

(9) "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.

(10) "Sanitize" means a bactericidal treatment that meets the temperature and chemical concentration levels in 15A NCAC 18A .2619.

(11) "Soiled utility room" means a room or area with fixtures used for cleaning and disinfecting soiled patient-care items.

15A NCAC 18A .1302 APPROVAL OF PLANS
In addition to any other licensure requirements, plans shall be submitted to the local health department for review and approval before beginning construction. Construction shall comply with the Rules of this Section.

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

15A NCAC 18A .1304 INSPECTIONS
(a) Institutions shall be graded once each six months and food services at institutions that prepare and serve meals to 13 or more patients or residents shall be inspected at least once each quarter.
(b) The grading of institutions shall be done on inspection forms furnished by the Department to local health departments. The form shall include the following information:
   (1) the name and address of the facility;
   (2) the name of the person in charge of the facility;
   (3) the standards of construction and operation as listed in .1309 - .1324 of this Section;
   (4) the score; and
   (5) the signature of the authorized agent of the Department.
Whether or not a permit is required under G.S. 130A-248, inspections of food preparation and central dining areas in institutions serving meals to 13 or more patients or residents shall be documented separately using the inspection forms and grading system used for grading restaurants as specified in current "Rules Governing the Sanitation of Restaurants and Other Foodhandling Establishments" 15A NCAC 18A .2600. When grading the food preparation and central dining areas of institutional food services that are not required to obtain a permit under G.S. 130A-248, the provisions of Rule .1323(d) of this Section shall supercede the provisions of Rule 15A NCAC 18A .2610(c) regarding animals in dining areas. Except as required by G.S. 130A-247 through 250, food services at institutions shall not be required to obtain foodhandling establishment permits. Facilities that the "Rules Governing the Sanitation of Restaurants and Other Foodhandling Establishments" are made effective by the rules of this Section that were in operation before March 1, 2003 may continue to use equipment and construction in use on that date if no imminent hazard exists. Points shall not be deducted from the food service sanitation score for existing equipment that is kept clean and performs the task for which it is used. Replacement equipment for these facilities shall comply with 15A NCAC 18A .2600.

History Note: Authority G.S. 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;

15A NCAC 18A .1305 GRADING RESIDENTIAL CARE FACILITIES IN INSTITUTIONS
If an institution includes one or more residential care facilities each providing room or board for 12 persons or fewer, the rules in 15A NCAC 18A .1600 shall apply and grading of the residential care facilities shall be in accordance with the residential care and these Rules do not apply.

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.

15A NCAC 18A .1306 PUBLIC DISPLAY OF GRADE CARD
(a) Whenever an inspection of an institution is made, the Environmental Health Specialist shall remove the existing grade card, issue a new grade card, and post the new grade card where it may be readily observed by the public upon entering the facility. The administrator shall be responsible for keeping the grade card posted at the location designated by the Environmental Health Specialist at all times. If the administrator objects to the location designated by the Environmental Health Specialist, then the administrator may suggest an alternative location which meets the criteria of this Rule.

(b) Private institutions are inspected and graded by Environmental Health Specialists employed by the local health departments, under the direction of the local health directors.

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); July 1, 1986.

15A NCAC 18A .1307 REINSPECTIONS
Upon receipt of a request from the management for a reinspection for the purpose of raising the alphabetical grade of the institution, the Environmental Health Specialist shall make an unannounced inspection after the lapse of a reasonable period of time, not to exceed 30 days.

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

15A NCAC 18A .1308 APPROVED INSTITUTIONS AND SCORING SYSTEM
(a) The sanitation grading of all institutions shall be based on a system of scoring wherein all institutions receiving a score of at least 90 percent shall be awarded Grade A; all institutions receiving a score of at least 80 percent and less than 90 percent shall be awarded Grade B; all institutions receiving a score of at least 70 percent and less than 80 percent shall be awarded Grade C; and all institutions receiving a score of less than 70 percent do not meet the minimum sanitation standards. If an institution or an institutional food service fails to maintain a sanitation score of at least 70 percent or if the Environmental Health Specialist determines that conditions found at the institution at the time of any inspection are dangerous to the health of residents or the public, the Environmental Health Specialist shall notify the licensing agency within 24 hours. A copy of the inspection report documenting the dangerous conditions shall be sent to the licensing agency within two working days following the inspection.

(b) Sanitation scores for institutions shall be determined by an Environmental Health Specialist authorized by the Department by completing an inspection report Form DENR 1213. The score is a percentage compliance determined by deducting points from 100 percent for each item found not to be in compliance with the Rules of this Section. The authorized Environmental Health Specialist shall deduct full or half credit for non-compliant items based on the severity, pervasiveness and persistence of the rule violation. The percentage point value of each item is determined as follows:

1. Violation of Rule .1309 of this Section regarding cleanability of floors and provision of floor drains shall be assessed a value of two points.
2. Violation of Rule .1309 of this Section regarding cleaning and maintenance of floors and carpet shall be assessed a value of two points.
3. Violation of Rule .1310 of this Section regarding cleanability and repair of walls and ceilings shall be assessed a value of two points.
4. Violation of Rule .1311(a) of this Section regarding lighting levels shall be assessed a value of two points.
5. Violation of Rule .1311(b) or (c) of this Section regarding ambient air temperatures and cleaning of ventilation equipment shall be assessed a value of two points.
6. Violation of Rule .1311(d) of this Section regarding moisture control shall be assessed a value of three points.
7. Violation of Rule .1311(e) of this Section regarding control of indoor smoke exposure shall be assessed a value of two points.
8. Violation of Rules .1312(a), (b), or (f) of this Section regarding location, cleaning and repair of toilet, handwashing and bathing facilities shall be assessed a value of two points.
9. Violation of Rule .1312(b) of this Section regarding toilet rooms shall be assessed a value of one point.
10. Violation of Rule .1312(c) or (d) of this Section regarding provision, accessibility and use of hand sinks shall be assessed a value of two points.
11. Violation of Rule .1312(d) of this Section regarding equipment for handwashing facilities shall be assessed a value of three points.
12. Violation of Rule .1312(e) of this Section regarding hot water temperature at lavatory and bathing facilities shall be assessed a value of two points.
13. Violation of Rule .1312(f) of this Section regarding accessibility and mixing of cleaning and disinfectant agents shall be assessed a value of two points.
14. Violation of Rule .1313(a) or (d) of this Section regarding water supply and cross-connections shall be assessed a value of four points.
15. Violation of Rule .1313(e) or (f) of this Section regarding quantity of hot water and backup water supply plans shall be assessed a value of two points.
16. Violation of Rule .1314(a) of this Section regarding cleaning, repair and flow regulation of drinking fountains shall be assessed a value of two points.
17. Violation of Rule .1314(b) of this Section regarding drinking utensils shall be assessed a value of two points.
18. Violation of Rule .1314(b) of this Section regarding protection of ice and cleaning and repair of ice making and handling equipment and utensils shall be assessed a value of two points.
19. Violation of Rule .1315 of this Section regarding wastewater disposal shall be assessed a value of four points.
20. Violation of Rule .1316(a), (b) or (c) of this Section regarding solid waste storage and container cleaning facilities shall be assessed a value of four points.
Violation of Rule .1316(d) of this Section regarding solid waste disposal and control of insect breeding or nuisance shall be assessed a value of two points.

Violation of Rule .1316(e) of this Section regarding handling and disposal of medical wastes shall be assessed a value of two points.

Violation of Rule .1317(a) of this Section regarding exclusion of vermin shall be assessed a value of three points.

Violation of Rule .1317(b) of this Section regarding storage and handling of pesticides shall be assessed a value of two points.

Violation of Rule .1317(c) of this Section regarding cleaning and maintenance of premises shall be assessed a value of two points.

Violation of Rule .1317(e) or (f) of this Section regarding pet maintenance shall be assessed a value of two points.

Violation of Rule .1318(a) of this Section regarding storage areas shall be assessed a value of one point.

Violation of Rule .1318(b) of this Section regarding mop sinks shall be assessed a value of one point.

Violation of Rule .1318(c) of this Section regarding medication carts shall be assessed a value of two points.

Violation of Rule .1318(d) of this Section regarding feeding syringes, oral suction catheters and tube-feeding bags shall be assessed a value of two points.

Violation of Rule .1319(a) of this Section regarding cleaning and repair of furniture and use of mattress covers shall be assessed a value of two points.

Violation of Rule .1319(b) of this Section regarding linen changes and handling of soiled laundry shall be assessed a value of two points.

Violation of Rule .1319 of this Section regarding storage areas and equipment, cleaning and sanitizing of laundry, and storage and handling of clean laundry shall be assessed a value of two points.

Violation of Rule .1319(c) of this Section regarding repair, storage, cleaning and disinfection of patient contact items shall be assessed a value of one point.

Violation of Rule .1320 of this Section regarding approval, cleaning and sanitizing food contact items shall be assessed a value of two points.

Violation of Rule .1320 of this Section regarding approved uses of activity kitchens shall be assessed a value of one point.

Violation of Rule .1320(b) of this Section regarding handwashing lavatories in foodhandling areas shall be assessed a value of two points.

Violation or Rule .1321(a) of this Section regarding food sources and supplies shall be assessed a value of four points.

Violation of Rule .1321(b) of this Section regarding disposition of food brought by employees or visitors shall be assessed a value of one point.

Violation of Rule .1322 of this Section regarding milk and milk products shall be assessed a value of two points.

Violation of Rule .1323(a) of this Section regarding food protection, temperature control and time in lieu of temperature shall be assessed a value of four points.

Violation of Rule .1323(b) of this Section regarding hot and cold food storage and display units and thermometers shall be assessed a value of one point.

Violation of Rule .1323(c) of this Section regarding food storage shall be assessed a value of one point.

Violation of Rule .1323(d) of this Section regarding control of live animals in food service areas shall be assessed a value of two points.

Violation of Rule .1324(a) of this Section regarding employee clothing and tobacco use while handling food shall be assessed a value of one point.

Violation of Rule .1324(a) or (b) of this Section regarding employee hand washing and hand antisepsis shall be assessed a value of three points.

Violation of Rule .1324(c) of this Section regarding exclusion of persons with infections from food service work shall be assessed a value of two points.

History Note: 
Authority G.S. 130A-235;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
15A NCAC 18A .1309 FLOORS
(a) All floors in intensive care units, bathrooms, showers, hydrotherapy areas, operating rooms, soiled utility rooms and laundry areas shall be of smooth, non-absorbent materials and so constructed as to be easy to clean. Floors shall be free of obstacles to cleaning, and shall be kept clean and in good repair. Carpeting shall be maintained clean, odor free, dry and in good repair.
(b) In all rooms in which 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. 130A-235; 
Eff. February 1, 1976; 
Readopted Eff. December 5, 1977; 
Amended Eff. March 1, 2003 (see S.L. 2002-160); September 1, 1990.

15A NCAC 18A .1310 WALLS AND CEILINGS
The walls and ceilings of all rooms and areas shall be kept clean and in good repair. All walls shall be easily cleanable 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. 130A-235; 
Eff. February 1, 1976; 
Readopted Eff. December 5, 1977; 

15A NCAC 18A .1311 LIGHTING, VENTILATION AND MOISTURE CONTROL
(a) All areas shall be provided with sufficient illumination to effectively perform all operations, including cleaning, and shall have at least 10 foot candles of light at 30 inches above the floor in all areas other than food service areas. Food service areas shall be lighted as required for restaurants in "Rules Governing The Sanitation of Restaurants and other Foodhandling Establishments" 15A NCAC 18A .2600.
(b) Ventilation equipment shall be kept clean and in good repair.
(c) Ambient air temperatures shall be maintained in the range of 65° F to 85° F.
(d) Moisture shall be controlled such that there is no evidence of microbial growth on interior surfaces and objects.
(e) Indoor smoking, including the carrying of any lit cigarette, pipe, cigar, or other similar product containing tobacco or other substances shall be restricted to dedicated smoking rooms. Smoking rooms shall be ventilated to prevent environmental tobacco smoke from moving into other occupied portions of the building. There shall be no obligation to establish such smoking rooms.

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, 1986; October 1, 1985.

15A NCAC 18A .1312 TOILET: HANDWASHING: LAUNDRY: AND BATHING FACILITIES
(a) All institutions shall be provided with toilet, handwashing, and bathing facilities that are conveniently located and readily accessible to residents and staff. These facilities, and laundry facilities when provided, shall be kept clean and in good repair.
(b) Toilet facilities shall comply with the requirements of the state agency licensing the facility. Toilet rooms shall not be used for storage. Fixtures and furnishings shall be kept clean and in good repair. Durable, legible signs shall be posted or stenciled conspicuously in each toilet room for food service employees directing them to wash their hands before returning to work.
(c) Institutions where bedpans, urinals or emesis basins are used shall provide facilities for emptying, cleaning, and disinfecting bedpans, urinals and emesis basins. Bedpans, urinals and emesis basins shall be cleaned after each use and shall be disinfected before use by other patients. Where bedpans are cleaned in patient rooms, bedpan cleaning facilities shall consist of a water closet with bedpan lugs or spray arms. Where facilities for cleaning bedpans are not provided in patient rooms, bedpans shall be taken to a soiled utility room and be cleaned and disinfected using an EPA registered hospital disinfectant after each use. Where disposable bedpans are reused, they shall be labeled with the patient's name and date and
shall not be used by more than one patient. Bedside commodes shall be cleaned after each use and shall be cleaned and disinfected before use by successive patients. Hand sinks shall not be used for cleaning bedpans or bedside commodes.

(d) Handwashing facilities shall be accessible to all areas where personnel may be exposed to bodily excretions or secretions and in sterile supply processing areas, medication rooms, laundry areas, and soiled utility rooms. Any area where personnel may be exposed to bodily excretions or secretions shall have handwashing facilities located in the same room or have a doorway connecting to an adjacent room or corridor containing handwashing facilities. All lavatories shall be supplied with hot and cold running water through a mixing faucet, or with tempered warm water, soap, and sanitary towels or hand-drying devices. Facilities in operation prior to March 1, 2003 that do not have handwashing lavatories in all areas required shall not be required to install additional lavatories if an approved hand hygiene program is used. Hand hygiene programs shall be approved by the Environmental Health Specialist case-by-case based on type and frequency of activities involving contamination with bodily excretions or secretions, use of gloves to reduce contamination, availability of pre-moistened detergent wipes for hand cleaning, use of alcohol rubs or other skin antiseptics, and availability of handwashing facilities on the same wing or floor of the building. Handwashing facilities shall be provided in kitchens and any other food preparation areas in addition to any lavatories provided at employees' toilet rooms. Sinks used for washing utensils and equipment shall not be accepted as a substitute for required handwashing facilities. Handwash lavatories shall be used only for handwashing. Lavatories provided for use of patients or residents shall be used only for handwashing, personal hygiene, rinsing feeding tubes and obtaining water. Lavatories used for handwashing or personal hygiene shall not be used for disposal of body fluids or cleaning soiled linens. Lavatories in medication rooms used primarily for handwashing can be used for other purposes, such as disposal of medications, which do not interfere with effective handwashing.

(e) Water heating facilities shall provide hot water within the temperature range of 100 degrees F to 116 degrees F at all lavatories and bathing facilities.

(f) Bathing facilities as required by the licensing agency shall be provided, maintained and kept clean. Bathing facilities shall be supplied with hot and cold running water and a mixing device, or tempering device. Shared bathing equipment that has contact with patient's skin shall be cleaned with detergent and an EPA registered hospital disinfectant between patient 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. Where disinfectants are mixed on site, the concentration of the mix shall be assured by use of a metering pump, measuring device or chemical test kit.


15A NCAC 18A .1313 WATER SUPPLY

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

(b) Non-community public water supplies shall be listed with the Public Water Supply Section, Division of Environmental Health.

(c) In institutions that use a non-community water supply, a sample of water shall be collected by the Department at least once a year and submitted to the Division of Laboratory Services or other laboratory certified by the Department to perform bacteriological examinations.

(d) Cross-connections with sewage lines, non-potable water supplies, 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 areas, and to any other areas where water is required in sufficient quantities to carry out all operations.

(f) The local health department shall be immediately notified if the primary water supply is interrupted for more than four hours. Each institution shall have a plan to obtain a backup water supply in the event that the water supply is lost for more than four hours. The backup water supply plan shall provide for two liters of water per day per person for drinking. The backup water supply plan shall include a plan for either relocating residents or providing an alternative source of water for essential functions such as food preparation, hand washing, bathing, cleaning, dishwashing, laundry and disposal of bodily waste. The amount of water provided for uses other than drinking may be reduced if the plan includes alternatives for water use for services such as laundry and dishwashing. If an assessment determines that tap water is not to be used for drinking, sources shall be prominently labeled or hooded to restrict use and potable water shall be provided.
15A NCAC 18A .1314   DRINKING WATER FACILITIES: ICE HANDLING
(a) Drinking fountains shall be of sanitary angle-jet design, kept clean, and properly regulated. All multi-use utensils used for service of water in patients' rooms, including glasses, pitchers, and drinking tubes, shall be cleaned and sanitized before being used by any other individuals. Disposable water pitchers shall be marked with the patient's name, used only by that patient and shall be disposed of and replaced when visibly soiled.
(b) Ice shall be handled, transported, stored, and dispensed in such a manner as to be protected against contamination. Ice machines, buckets, other containers, and scoops shall be cleaned on a regular schedule such that they are kept free of scum, rust, mold or other contamination. Ice machines, buckets, other containers and scoops shall be maintained in good repair and shall be protected from the elements, splash, drip, dust, vermin, other contamination, and from use by unauthorized personnel. Ice machines and storage chests which are accessible to patients or the public shall provide ice through automatic ice dispensing equipment which prevents the contamination of stored ice.

15A NCAC 18A .1315   LIQUID WASTES
All wastewater shall be disposed of in accordance with 15A NCAC 18A .1900 or 15A NCAC 02H .0200.

15A NCAC 18A .1316   SOLID WASTES
(a) All solid wastes containing food scraps or other decomposable materials shall, prior to disposal, be kept in leak-proof, non-absorbent containers, such as standard garbage cans, which shall be kept covered with tight-fitting lids when filled or stored, or not in continual use; provided that such containers need not be covered when stored in a special vermin-proofed room, such as a refrigerated garbage room, or enclosure.
(b) All dry rubbish (including scrap paper, cardboard boxes, packing crates, etc.) shall be stored in containers, rooms, or designated areas.
(c) The rooms, enclosures, designated areas, and containers shall be adequate for the storage of all solid wastes accumulating on the premises. Cleaning facilities for waste containers shall be provided. Containers, rooms, or designated areas shall be kept clean.
(d) All solid wastes shall be disposed of with sufficient frequency and in such a manner as to prevent insect breeding or public health nuisances.
(e) Medical wastes shall be handled and disposed of as required in North Carolina "Solid Waste Management Rules" 15A NCAC 13B .1200 Medical Waste Management.

15A NCAC 18A .1317   VERMIN CONTROL: PREMISES: ANIMAL MAINTENANCE
(a) Effective measures shall be taken to keep flies, rodents, cockroaches, and other vermin out of the establishment and to prevent their breeding or presence on the premises. All openings to the outer air shall be protected against the entrance of flies and other flying insects by self-closing doors, closed windows, 16-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 registered with the Environmental Protection Agency and with the North Carolina Department of Agriculture in accordance with the "Federal Insecticide, Fungicide and 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.

(c) The premises under control of the management shall be kept neat, clean, and free of litter. There shall be no fly or mosquito breeding places, rodent harborage, or undrained areas on the premises.

(d) Cleaning shall minimize accumulation of feces and other allergens generated by insects and other vermin.

(e) Animal pens, litter boxes, bird cages and other areas on the premises shall be cleaned to minimize accumulation of animal wastes, pet dander and allergens.

(f) Copies of veterinary records for all resident pets shall be kept on the premises.


15A NCAC 18A .1318 MISCELLANEOUS

(a) Suitable rooms or spaces shall be provided for the storage of all necessary equipment, furniture and supplies, and kept clean. All patient care or consumable items shall be stored at least eight inches above the floor to prevent water contamination from cleaning floors and shall not be stored below exposed sewer lines.

(b) Mop receptors or sinks shall be provided and used for the cleaning of mops and the disposal of mop water. Other plumbing fixtures shall not be used for these purposes.

(c) Medication carts shall be cleaned when visibly soiled. Food and utensils used on medication carts shall be handled in a sanitary manner. Unused medication cups shall be kept covered or inverted. Sharps containers on medication carts shall be affixed or secured to prevent spillage.

(d) Feeding syringes which are reused shall be labeled with the patient's name and date opened, shall be disassembled and rinsed after each use, and shall be disposed of within 24 hours of first use. Tube feeding bags shall be changed within the time period specified by the manufacturer. Oral suction catheters which are reused shall be flushed after each use and shall be disposed of within 24 hours of first use. Feeding syringes and oral suction catheters shall be stored in a clean container.


15A NCAC 18A .1319 FURNISHINGS AND PATIENT CONTACT ITEMS

(a) All furniture, bed springs, mattresses, sleeping mats, draperies, curtains, shades, venetian blinds, or other furnishings in institutions shall be kept clean and in good repair. Mattresses shall be kept clean, dry and odor free.

(b) Clean bed linen in good repair shall be provided for each individual and shall be changed when soiled. Soiled linen shall be placed in a covered container or bag at the point of use and stored and handled so as to contain and minimize aerosolization of and exposure to any waste products. 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 for soiled laundry use only. If hot water is used, linen including sheets, pillow cases, absorbent pads, towels and wash cloths provided by the facility shall be washed with a detergent in water at least 71°C (160°F) for 25 minutes. If low temperature (less than 71°C) laundry cycles are used, linens shall be washed in at least 50 parts per million chlorine or an EPA Listed laundry sanitizer shall be used in accordance with the manufacturer's instructions. This shall not preclude the approval of other chemicals or processes shown to produce a 99.9 percent reduction of the pathogens Staphylococcus aureus, Klebsiella pneumoniae and Pseudomonas aeruginosa on laundry. The wash temperatures and chemicals required for linens shall not apply to personal laundry provided and used by a resident. Clean linen shall be stored and handled in a separate room or area, or in another manner that will prevent contamination of clean linen. Laundry areas and equipment shall be kept clean.
(c) Patient contact items shall be kept clean and in good repair. Soiled patient contact items shall be taken to a designated area for cleaning and shall be stored separately from clean items. A room or area shall be provided for cleaning patient contact equipment such as wheelchairs. Patient contact items such as diaper changing surfaces that become contaminated during use shall be cleaned and disinfected after each use. Shared toys subject to mouthing shall be washed and rinsed with soap and water and disinfected with 70 percent alcohol or 100 parts per million chlorine after each day's use. Shared plush toys shall be laundered after each day's use. Shared toys that are not washable shall be gas sterilized or disposed of when soiled.

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); August 1, 1998; February 1, 1997; September 1, 1990; Temporary Amendment Eff. June 1, 2003; Amended Eff. February 1, 2004.

15A NCAC 18A .1320  FOOD SERVICE UTENSILS AND EQUIPMENT

(a) All food service equipment and utensils used in institutions for preparing meals for 13 or more people shall comply with the requirements of "Rules Governing the Sanitation of Restaurants and Other Foodhandling Establishments" 15A NCAC 18A .2600. Residential style rehabilitation activity kitchens with domestic utensils and equipment may be used by groups of 12 or less people to prepare meals only for members of the group. Potentially hazardous foods prepared in rehabilitation activity kitchens shall not be served to groups of more than 12 people. This shall not preclude the use of an activity kitchen as a serving area for meals catered from a main kitchen and served to groups of 13 or more people in connection with a planned event from which the public is excluded. For planned events, the equipment in the activity kitchen may be used for heating prepared foods received from a main kitchen or a commercial source. Bread machines, soup kettles and other food contact items used at nutrition stations shall be so constructed as to be easily cleanable.

(b) At activity kitchens or nutrition stations, provisions shall be made for cleaning all food service utensils and equipment and sanitizing utensils and equipment not continuously subjected to high temperatures. Where utensils and equipment are not returned to a central kitchen for cleaning, designated nutrition stations shall be equipped with at least a two compartment sink with 24 inch drainboards or counter top 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. At nutrition stations, dish machines listed with NSF International shall meet this provision. Any area where food is portioned, served or handled shall be equipped with a separate handwash lavatory with hot and cold mixing faucet, soap and individual towels or hand drying device. Separate handwashing lavatories shall not be required for activity kitchens used only by groups of 12 or less people.

(c) 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 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.


15A NCAC 18A .1321  FOOD SUPPLIES

(a) All food and food supplies provided by an institution shall be from sources that comply with North Carolina "Rules Governing the Sanitation of Restaurants and Other Foodhandling Establishments" 15A NCAC 18A .2600 and shall be clean, free from spoilage, free from adulteration and misbranding, and safe for human consumption.

(b) Food brought from home by employees or visitors of patients or residents shall be stored separately from the institution's food supply and shall be labeled with the name of the person to receive the food and the date the food was brought in and shall be kept only as long as it is clean, and free from spoilage. Labeling shall not be required for food items stored in employee-designated or individual resident’s refrigerators or rooms.
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;
Temporary Amendment Eff. June 1, 2003;

(a) All food while being stored, prepared, transported, displayed, and served, shall be protected from contamination. All perishable foods shall be stored at temperatures which will protect against spoilage. All potentially hazardous food shall be maintained at safe temperatures (45 degrees F. or below, or 140 degrees F. or above) except during necessary periods of preparation and serving. Potentially hazardous foods served shall be either consumed or discarded within two hours of being removed from temperature control. Medications shall be stored in a manner which will not contaminate food or food products such as in separate covered containers or in separate refrigerators.

(b) Conveniently located refrigeration units, hot food storage and display units and effective insulated units shall be provided as needed to assure the maintenance of all food at required temperatures during storage, preparation, display, service, and transportation. Each refrigeration unit shall be provided with an indicating thermometer of such type and so situated that the thermometer can be easily read except that indicating thermometers shall not be required for food iced in coolers for transport.

(c) 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 or other contamination.

(d) No live animals shall be allowed in any room where food is prepared or stored. Live animals shall be allowed in dining areas if their presence will not result in contamination of food, clean equipment, utensils, linens, and unwrapped single-service and single-use articles in the following situations:

1. Fish or crustacea in aquariums or display tanks, or other animals in enclosed terrariums or glass enclosed aviaries;
2. Patrol dogs accompanying police or security officers in offices and dining, sales, and storage areas, and sentry dogs running loose in outside fenced areas;
3. In areas that are not used for food preparation such as dining and sales areas, support animals such as guide dogs that are trained to assist an employee or other person who is handicapped, are controlled by the handicapped employee or person, and are not allowed to be on seats or tables; and
4. Pets in the common dining areas of group residences at times other than during meals if:
   (A) Effective partitioning or self-closing doors prevent pets from entering food storage and food preparation areas;
   (B) Condiments, equipment, and utensils are stored in enclosed cabinets or removed from the common dining areas when pets are present; and
   (C) Dining areas including tables, countertops, and similar surfaces are cleaned after all pets have left the area and before the next meal service.

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); October 1, 1993; September 1, 1990.

15A NCAC 18A .1323  FOOD PROTECTION

(a) All food while being stored, prepared, transported, displayed, and served, shall be protected from contamination. All perishable foods shall be stored at temperatures which will protect against spoilage. All potentially hazardous food shall be maintained at safe temperatures (45 degrees F. or below, or 140 degrees F. or above) except during necessary periods of preparation and serving. Potentially hazardous foods served shall be either consumed or discarded within two hours of being removed from temperature control. Medications shall be stored in a manner which will not contaminate food or food products such as in separate covered containers or in separate refrigerators.

(b) Conveniently located refrigeration units, hot food storage and display units and effective insulated units shall be provided as needed to assure the maintenance of all food at required temperatures during storage, preparation, display, service, and transportation. Each refrigeration unit shall be provided with an indicating thermometer of such type and so situated that the thermometer can be easily read except that indicating thermometers shall not be required for food iced in coolers for transport.

(c) 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 or other contamination.

(d) No live animals shall be allowed in any room where food is prepared or stored. Live animals shall be allowed in dining areas if their presence will not result in contamination of food, clean equipment, utensils, linens, and unwrapped single-service and single-use articles in the following situations:

1. Fish or crustacea in aquariums or display tanks, or other animals in enclosed terrariums or glass enclosed aviaries;
2. Patrol dogs accompanying police or security officers in offices and dining, sales, and storage areas, and sentry dogs running loose in outside fenced areas;
3. In areas that are not used for food preparation such as dining and sales areas, support animals such as guide dogs that are trained to assist an employee or other person who is handicapped, are controlled by the handicapped employee or person, and are not allowed to be on seats or tables; and
4. Pets in the common dining areas of group residences at times other than during meals if:
   (A) Effective partitioning or self-closing doors prevent pets from entering food storage and food preparation areas;
   (B) Condiments, equipment, and utensils are stored in enclosed cabinets or removed from the common dining areas when pets are present; and
   (C) Dining areas including tables, countertops, and similar surfaces are cleaned after all pets have left the area and before the next meal service.

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); October 1, 1993; September 1, 1990.

15A NCAC 18A .1324  EMPLOYEES

(a) While on duty, all employees shall wear visibly clean outer clothing and shall be clean as to their persons. No employee shall use tobacco in any form while engaged in the preparation and handling of food. Employees shall wash or decontaminate their hands:
(1) before beginning work;
(2) after each visit to the toilet;
(3) before and after patient contact, including oral feeding;
(4) after contact with a source of microorganisms (body fluids and substances, mucous membranes, nonintact skin, inanimate objects that are likely to be contaminated); and
(5) after removing gloves.

(b) When hands are visibly soiled, routine handwashing shall include a vigorous rubbing together of all surfaces of lathered hands for at least 10 seconds followed by thorough rinsing under a stream of water and drying with individual disposable towels or hand drying devices. When hands are not visibly soiled, hand antiseptics with alcohol-based hand rubs shall be acceptable for decontamination of hands. In the event of interruption of water supply or in settings where handwashing facilities are inadequate or inaccessible, hand decontamination can be achieved by using detergent containing towelettes and alcohol-based hand rubs.

(c) No person who has a communicable or infectious disease that can be transmitted by foods, or who knowingly is a carrier of organisms that cause such a disease, or who has a boil, infected wound, or an acute respiratory infection with cough or 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-235;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. March 1, 2003 (see S.L. 2002-160); September 1, 1990.

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;

15A NCAC 18A .1327 INCORPORATED RULES

(a) The North Carolina "Rules Governing the Sanitation of Restaurants and Other Foodhandling Establishments" 15A NCAC 18A .2600 are incorporated by reference including any subsequent amendments or editions. 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 Environmental Health Services Section, 1632 Mail Service Center, Raleigh, NC 27699-1632 at no cost.

(b) The North Carolina "Rules Governing Public Water Systems" 15A NCAC 18C are incorporated by reference including any subsequent amendments or editions. 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 Public Water Supply Section, 1634 Mail Service Center, Raleigh, NC 27699-1634 at no cost.

(c) The North Carolina "Rules Governing Protection of Water Supplies" 15A NCAC 18A .1700 are incorporated by reference including any subsequent amendments or editions. 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 Environmental Health Services Section, 1632 Mail Service Center, Raleigh, NC 27699-1632 at no cost.

(d) The North Carolina "Solid Waste Rules" 15A NCAC 13B .1200 Medical Waste Management are incorporated by reference including any subsequent amendments or editions. This material is available for inspection at the Department of
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-235;

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;
Amended Eff. July 1, 1985;

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;

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;
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;

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;

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;

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;

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.
15A NCAC 18A .1412  DUST CONTROL
The application shall be accompanied by a written plan for dust control. The permittee shall execute the plan.

15A NCAC 18A .1413  FIRE PREVENTION AND CONTROL
The application shall be accompanied by a written plan for fire prevention and control.

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.

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.
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;

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 accommodate 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;

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.


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.


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.


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.

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;

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;

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;

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;

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.


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.


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.


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.


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:
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;

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;

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;

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;

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.


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.


15A NCAC 18A .1511 WATER SUPPLY
(a) Water supplies shall meet the requirements in 15A NCAC 18A .1700.
(b) At least once a year, a sample of water shall be collected by the Department and submitted to the Division of Laboratory Services or other laboratory certified by the Department to perform bacteriological examinations.
(c) No backflow connections or cross connections with unapproved water supplies shall exist.
(d) Hot water heating facilities shall be provided. Hot and cold running water under pressure shall be provided to food preparation areas, and any other areas in which water is required for cleaning.


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 corrodeable and difficult to clean and maintain shall not be used. All multi-use drinking cups shall be thorougly cleaned and sanitized daily and before being used by succeeding persons. Drinking fountains, if provided, shall be properly regulated and kept clean.


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;
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;

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;

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;

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.


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.


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.


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.


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.


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;

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;

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;

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. "Department of Environment and Natural Resources" means the Secretary, or his authorized representative.
2. "Director" means the State Health Director.
3. "Foster Care" means the care of individuals as defined in G.S. 131D-10.2(9).
4. "Family foster home" means a facility as defined in G.S. 131D-10.2(8).
5. "Manager" means the person in responsible charge of a residential care facility.
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.

(7) "Residential care facility" means an establishment providing room or board and for which a license or certificate for payment is obtained from the Department of Human Resources. However, the term shall not include a child day care facility or an institution as defined in 15A NCAC 18A .1300.

(8) "Resident" means a person, other than the manager, his immediate family, and staff, residing in a residential care facility.

(9) "Sanitarian" means a person authorized to represent the Department on the local or state level in making inspections pursuant to state laws and rules.

(10) "Sanitize" means the approved bactericidal treatment by a process which meets the temperature and chemical concentration levels in 15A NCAC 18A .2619.

**History Note:** Authority G.S. 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

**15A NCAC 18A .1602 APPROVAL OF PLANS**

Plans and specifications for new construction or modification of residential care facilities, except family foster homes, shall be submitted to the agency designated by the state licensure regulations and to the local health department for review and approval before beginning construction.

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

**15A NCAC 18A .1603 INSPECTIONS**

Inspections of residential care facilities shall be made by the Department at least once a year prior to the expiration of the license. Inspections are required for family foster homes only for those homes served by individual or non-community water supplies or on-site sewage systems. A copy of the inspection form shall be provided to the person in charge of the facility. If conditions found at the time of the inspection are dangerous to the health of the residents, the agency supervising the family foster home shall be notified immediately by telephone or other direct means by the sanitarian.

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

**15A NCAC 18A .1604 REINSPECTIONS: VISITS**

The sanitarian may reinspect or visit residential care facilities at any time to insure compliance with these Rules. When requested by the manager to inspect for the purpose of improving a classification, the sanitarian shall make at least one unannounced inspection within 30 days. The sanitarian shall give assistance in the explanation and interpretation of these Rules.

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

**15A NCAC 18A .1605 INSPECTION FORMS**
The grading of residential care 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. name and address of facility,
2. name of person in charge,
3. number of residents,
4. classification,
5. standards of construction and operation as listed in Rule .1607 to .1621 of this Section,
6. signature of authorized representative.


15A NCAC 18A .1606 GRADING

(a) The grading of residential care facilities shall be based upon the standards of construction and operation set out in Rules .1607 - .1621 of this Section; however, family foster homes are required to comply only with Rule .1611(a) and (b) and Rule .1613 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 residents, or if the conditions resulting in the provisional classification have not been corrected within the specified time.


15A NCAC 18A .1607 FLOORS

All floors shall be easily cleanable and shall be kept clean and in good repair.

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

15A NCAC 18A .1608 WALLS AND CEILINGS

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

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

15A NCAC 18A .1609 LIGHTING AND VENTILATION

(a) All rooms shall be well lighted by natural or artificial means.

(b) Ventilation equipment shall be kept clean and in good repair.

15A NCAC 18A .1610  TOILET: HANDWASHING: LAUNDRY AND BATHING FACILITIES
(a) All residential care facilities shall be provided with approved sanitary toilet, handwashing and bathing facilities complying with state licensure requirements. These facilities, and laundry facilities when provided, shall be kept clean and in good repair.
(b) All lavatories and baths shall be supplied with hot and cold running water through mixing devices. Each resident will be provided soap and individual towels. These towels will be stored separately after being used.

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

15A NCAC 18A .1611  WATER SUPPLY
(a) Water supplies shall meet the requirements in 15A NCAC 18A .1700; however wells shall be approved without meeting the setback to building foundation requirements found in 15A NCAC 18A .1720, if water sampling in accordance with Paragraph (b) of this Rule does not indicate a health threat.
(b) At least once a year, samples of water shall be collected by the Department and submitted to the North Carolina State Laboratory of Public Health or other laboratory certified by the Department to perform examinations for Nitrates and Coliform bacteria. If the well is located less than 25 feet from a building foundation, the well shall also be sampled for pesticides upon application for licensure or approval. After the initial pesticide sample is collected and analyzed, the well shall be sampled again for pesticides following any treatment for structural pests.
(c) No backflow connections or cross connections with unapproved supplies shall exist.
(d) Adequate hot water heating facilities shall be provided. Hot and cold running water under pressure shall be provided to food preparation areas and any other areas in which water is required for cleaning.

History Note:  Authority G.S. 95-225; 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;

15A NCAC 18A .1612  DRINKING WATER FACILITIES: ICE HANDLING
Common drinking cups shall not be provided or used. If ice is provided for residents, it shall be handled, transported, stored and dispensed in such a manner as to be protected against contamination.

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

15A NCAC 18A .1613  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 an approved, properly operating sanitary sewage system.

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

15A NCAC 18A .1614  SOLID WASTES
(a) All solid wastes shall be kept in durable, rust-resistant, nonabsorbent, watertight, rodent-proof standard waste containers which shall be kept covered when filled or stored or not in continuous use.
(b) Outdoor containers shall be stored on a rack to prevent overturning. Waste containers shall be kept clean.

(c) All solid wastes shall be disposed of with sufficient frequency and in such a manner as to prevent insect breeding and public health nuisances.


15A NCAC 18A .1615 VERMIN CONTROL: PREMISES

(a) Effective measures shall be taken to keep insects, rodents, and other vermin out of the residential care facility and to prevent their breeding, harborage, or presence on the premises. The premises shall be kept neat, clean, adequately drained, and free of litter and vermin harborage. All openings to the outer air shall be effectively protected against the entrance of flying insects by screens, closed doors, closed windows, 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. Such pesticides shall be used as directed on the label and shall be so handled and stored as to avoid health hazards.


15A NCAC 18A .1616 STORAGE: MISCELLANEOUS

(a) Rooms or spaces which are provided and used for the storage of clothing, personal effects, luggage, necessary equipment and supplies and for items not in routine use, shall be kept clean.

(b) Pesticides, herbicides and other substances which may be hazardous if ingested, inhaled, or handled, shall be stored in a closet, cabinet or box not accessible to young children unless otherwise required in the rules of the licensing agency.

(c) Household cleaning agents such as bleaches, detergents and polishes shall be stored out of the reach of young children unless otherwise required in the rules of the licensing agency.

(d) Medications shall be stored in a separate cabinet, closet or box not accessible to young children unless otherwise required in the rules of the licensing agency.


15A NCAC 18A .1617 BEDS: LINEN: FURNITURE

(a) All furniture, mattresses, curtains, draperies, and other furnishings shall be kept clean and in good repair.

(b) Clean bed linen in good repair shall be provided for each resident and shall be changed when soiled.

(c) Clean linen shall be stored and handled in a sanitary manner and separate from soiled linen.


15A NCAC 18A .1618 FOOD SERVICE UTENSILS AND EQUIPMENT

(a) All equipment and utensils shall be so constructed as to be easily cleaned and shall be kept in good repair. All surfaces with which food or drink comes in contact shall, in addition, be easily accessible for cleaning, nontoxic, corrosion-resistant, nonabsorbent, and free of open crevices. Disposable articles shall be made from nontoxic materials.

(b) All multi-use eating and drinking utensils shall be thoroughly cleaned after each usage, and the facilities needed for the operations of washing and rinsing shall be provided.
(c) All pots, pans and other utensils 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, if any, shall be cleaned at least once each day. Non-food-contact surfaces of equipment shall be cleaned at such intervals as to keep them in a clean and sanitary condition.

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

(e) All cloths used in the kitchen shall be clean. Disposable items shall be used only once.

(f) All containers and clean utensils shall be stored in a clean place. Containers and clean utensils shall be covered, inverted, stored in tight, clean cabinets, or otherwise stored in such a manner as to prevent contamination. 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.

(g) Disposable 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.

(h) Acceptable facilities for washing multi-use eating and drinking utensils, and pots, pans and other cooking utensils, include 2-section residential sinks, in counters. It is not necessary that such sinks be deep enough to permit immersion of large utensils.

(i) Acceptable storage facilities include residential kitchen cabinets, which should be kept clean and free of vermin.


15A NCAC 18A .1619 FOOD SUPPLIES

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

(b) If non-acid or low-acid home-canned foods are used, they shall be boiled for ten minutes in order to destroy any toxin that may have been produced by bacteria surviving the canning process.


15A NCAC 18A .1620 FOOD PROTECTION

(a) All foods, while being stored, prepared, served, and during transportation, shall be protected from contamination. All perishable foods 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. Frozen food shall be kept at such temperatures as to remain frozen, except when being thawed for preparation or use. Potentially hazardous frozen food shall be thawed at refrigerator temperatures of 45°F or below; or quick-thawed as part of the cooking process; or by a method approved by the sanitarian. An indicating thermometer shall be located in each refrigerator. Raw fruits and vegetables shall be washed thoroughly before use. 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). 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. Portions of food once served to an individual shall not be served again.

(b) Live pets shall not be allowed in any room or area in which food is prepared or stored. Live pets, unless caged and restricted from the immediate eating area, shall not be allowed in any room or area in which food is served.

(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) Containers of food shall be stored above the floor, on clean racks, shelves, or other clean surfaces, in such a manner as to be protected from splash and other contamination.
15A NCAC 18A .1621  FOOD SERVICE PERSONS
(a) All persons, while preparing or serving food or washing equipment or utensils, shall wear clean outer garments, and
conform to proper hygienic practices. They shall wash their hands thoroughly before starting work and as often as necessary
to remove soil and contamination. After visiting a toilet room, such persons shall wash their hands thoroughly in a lavatory
and in no case in the kitchen sink. They shall not use tobacco in any form while preparing or serving food.
(b) 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.

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

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

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;
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:
   - Septic tank or nitrification field: 100 ft.
   - Other subsurface ground absorption waste disposal: 100 ft.
   - Industrial or municipal sludge spreading or wastewater irrigation site: 100 ft.
   - Watertight sewage or liquid-waste collection or transfer facility: 50 ft.
   - Other sewage or liquid-waste collection or transfer facility: 100 ft.
   - Animal feedlot or manure pile: 100 ft.
   - Fertilizer, pesticide, herbicide or other chemical storage area: 100 ft.
   - Non-hazardous waste storage, treatment or disposal lagoon: 100 ft.
   - Sewerage or liquid-waste collection or transfer facility: 50 ft.
   - Non-hazardous solid waste landfill: 100 ft.
   - Animal barn and lagoons: 100 ft.
   - Building foundation: 50 ft.
   - Surface water body: 50 ft.
   - Chemical or petroleum fuel underground storage tank regulated under 15A NCAC 2N:
     - with secondary containment: 50 ft.
     - without secondary containment: 100 ft.
   - 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:
   - Septic tank or nitrification field: 50 ft.
   - Other subsurface ground absorption waste disposal: 50 ft.
   - Watertight sewage or liquid-waste collection or transfer facility: 25 ft.
   - 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:
   - Septic tank or nitrification field: 50 ft.
   - 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 permittee 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;

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;

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-228; 130A-230; 130A-235; 130A-236; 130A-248; 130A-257;
Eff. July 1, 1993;
Amended Eff. May 1, 1996;

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-228; 130A-230; 130A-235; 130A-236; 130A-248; 130A-257;
Eff. July 1, 1993;
Amended Eff. May 1, 1996;

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;

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;
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

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 .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, 1977;  

**15A NCAC 18A .1817  APPEALS PROCEDURE**

**History Note:**
Authority G.S. 130A-248;  
Eff. February 1, 1987;  
Amended Eff. September 1, 1990;  

**15A NCAC 18A .1818  PLAN REVIEW**

**History Note:**
Authority G.S. 130A-248;  
Eff. August 1, 1990;  
Amended Eff. January 1, 1996;  

**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.
“Bed and Breakfast Home” means bed and breakfast home as defined in G.S. 130A-247(5a).

“Bed and Breakfast Inn” means bed and breakfast inn as defined in G.S. 130A-247(6).


“Clean” means washed and free from dirt, marks, or unwanted matter.

“Department” means the North Carolina Department of Health and Human Services.

“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.

“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.

“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.

“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.

“Food employee” means an individual working with unpackaged food, food equipment or utensils, or food-contact surfaces.

“Furnishings” means furniture, fittings, window coverings, and other accessories, including decorative accessories.

“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.

“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.

“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.

“Kitchenware” means food preparation and storage utensils.

“Linen” means fabric items such as bedding, towels, cloth hampers, cloth napkins, table cloths, wiping cloths, and work garments including cloth gloves.

“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.

“mg/L” means milligrams per liter, which is the metric equivalent of parts per million (ppm).

“Packaged” means bottled, canned, cartoned, bagged, or wrapped, whether packaged in a food establishment or a food processing plant.

“Permit” means the document issued by the regulatory authority that authorizes a person to operate a lodging establishment.

“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.

“Person” means person as defined in G.S. 130A-2(7).

“Person in charge” means the individual present at a lodging establishment who is responsible for the operation at the time of inspection.

“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.
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.

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 sanitation 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.

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.
(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.
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 4 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 harboringes shall equal no more than 3 points.
Violation of Rule .1827 of this Section related to storage areas maintained clean, provided for maintenance equipment shall equal no more than 3 points.

Violation of Rule .1827 of this Section related to approved pesticide use shall equal no more than 3 points.

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.

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

The rules contained in this Section shall govern the treatment and disposal of domestic type sewage from septic tank systems, privies, incinerating toilets, mechanical toilets, composting toilets, recycling toilets, or other such systems serving single or multiple-family residences, places of business, or places of public assembly, the effluent from which is designed not to discharge to the land surface or surface waters.

"Alluvial Soils" means stratified soils without distinct horizons, deposited by flood waters.

"Alternative System" means any approved ground absorption sewage treatment and disposal system other than an approved privy or an approved septic tank system.

"Approved" means that which the State or local health department has determined is in accordance with this Section and G.S. 130A, Article 11.

"Approved Privy" means a fly-tight structure consisting of a pit, floor slab, and seat riser constructed in accordance with Rule .1959 of this Section.

"Areas subject to frequent flooding" means those areas inundated at a 10-year or less frequency and includes alluvial soils and areas subject to tidal or storm overwash.

"Certified Operator" means a person authorized to operate a wastewater system in accordance with G.S. 90A, Article 3 and applicable rules of the Water Pollution Control System Operators Certification Commission.
"Collection sewer" means gravity flow pipelines, force mains, effluent supply lines, and appliances appurtenant thereto, used for conducting wastes from building drains to a treatment system or to a ground absorption sewage treatment and disposal system.

"Designated wetland" means an area on the land surface established under the provisions of the Coastal Area Management Act or the Federal Clean Water Act.

"Design unit" means one or more dwelling units, places of business, or places of public assembly on:
(a) a single lot or tract of land;
(b) multiple lots or tracts of land served by a common ground absorption sewage treatment and disposal system; or
(c) a single lot or tract of land or multiple lots or tracts of land where the dwelling units, places of business or places of public assembly are under multiple ownership (e.g. condominiums) and are served by a ground absorption system or multiple ground absorption systems which are under common or joint ownership or control.

"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.

"Effluent" means the liquid discharge of a septic tank or other sewage treatment device.

"Estimated saturated hydraulic conductivity" - means a saturated hydraulic conductivity value based upon the soil profile evaluation and description of the soil texture, soil structure, soil consistency, soil pores, and roots following the procedures in Field Book for Describing and Sampling of Soils, NRCS, USDA and comparison to soil profile saturated hydraulic conductivity data for soil input files for similar soils. The Field Book is hereby incorporated by reference, including any subsequent amendments and editions, in accordance with G.S. 150B-21.6. Copies of the Field Book may be inspected at the Division of Environmental Health Raleigh Office, 2728 Capital Boulevard, Raleigh, 27604, and copies may be downloaded at no cost from the internet at http://soils.usda.gov/procedures/field_bk/main.htm#intro, or obtained from the National Soil Survey Center, MS 34, Room 152,100 Centennial Mall North, Lincoln, NE 68508-3866.

"Gravity distribution" means an approved drainfield utilizing gravity and not pressure to distribute effluent from the inlet to the distal end of each nitrification line.

"Ground absorption sewage treatment and disposal system" means a system that utilizes the soil for the subsurface disposal of partially treated or treated sewage effluent.

"Horizon" means a layer of soil, approximately parallel to the surface, that has distinct characteristics produced by soil forming processes.

"Horizon subdivision" - means a portion of a horizon, approximately parallel to the surface that has distinct characteristics produced by soil forming processes.

"Lateral water movement" - means the movement of water down slope on sites of at least a four percent slope and above a less permeable horizon, and as observed periodically in bore holes, excavations, or monitoring wells.

"Long Term Acceptance Rate (LTAR)" means the rate of wastewater effluent absorption by the soil in a ground absorption system after long-term use. The LTAR, in units of gallons per day per square foot (gpd/ft²), is assigned based upon soil textural class and system type, and is used to determine the required length of nitrification trenches and size of drainfield area when designing a ground absorption system, pursuant to applicable rules of this Section.

"Local health department" means any county, district, or other health department authorized to be organized under the General Statutes of North Carolina.

"Matrix" - means a volume equivalent to 50 percent or greater of the total volume of a horizon or horizon subdivision.

"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 or U.S. Army Corps of Engineers tide stations data or as otherwise determined under the provisions of the Coastal Area Management Act.

"Mottle" - means a feature(s) which occupies less than 50 percent of the total volume of a horizon or horizon subdivision.

“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 again corrosion, as set forth in Standard 250 of the National Electrical Manufacturers Association. NEMA Standard 250 is hereby incorporated by reference, including any subsequent amendments and editions. Copies may be inspected at the On-Site Wastewater Section Central Office, located at 2728 Capital Blvd., Raleigh, NC in the Parker Lincoln Building, and copies may be downloaded from the internet at http://www.nema.org/STDs/250.cfm, or obtained from HIS/Global, 15 Inverness Way East, Englewood, CO 80112, at a cost of sixty-one dollars ($61.00).

(24) "NSF-40 Systems" means individual residential wastewater treatment systems (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 pursuant to G.S. 130A-342 and the rules in this Section.

(25) "Naturally occurring soil" means soil formed in place due to natural weathering processes and being unaltered by filling, removal, or other man-induced changes other than tillage.

(26) "Nitrification field" means the area in which the nitrification lines are located.

(27) "Nitrification lines" means approved pipe, specially designed porous blocks, or other approved materials which receive partially treated sewage effluent for distribution and absorption into the soil beneath the ground surface.

(28) "Nitrification trench," also referred to as a sewage absorption trench, means a ditch into which a single nitrification line is laid and covered by soil.

(29) "Non-ground absorption sewage treatment 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.

(30) "Operator in Responsible Charge ('ORC')" means the individual designated by the person owning or controlling the system as the certified operator of record of the system who has primary responsibility for the operation of such system as defined in G.S. 90A-46 and applicable rules of the Water Pollution Control System Operators Certification Commission.

(31) "Organic soils" means those organic mucks and peats consisting of more than 20 percent organic matter (by dry weight) and 18 inches or greater in thickness.

(32) "Parent material" means the mineral matter that is in its present position through deposition by water, wind, gravity or by decomposition of rock and exposed at the land surface or overlain by soil or saprolite.

(33) "Ped" means a unit of soil structure, such as an aggregate, crumb, prism, block, or granule formed by natural processes.

(34) "Perched water table" means a saturated soil horizon or horizon subdivision, with a free water surface periodically observed in a bore hole or shallow monitoring well, but generally above the normal water table, or may be as identified by drainage mottles or redoximorphic features, and caused by a less permeable lower horizon.

(35) "Person" means any individual, firm, association, organization, partnership, business trust, corporation, company, or unit of local government.

(36) "Place of business" means any store, warehouse, manufacturing establishment, place of amusement or recreation, service station, foodhandling establishment, or any other place where people work or are served.

(37) "Place of public assembly" means any fairground, auditorium, stadium, church, campground, theater, school, or any other place where people gather or congregate.

(38) "Pressure Dispersal" means an approved system utilizing an effluent pump or siphon to distribute effluent uniformly to each nitrification line and along each nitrification line in the drainfield through a pressurized pipe network.

(39) "Privy building" means and includes any and all buildings which are used for privacy in the acts of urination and defecation which are constructed over pit privies and are not connected to a ground absorption sewage treatment and disposal system or a public or community sewage system.

(40) "Public management entity" means a city (G.S. 160A, Article 16), county (G.S. 153A, Article 15), interlocal contract (G.S. 153A, Article 16), joint management agency (G.S. 160A-461-462), county service district (G.S. 153A, Article 16), county water and sewer district (G.S. 162A, Article 6), sanitary district (G.S. 130A, Article 2), water and sewer authority (G.S. 162A, Article 1), metropolitan water district (G.S. 162A, Article 4), metropolitan sewerage district (G.S. 162A, Article 5), public utility [G.S. 62-3(23)], county or district health department (G.S. 130A, Article 2), or other public entity legally authorized to operate and maintain on-site sewage systems.
"Redoximorphic features" - means a color pattern of a horizon or horizon subdivision due to a loss (depletion) or gain (concentration) of pigment compared to the matrix color, formed by oxidation/reduction of iron (Fe) coupled with its removal, translocation, or accrual; or a soil matrix color controlled by the presence of Fe+2 (see Field Book for Describing and Sampling of Soils, NRCS, USDA which is hereby incorporated by reference, including any subsequent amendments and editions, in accordance with G.S. 150B-21.6).

"Relocation" means the displacement of a residence, place of business, or place of public assembly from one location to another.

"Repair area" means an area, either in its natural state or which is capable of being modified, consistent with the rules in this Section, which is reserved for the installation of additional nitrification fields and is not covered with structures or impervious materials.

"Residence" means any home, hotel, motel, summer camp, labor work camp, mobile home, dwelling unit in a multiple-family structure, or any other place where people reside.

"Residential Wastewater Treatment Systems (RWTS)" means approved individual advanced pretreatment systems which are covered under standards of NSF International, in accordance with G.S. 130A-342 and applicable rules in this Section.

"Restrictive horizon" means a soil horizon that is capable of perching ground water or sewage 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.

"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.

"Sanitary system of sewage treatment and disposal" means a complete system of sewage collection, treatment and disposal, including approved privies, septic tank systems, connection to public or community sewage systems, incinerators, mechanical toilets, composting toilets, recycling toilets, mechanical aeration systems, or other such systems.

"Saprolite" means the body of porous material formed in place by weathering of igneous or metamorphic rocks. Saprolite has a massive, rock-controlled structure, and retains the fabric (arrangement of minerals) of its parent rock in at least 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. The term "saprolite" does not include sedimentary parent materials.

"Saturated soils" - means a horizon or horizon subdivision with a free water surface at the corresponding depth and observed in a bore hole or monitoring well.

"Septic tank" means a water-tight, covered receptacle designed for primary treatment of sewage and constructed to:
(a) receive the discharge of sewage 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 clarified liquids to discharge for additional treatment and final disposal.

"Septic tank system" means a subsurface sanitary sewage system consisting of a septic tank and a subsurface disposal field.

"Sewage" means the liquid and solid human 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.

"Site" means the area in which the sewage treatment and disposal system is to be located and the area required to accommodate repairs and replacement of nitrification field and permit proper functioning of the system.

"Soil" means the naturally occurring body of porous 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 (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.
"Soil series" - means an official series name established by NRCS, USDA and confirmed to be present on the site by detailed on-site soil profile descriptions and taxonomic classification, and not necessarily the soil series mapped on the county soil survey.

"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 aggregates.

"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 (2.0 - 0.05 mm in size), silt (less than 0.05 mm - 0.002 mm or greater in size), and clay (less than 0.002 mm in size) particles. The specific textural classes are defined as follows and as shown in the Field Book for Describing and Sampling Soils, NRCS, USDA. The Field Book is hereby incorporated by reference, including any subsequent amendments and editions. Copies of the Field Book may be inspected at the On-Site Wastewater Section Central Office, located at 2728 Capital Blvd., Raleigh, NC in the Parker Lincoln Building, and copies may be downloaded at no cost from the internet at http://soils.usda.gov/technical/fieldbook, or obtained from the US Government Printing office at http://bookstore.gpo.gov/ at a cost of twenty-four dollars ($24.00).

(a) "Sand" means soil material that contains 85 percent or more of sand; the percentage of silt plus 1.5 times the percentage of clay shall not exceed 15.
(b) "Loamy sand" means soil material that contains at the upper limit 85 to 90 percent sand, and the percentage silt plus 1.5 times the percentage of clay is not less than 15; at the lower limit it contains not less than 70 to 85 percent sand, and the percentage of silt plus twice the percentage of clay does not exceed 30.
(c) "Sandy loam" means soil material that contains either 20 percent clay or less, and the percentage of silt plus twice the percentage of clay exceeds 30, and contains 52 percent or more sand; or less than seven percent clay, less than 50 percent silt, and between 43 and 52 percent sand.
(d) "Loam" means soil material that contains seven to 27 percent clay, 28 to 50 percent silt, and less than 52 percent sand.
(e) "Silt loam" means soil material that contains 50 percent or more silt and 12 to 27 percent clay; or contains 50 to 80 percent silt and less than 12 percent clay.
(f) "Silt" means soil material that contains 80 percent or more silt and less than 12 percent clay.
(g) "Sandy clay loam" means soil material that contains 20 to 35 percent clay, less than 28 percent silt, and 45 percent or more sand.
(h) "Clay loam" means soil material that contains 27 to 40 percent clay and 20 to 45 percent sand.
(i) "Silty clay loam" means soil material that contains 27 to 40 percent clay and less than 20 percent sand.
(j) "Sandy clay" means soil material that contains 35 percent or more clay and 45 percent or more sand.
(k) "Silty clay" means soil material that contains 40 percent or more clay and 40 percent or more silt.
(l) "Clay" means soil material that contains 40 percent or more clay, less than 45 percent sand, and less than 40 percent silt.

"State" means the Department of Environment and Natural Resources, Division of Environmental Health.

"Stream" means a natural or manmade channel, including groundwater lowering ditches and devices, in which water flows or stands most of the year.

"Subsurface disposal" means the application of sewage effluent beneath the surface of the ground by distribution through approved nitrification lines.

"TS-I Systems" means advanced pretreatment systems which are approved in accordance with TS-I effluent quality standards in Table VII of Rule .1970.

"TS-II Systems" means advanced pretreatment systems which are approved in accordance with TS-II effluent quality standards in Table VII of Rule .1970.

"Third-Party" means a person or body that is independent of the parties involved which does not gain financially or otherwise benefit from the outcome of the testing, and which has a knowledge of the subject area based upon relevant training and experience.

History Note: Authority G.S. 130A-335(e) and (f); Eff. July 1, 1982; Amended Eff. July 1, 1995; January 1, 1990; August 1, 1988; April 1, 1985;
15A NCAC 18A .1936 REQUIREMENTS FOR SEWAGE TREATMENT AND DISPOSAL

History Note: Authority G.S. 130A-335(e);
Eff. July 1, 1982;

15A NCAC 18A .1937 PERMITS

(a) Any person owning or controlling a residence, place of business, or place of public assembly containing water-using fixtures connected to a water supply source shall discharge all wastewater directly to an approved wastewater system permitted for that specific use.

(b) An Improvement Permit, Authorization for Wastewater System Construction (Construction Authorization) and Operation Permit, shall be required in accordance with G.S. 130A-336, G.S. 130A-337 and G.S. 130A-338. Rule .1949 of this Section shall be used to determine whether subsequent additions, modifications, or change in the type of facility increase wastewater flow or alter wastewater characteristics.

(c) An application for an Improvement Permit or Construction Authorization, as applicable, shall be submitted to the local health department for each site prior to the construction, location, or relocation of a residence, place of business, or place of public assembly. Applications for systems required to be designed by a professional engineer and applications for industrial process wastewater systems shall meet the provisions of Rule .1938 of this Section.

(d) The application for an Improvement Permit shall contain the following information: owner's name, mailing address, and phone number, location of property, plat of property or site plan, description of existing and proposed facilities or structures, number of bedrooms, or number of persons served, or other factors required to determine wastewater system design flow or wastewater characteristics, type of water supply including the location of proposed or existing well(s), and signature of owner or owner's legal representative. The applicant shall identify property lines and fixed reference points in the field. The applicant shall make the site accessible for an evaluation as required in Rule .1939 of this Section. The applicant shall notify the local health department on the application of the following:

1. the property contains previously identified jurisdictional wetlands;
2. wastewater other than sewage will be generated; or
3. the site is subject to approval by other public agencies.

(e) The application for a Construction Authorization shall contain:

1. the information required in Paragraph (d) of this Rule; however, a plat or site plan shall not be required with the application for a Construction Authorization to repair a previously permitted system when the repairs will be accomplished on property owned and controlled by the applicant and for which the property lines are readily identifiable in the field;
2. the locations of the proposed facility, appurtenances, and the site for the system showing setbacks to property line(s) or other fixed reference point(s); and
3. the proposed system type as specified by the owner or owner's legal representative and that meets the conditions of the Improvement Permit, the provisions of these Rules, and G.S. 130A, Article 11.

(f) An authorized agent of DENR shall issue an Improvement Permit after determining that the site is suitable or provisionally suitable and that a system can be installed so as to meet the provisions of these Rules. The Improvement Permit shall include those items required in G.S. 130A-336(a). An Improvement Permit for which a plat is provided shall be valid without expiration and an Improvement Permit for which a site plan is provided shall be valid for 60 months from the date of issue as provided in G.S. 130A-335(f) and G.S. 130A-336(a). The Improvement Permit is transferable to subsequent owners except as provided in G.S. 130A-335(f) and G.S. 130A-336(a).

(g) The Construction Authorization as provided in G.S. 130A-335(f) and G.S. 130A-336(b) shall be valid for a period equal to the period of validity of the Improvement Permit, not to exceed 60 months. Site modifications required as conditions of an Improvement Permit shall be completed prior to the issuance of a Construction Authorization. The Construction Authorization shall be issued by an authorized agent for the installation of a wastewater system when it is found that the Improvement Permit conditions and rules of this Section are met. The Construction Authorization shall contain conditions regarding system type, system layout, location, and installation requirements. The property owner shall ensure that a Construction Authorization is obtained and is valid prior to the construction or repair of a system. The property owner shall obtain a Construction Authorization prior to the construction, location, or relocation of a residence, place of business, or place of public assembly. If the installation has not been completed during the period of validity of the Construction Authorization,
the information submitted in the application for a Permit or Construction Authorization is found to have been incorrect, falsified or changed, or the site is altered, the Permit or Construction Authorization shall become invalid, and may be suspended or revoked. When a Permit or Construction Authorization has become invalid, expired, suspended, or revoked, the installation shall not be commenced or completed until a new Permit or Construction Authorization has been obtained. Revised Construction Authorizations shall be issued for sites where Improvement Permits are valid without expiration in compliance with G.S. 130A-335(f1).

(h) Prior to the issuance of a Construction Authorization for a wastewater system to serve a condominium or other multiple-ownership development where the system will be under common or joint control, a draft agreement (tri-party) among the local health department, developer, and a proposed non-profit, incorporated owners association shall be submitted to the local health department for approval. Prior to the issuance of an Operation Permit for a system requiring a tri-party agreement, the agreement shall be executed among the local health department, developer, and a non-profit, incorporated owners association and filed with the local register of deeds. The tri-party agreement shall address ownership transfer of ownership, maintenance, repairs, operation, and the necessary funds for the continued satisfactory performance of the wastewater system, including collection, treatment, disposal, and other appurtenances.

(i) No residence, place of business, or place of public assembly shall be occupied nor shall any wastewater system be covered or placed into use until an authorized agent issues an Operation Permit. The Operation Permit shall not be issued or reissued until the authorized agent finds that the system is in compliance with Article 11 of G.S. Chapter 130A, these Rules, and all conditions prescribed by the Improvement Permit, and Construction Authorization. The Operation Permit shall specify the system type in accordance with Table V(a) of Rule .1961 of this Section, and shall include conditions for system performance, operation, maintenance, monitoring and reporting. At the review frequency specified in Rule .1961, Table V(a) of this Section, an authorized agent shall determine whether a system in compliance with the conditions of the Operation Permit, these Rules, and Article 11 of G.S. Chapter 130A. An authorized agent may modify, suspend or revoke the Operation Permit or seek other remedies under Article 2, Chapter 130A, if the system is not in compliance with Article 11 of G.S. Chapter 130A, these Rules, and all conditions imposed by the Operation Permit.

(j) For a Type V or VI system as specified in Rule .1961, Table V(a) of Paragraph (b)(9) of this Section, the Operation Permit shall expire either:

1. 60 months after the Operation Permit is issued for any system installed on or after the effective date of these Rules, or
2. 60 months after the effective date of these Rules for any system with a valid Operation Permit issued prior to the effective date of these Rules.

(k) Upon determining that an existing wastewater system including all subsystems and system components in a manufactured home park has a valid Operation Permit and is in compliance with Article 11 of G.S. Chapter 130A, these Rules, and permit conditions, an authorized agent shall issue a written authorization for a manufactured home to be connected to the existing system.

(l) Any person other than the owner or controller of a residence, place of business, or place of public assembly, who engages in the business of constructing, installing, or repairing wastewater systems shall register with the local health department in each county where he operates before constructing, installing, or repairing wastewater systems.

(m) An authorized agent shall prepare a written report with reference to the site and soil conditions required to be evaluated pursuant to this Section. When a permit is denied, the report shall be provided to the applicant. If modifications or alternatives are available, information shall be provided to the applicant. The report shall be signed and dated by an authorized agent of the State.

History Note: Authority G.S. 130A-335(e),(f);
Eff. July 1, 1982;
Amended Eff. August 1, 1991; January 1, 1990; January 1, 1984;
Temporary Amendment Eff. January 20, 1997;

15A NCAC 18A .1938 RESPONSIBILITIES

(a) The permitting of a wastewater system shall be the responsibility of agents authorized by the State in accordance with G.S. 130A-40, 130A-50, and registered with the State of North Carolina Board of Sanitarian Examiners if required in G.S. 90A Article 4.

(b) The person owning or controlling the system shall be responsible for assuring compliance with the laws, rules, and permit conditions regarding system location, installation, operation, maintenance, monitoring, reporting, and repair.
(c) Prior to the issuance of an Improvement Permit or Construction Authorization, plans and specifications may be required by the local health department where there is an unsuitable soil or unsuitable characteristic and shall be required for drainage systems serving two or more lots. These plans and specifications shall be required to be prepared by a person or persons who are licensed or registered to consult, investigate, evaluate, plan or design wastewater systems, soil and rock characteristics, ground water hydrology, or drainage systems if required in G.S. 89C, 89E, 89F, and 90A Article 4.

(d) Any wastewater system which meets one or more of the following conditions shall be designed by a registered professional engineer if required by G.S. 89C:

1. The system is designed to handle over 3,000 gallons per day, as determined in Rule .1949(a) or (b) of this Section, except where the system is limited to an individual septic tank system serving an individual dwelling unit or several individual septic tank systems, each serving an individual dwelling unit.

2. The system requires pretreatment before disposal, other than by a conventional septic or other system approved under Rule .1957 or .1969 of this Section.

3. The system requires use of sewage pumps prior to the septic tank or other pretreatment system, except for systems subject to 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 the National Sanitation Foundation.

4. The individual system is required by Rule .1952 of this Section to use more than one pump or siphon in a single pump tank.

5. The system includes a collection sewer, prior to the septic tank or other pretreatment system, which serves two or more buildings, except for systems subject to the North Carolina Plumbing Code.

6. The system includes structures which have not been pre-engineered.

7. The system is designed for the collection, treatment and disposal of industrial process wastewater, except under the following circumstances:

   (A) the State has determined that the wastewater generated by the proposed facility has a pollutant strength which is lower than or equal to domestic sewage, and does not require specialized pretreatment or management, or

   (B) the State has pre-approved a predesigned pretreatment system or process and management method proposed by the facility owner which shall enable the industrial process wastewater to have a pollutant strength which is lower than or equal to domestic sewage.

8. Any other system serving a business or multi-family dwelling so specified by the local health department.

(e) The State shall review and approve the system layout on a site plan or plat, plans and specifications for all systems serving a design unit with a design flow greater than 3,000 gallons per day, as determined in Rule .1949(a) or (b) of this Section, except:

1. where the system is limited to an individual septic tank system serving an individual dwelling unit or several individual septic tank systems, each serving an individual dwelling unit, or

2. where the system consists of individual septic tank systems, each serving an individual facility, and which meets all of the following criteria:

   (A) each individual system's design flow does not exceed 1500 gallons per day, as determined in Rule .1949(a) or (b) of this Section,

   (B) the site for the nitrification field and repair area for each individual system is at least 20 feet from any other individual system site, and

   (C) the design wastewater loading on the lot or tract of land containing the design unit is less than 1,500 gallons per day per acre for new or expanded systems and 3,000 gallons per day/acre for malfunctioning systems.

(f) The state shall also review and approve plans and specifications for any industrial process wastewater system required by this Section to be designed by a registered professional engineer and any other system so specified by the local health department.

(g) For systems that require State review and approval, an improvement permit shall not be issued unless the site plan or plat and system layout, including details for any proposed site modifications, are approved. A Construction Authorization shall not be issued unless plans and specifications, including methods of operation and maintenance, are approved.

(h) Prior to issuance of the operation permit for a system required to be designed by a registered professional engineer, the owner shall submit to the local health department a statement signed by a registered professional engineer stating that construction is complete and in accordance with approved plans and specifications and approved modifications. Periodic observations of construction and a final inspection for design compliance by the certifying registered professional engineer or
his representative shall be required for this statement. The statement shall be affixed with the registered professional engineer's seal.

(i) Plans and specifications required to be prepared by a registered professional engineer shall contain the information necessary for construction of the system in accordance with applicable rules and laws and shall include any of the following, determined to be applicable by the local health department or the State:

1. The seal, signature, and the date on all plans and the first sheet of specifications; specifications and reports prepared by the design engineer and licensed or registered professionals who contributed to the plans, specifications, or reports;
2. A description of the facilities served and the calculations and basis for the design flow proposed;
3. A site plan based on a surveyed plat showing all system components, public water supply sources within 500 feet, private water supplies and surface water supplies within 200 feet, water lines serving the project and within 10 feet of all components, building foundations, basements, property lines, embankments or cuts of two feet or more in vertical height, swimming pools, storm sewers, interceptor drains, surface drainage ditches, and adjacent nitrification fields;
4. Specifications describing all materials to be used, methods of construction, means for assuring the quality and integrity of the finished product, and operation and maintenance procedures addressing requirements for the system operator, inspection schedules, residuals management provisions, process and performance monitoring schedules, and provisions for maintaining mechanical components and nitrification field vegetative cover;
5. Plan and profile drawings for collection sewers, force mains and supply lines, showing pipe diameter, depth of cover, cleanout and manhole locations, invert and ground surface elevations, valves and other appurtenances, lateral connections, proximity to utilities and pertinent features such as wells, water lines, storm drains, surface waters, structures, roads, and other trafficked areas;
6. Plans for all tanks, showing capacity, invert and ground elevations, access manholes, inlet and outlet details, and plans for built-in-place or non-state-approved, precast tanks, also showing dimensions, reinforcement details, liquid depth, and other pertinent construction features;
7. Calculations for pump or siphon sizing, pump curves, and plan and profile drawings for lift stations and effluent dosing tanks, showing anti-buoyancy provisions, pump or siphon locations, discharge piping, valves, vents, pump controls, pump removal system, electrical connection details, and activation levels for pumps or siphons and high-water alarms;
8. Plan and profile drawings for wastewater treatment plants and other pretreatment systems, including cross-section views of all relevant system components, and data and contact lists from comparable facilities for any non-standard systems;
9. Plans for nitrification field and repair area, based on an evaluation and report prepared by a person licensed or registered to practice soil science, if required in G.S. 89F showing the following:
   A. Field locations with existing and final relative contour lines based on field measurements at intervals not exceeding two feet or spot elevations if field areas are essentially flat or of uniform grade;
   B. Field layout, pipe sizes, length, spacing, connection and clean out details, invert elevations of flow distribution devices and laterals, valves, and appurtenances;
   C. Trench plan and profile drawings and flow distribution device details; and
   D. Location and design of associated surface and groundwater drainage systems; and
10. Any other information required by the local health department or the State.

(j) The entire wastewater sewage system shall be on property owned or controlled by the person owning or controlling the system. Necessary easements, right of ways, or encroachment agreements, as applicable, shall be obtained prior to the issuance of a Construction Authorization for the system installation or repair. Terms of the easement, right-of-way or encroachment agreement shall provide that the easement, right-of-way, or encroachment agreement:

1. Is appurtenant to specifically described property and runs with the land and is not affected by change of ownership or control;
2. Is valid for as long as the wastewater system is required for the facility that it is designed to serve;
3. Describes and specifies the uses being granted and shall include ingress and egress, system installation, operation, maintenance, monitoring, and repairs;
4. Specifies by metes and bounds description or attached plat, the area or site required for the wastewater system and appurtenances including a site for any required system replacement; and
5. Shall be recorded with the register of deeds in the county where the system and facility is located.
SITE EVALUATION

(a) The local health department shall investigate each proposed site. The investigation shall include the evaluation of the following factors:
   (1) topography and landscape position;
   (2) soil characteristics (morphology);
   (3) soil wetness;
   (4) soil depth;
   (5) restrictive horizons; and
   (6) available space.

(b) Soil profiles shall be evaluated at the site by borings or other means of excavation to at least 48 inches or to an UNSUITABLE characteristic and a determination shall be made as to the suitability of the soil to treat and absorb septic tank effluent. Applicants may be required to dig pits when necessary for proper evaluation of the soil at the site.

(c) Site evaluations shall be made in accordance with Rules .1940 through .1948 of this Section. Based on this evaluation, each of the factors listed in Paragraph (a) of this Rule shall be classified as SUITABLE (S), PROVISIONALLY SUITABLE (PS), or UNSUITABLE (U).

(d) The local health department shall determine the long-term acceptance rate to be used for sites classified SUITABLE OR PROVISIONALLY SUITABLE in accordance with these rules.

TOPOGRAPHY AND LANDSCAPE POSITION

(a) Uniform slopes under 15 percent shall be considered SUITABLE with respect to topography.

(b) Uniform slopes between 15 percent and 30 percent shall be considered PROVISIONALLY SUITABLE with respect to topography.

(c) Slopes greater than 30 percent shall be considered UNSUITABLE as to topography. Slopes greater than 30 percent may be reclassified as PROVISIONALLY SUITABLE after an investigation indicates that a modified system may be installed in accordance with Rule .1956 of this Section; however, slopes greater than 65 percent shall not be reclassified as PROVISIONALLY SUITABLE.

(d) Complex slope patterns and slopes dissected by gullies and ravines shall be considered UNSUITABLE with respect to topography.

(e) Depressions shall be considered UNSUITABLE with respect to landscape position except when the site complies essentially with the requirements of this Section and is specifically approved by the local health department.

(f) The surface area on or around a ground absorption sewage treatment and disposal system shall be landscaped to provide adequate drainage if directed by the local health department. The interception of perched or lateral ground-water movement shall be provided where necessary to prevent soil saturation on or around the ground absorption sewage treatment and disposal system.

(g) A designated wetland shall be considered UNSUITABLE with respect to landscape position, unless the proposed use is specifically approved in writing by the U.S. Army Corps of Engineers or the North Carolina Division of Coastal Management.

SOIL CHARACTERISTICS (MORPHOLOGY)

(a) The soil characteristics which shall be evaluated by the local health department are as follows:
Texture - The relative proportions of sand, silt, and clay sized mineral particles in the fine-earth fraction of the soil are referred to as soil texture. The texture of the different horizons of soils shall be classified into four general groups and 12 soil textural classes based upon the relative proportions of sand, silt, and clay sized mineral particles.

(A) SOIL GROUP I - SANDY TEXTURE SOILS. The sandy group includes the sand and loamy sand soil textural classes and shall be considered SUITABLE with respect to texture.

(B) SOIL GROUP II - COARSE LOAMY TEXTURE SOILS. The coarse loamy group includes sandy loam and loam soil textural classes and shall be considered SUITABLE with respect to texture.

(C) SOIL GROUP III - FINE LOAMY TEXTURE SOILS. The fine loamy group includes silt, silt loam, sandy clay loam, clay loam, and silty clay loam textural classes and shall be considered PROVISIONALLY SUITABLE with respect to texture.

(D) SOIL GROUP IV - CLAYEY TEXTURE SOILS. The clayey group includes sandy clay, silty clay, and clay textural classes and shall be considered PROVISIONALLY SUITABLE with respect to texture.

(E) The soil textural class shall be determined in the field by hand texturing samples of each soil horizon in the soil profile using the following criteria:
   (i) Sand: Sand has a gritty feel, does not stain the fingers, and does not form a ribbon or ball when wet or moist.
   (ii) Loamy Sand: Loamy sand has a gritty feel, stains the fingers (silt and clay), forms a weak ball, and cannot be handled without breaking.
   (iii) Sandy Loam: Sandy loam has a gritty feel and forms a ball that can be picked up with the fingers and handled with care without breaking.
   (iv) Loam: Loam may have a slightly gritty feel but does not show a fingerprint and forms only short ribbons of from 0.25 inch to 0.50 inch in length. Loam will form a ball that can be handled without breaking.
   (v) Silt Loam: Silt loam has a floury feel when moist and will show a fingerprint but will not ribbon and forms only a weak ball.
   (vi) Silt: Silt has a floury feel when moist and sticky when wet but will not ribbon and forms a ball that will tolerate some handling.
   (vii) Sandy Clay Loam: Sandy clay loam has a gritty feel but contains enough clay to form a firm ball and may ribbon to form 0.75-inch to one-inch long pieces.
   (viii) Silty Clay Loam: Silty clay loam is sticky when moist and will ribbon from one to two inches. Rubbing silty clay loam with the thumbnail produces a moderate sheen. Silty clay loam produces a distinct fingerprint.
   (ix) Clay Loam: Clay loam is sticky when moist. Clay loam forms a thin ribbon of one to two inches in length and produces a slight sheen when rubbed with the thumbnail. Clay loam produces a nondistinct fingerprint.
   (x) Sandy Clay: Sandy clay is plastic, gritty, and sticky when moist and forms a firm ball and produces a thin ribbon to over two inches in length.
   (xi) Silty Clay: Silty clay is both plastic and sticky when moist and lacks any gritty feeling. Silty clay forms a firm ball and readily ribbons to over two inches in length.
   (xii) Clay: Clay is both sticky and plastic when moist, produces a thin ribbon over two inches in length, produces a high sheen when rubbed with the thumbnail, and forms a strong ball resistant to breaking.

(F) The Department may substitute laboratory determination of the soil textural class as defined in these Rules by particle-size analysis of the fine-earth fraction (less than 2.0 mm in size) using the sand, silt, and clay particle sizes as defined in these Rules for field testing when conducted in accordance with ASTM (American Society for Testing and Materials) D-422 procedures for sieve and hydrometer analyses which are hereby adopted by reference in accordance with G.S. 150B-14(c). For fine loamy and clayey soils (Groups III and IV), the dispersion time shall be increased to 12 hours. Copies may be inspected in and copies obtained from the Department of Environment, Health, and Natural Resources, Division of Environmental Health, P.O. Box 27687, Raleigh, North Carolina 27611-7687.

Soil Structure - The following types of soil structure shall be evaluated:
CRUMB AND GRANULAR SOIL STRUCTURE - Soils which have crumb or granular structure shall be considered SUITABLE as to structure.

BLOCK-LIKE SOIL STRUCTURE - Block-Like Soil Structure with peds 2.5 cm (1 inch) or less in size shall be considered PROVISIONALLY SUITABLE as to structure. Block-like soil structure with peds greater than 2.5 cm (1 inch) in size within 36 inches of the naturally occurring soil surface shall be considered UNSUITABLE as to structure.

PLATY SOIL STRUCTURE - Soils which have platy soil structure within 36 inches of the naturally occurring soil surface shall be considered UNSUITABLE as to structure.

PRISMATIC SOIL STRUCTURE - Soils which have prismatic soil structure within 36 inches of the naturally occurring soil surface shall be considered UNSUITABLE as to structure.

ABSENCE OF SOIL STRUCTURE - Soils which are single grained and exhibit no structural aggregates shall be considered SUITABLE as to structure. Soils which are massive and exhibit no structural peds within 36 inches of the naturally occurring soil surface shall be considered UNSUITABLE as to structure.

Structure shall be evaluated using Soil Taxonomy, Appendix I, which is hereby adopted by reference in accordance with G.S. 150B-14(c). Copies may be inspected in, and copies obtained from, the Department of Environment, Health, and Natural Resources, Division of Environmental Health, P.O. Box 27687, Raleigh, NC 27611-7687.

Clay Mineralogy - Along with soil texture, the mineralogy of the clay-sized fraction determines the degree to which some soils swell when wetted and thereby affects the size and number of pores available for movement of sewage effluent through the soil. There are two major types of clays, including the 1:1 clays, such as Kaolinite, which do not shrink or swell extensively when dried or wetted; and the 2:1 clays, including mixed mineralogy clays, such as clays containing both Kaolinite and Montmorillonite that will shrink and swell when dried and wetted. The type of clay minerals in the clay-sized fraction shall be determined by a field evaluation of moist soil consistence or of wet soil consistence using Soil Taxonomy, Appendix I, which is hereby adopted by reference in accordance with G.S. 150B-14(c). The Department may substitute laboratory determination of the expansive clay mineralogy as defined in these Rules for field testing when conducted in accordance with ASTM D-4318, procedures A and B, for the determination of liquid limit, plastic limit, and plasticity index of soils. These procedures are hereby adopted by reference in accordance with G.S. 150B-14(c). If the liquid limit exceeds 50 percent and the plasticity index exceeds 30, the soil shall be considered as having an expansive clay mineralogy. Copies may be inspected in, and copies obtained from, the Department of Environment, Health, and Natural Resources, Division of Environmental Health, P.O. Box 27687, Raleigh, NC 27611-7687.

SLIGHTLY EXPANSIVE CLAY MINERALOGY - Soils which have loose, very friable, friable or firm moist soil consistence, or have slightly sticky to sticky or nonplastic, slightly plastic to plastic wet soil consistence, are considered to have predominantly 1:1 clay minerals and shall be considered SUITABLE as to clay mineralogy.

EXPANSIVE CLAY MINERALOGY - Soils which have either very firm or extremely firm moist soil consistence, or have either very sticky or very plastic wet soil consistence, are considered to have predominantly 2:1 clay minerals (including mixed mineralogy clays) and shall be considered UNSUITABLE as to clay mineralogy.

Organic Soils - Organic soils shall be considered UNSUITABLE.

Where the site is UNSUITABLE with respect to structure or clay mineralogy, it may be reclassified PROVISIONALLY SUITABLE after an investigation indicates that a modified or alternative system may be installed in accordance with Rule .1956 or Rule .1957 of this Section.

History Note: Authority G.S. 130A-335(e); Eff. July 1, 1982; Amended Eff. January 1, 1990.

15A NCAC 18A .1942 SOIL WETNESS CONDITIONS
(a) Soil wetness conditions caused by seasonal high-water table, perched water table, tidal water, seasonally saturated soil or by lateral water movement shall be determined by field evaluation for soil wetness colors and field observations, and may be assessed by well monitoring, computer modeling, or a combination of monitoring and modeling as required by this Rule. All
sites shall be evaluated by an Authorized Agent of the Department using Basic Field Evaluation Procedures pursuant to Paragraph (b) of this Rule.

(b) Basic Field Evaluation Procedures:

(1) A soil wetness condition shall be determined by the indication of colors of chroma 2 or less (Munsell Color Charts) at ≥2% of soil volume in mottles or matrix of a horizon or horizon subdivision. However, colors of chroma 2 or less which are relic from minerals of the parent material shall not be considered indicative of a soil wetness condition.

(2) A Soil wetness condition shall also be determined by the periodic direct observation or indication of saturated soils or a perched water table, or lateral water movement flowing into a bore hole, monitoring well, or open excavation above a less permeable horizon or horizon subdivision, that may occur without the presence of colors of chroma 2 or less. A soil wetness condition caused by saturated soils or a perched water table shall be confirmed to extend for at least three consecutive days. The shallowest depth to soil wetness condition determined by Subparagraph (b)(1) or (b)(2) of this Rule shall take precedence.

(c) Site Suitability as to Soil Wetness: Initial suitability of the site as to soil wetness shall be determined based upon the findings of the Basic Field Evaluation Procedures made pursuant to Paragraph (b) of this Rule. Sites where soil wetness conditions are greater than 48 inches below the naturally occurring soil surface shall be considered SUITABLE with respect to soil wetness. Sites where soil wetness conditions are between 36 and 48 inches below the naturally occurring soil surface shall be considered PROVISIONALLY SUITABLE with respect to soil wetness. Sites where soil wetness conditions are less than 36 inches below the naturally occurring soil surface shall be considered UNSUITABLE with respect to soil wetness. Sites where a soil wetness condition is determined based upon the observation or indication of lateral water movement within 48 inches of the naturally occurring soil surface shall be considered UNSUITABLE, except when such water can be intercepted in accordance with 15A NCAC 18A .1956(4).

(d) Alternative Procedures for Soil Wetness Determination: The Owner or the Owner's Legal Representative (Applicant) shall have the opportunity to submit documentation that the soil wetness condition and resultant site classification be alternately determined and reclassified by direct monitoring, computer modeling, or a combination of monitoring and modeling, in accordance with a Direct Monitoring Procedure, Monitoring and Modeling Procedure, or Modeling Procedure made pursuant to Paragraphs (e), (f), or (g) of this Rule. This determination shall take precedence over the determination made pursuant to the Basic Field Evaluation Procedures [Paragraph (b) of this Rule], when the conditions of Paragraphs (e), (f), or (g) of this Rule are met. Determination by one of these Monitoring or Modeling procedures shall also be required when:

(1) the Owner proposes to use a wastewater system requiring a deeper depth to a soil wetness condition than the depth determined by the Basic Field Evaluation Procedures pursuant to Paragraph (b) of this Rule; or

(2) the Owner proposes to use sites with Group III or IV soil within 36 inches of the surface and where drainage modifications are proposed to be made, including the installation of subsurface drain tile, open drainage ditches, or surface landscape modifications, or on such sites when fill is proposed to be used in conjunction with existing or proposed drainage modifications. Final determination of soil wetness condition for these sites shall be made pursuant to the Modeling Procedure in Paragraph (g) of this Rule.

(e) Direct Monitoring Procedure. Soil wetness conditions may be determined by direct observation of the water surface in wells during periods of typically high water elevations utilizing the following monitoring procedures and interpretation method.

(1) The applicant shall notify the local health department of the intent to monitor water surface elevations by submitting a proposal that includes a site plan, well and soil profile at each monitoring location, and a monitoring plan no later than 30 days prior to the monitoring period. An applicant other than the property owner shall have written authorization from the owner to be the owner's legal representative. Soil wetness and rainfall monitoring shall be conducted under the responsible charge of a third-party consultant or by the property owner or the owner's agent. A third party consultant is qualified when licensed or registered in accordance with G.S. 89C (Engineers), G.S. 89E (Geologists), G.S. 89F (Soil Scientists), or G.S. 90A Article 4 (Registered Sanitarians), if required. The Owner shall submit the name(s) of the consultant(s) performing any monitoring on their behalf to the local health department.

(2) The applicant shall submit a site plan showing proposed sites for wastewater system, shall provide the longitude and latitude of the site, location of monitoring wells, and all drainage features that may influence the soil wetness conditions, and specify any proposed fill and drainage modifications.

(3) The applicant shall submit a monitoring plan indicating the proposed number, installation depth, screening depth, soil and well profile, materials and installation procedures for each monitoring well, and proposed method of analysis. A minimum of three water level monitoring wells shall be installed for water surface
observation at each site. Additional wells shall be required for sites handling systems with a design flow greater than 600 gallons per day (minimum of one additional well per 600 gallons per day increment).

(4) The local health department shall be given the opportunity to conduct a site visit and verify the appropriateness of the proposed plan. Well locations shall include portions of the initial and replacement drainfield site(s) containing the most limiting soil/site conditions. Prior to installation of the wells the local health department shall approve the plan. If the plan is disapproved, the local health department shall include specific changes necessary for approval of the monitoring plan.

(5) Wells shall extend at least five feet below the natural soil surface, or existing soil surface for fill installed prior to July 1, 1977 meeting the requirements for consideration of a site with existing fill of G.S. 130A-341 and the rules adopted pursuant thereto. However, a well or wells which extend(s) down only 40 inches may be used if they provide a continuous record of the water table for at least half of the monitoring period, and one or more shallower wells may be required on sites where shallow lateral water movement or perched soil wetness conditions are anticipated.

(6) Water surface in the monitoring wells shall be recorded at least daily from January 1 to April 30, taken at the same time during the day (plus or minus three hours). A rain (precipitation) gauge is required within one-half mile of the site. At least daily rainfall shall be recorded beginning no later than December 1 through April 30 (the end of the well monitoring period).

(7) Interpretation Method for Direct Monitoring Procedure: The following method of determining depth to soil wetness condition from water surface observations in wells shall be used when the 60-day weighted rainfall index for the January through April monitoring period equals or exceeds the site’s long-term (historic) 60-day weighted rainfall index for January to April rainfall with a 30 percent recurrence frequency (wetter than the 9th driest year of 30, on average). The 60-day weighted rainfall index for the monitoring period and historic rainfall record shall be computed as:

\[
WR_{I0} = 0.5P_D + P_J + P_F + P_M + 0.5P_A
\]

Where \(WR_{I0}\) = 60-day weighted rainfall index for January to April

\(P_D\) = Total December rainfall
\(P_J\) = Total January rainfall
\(P_F\) = Total February rainfall
\(P_M\) = Total March rainfall
\(P_A\) = Total April rainfall

The Department shall prepare contour maps for each county where this interpretation procedure is proposed. Contours shall be prepared following standard interpolation procedures using normalized data collected from all National Weather Service Stations, or equivalent, from which appropriate data are available, at least prior to February 1 of the monitoring season. Data from each station shall be normalized by fitting a 2-parameter gamma distribution to the 60-day weighted rainfall index computed for at least the most recent three decades of historic data, in accordance with procedures outlined in Chapter 18 of the National Engineering Handbook, NRCS, USDA. From this fitted distribution, the 60-day weighted rainfall index for January through April rainfall with a 30%, 50%, 70% and 80% recurrence frequency shall be computed for each Station, to provide the raw data points from which the contour maps shall be prepared. From these maps, the site's 60-day weighted rainfall index for the January through April monitoring period shall be compared to the long-term (historic) January to April 60-day weighted rainfall index at different expected recurrence frequencies. The soil wetness condition shall be determined as the highest level that is continuously saturated for the number of consecutive days during the January through April monitoring period shown in the following table:

<table>
<thead>
<tr>
<th>Recurrence Frequency Range</th>
<th>Number of Consecutive Days of Continuous Saturation for Soil Wetness Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>30% to 49.9%</td>
<td>3 days or 72 hours</td>
</tr>
<tr>
<td>50% to 69.9%</td>
<td>6 days or 144 hours</td>
</tr>
<tr>
<td>70% to 79.9%</td>
<td>9 days or 216 hours</td>
</tr>
<tr>
<td>80% to 100%</td>
<td>14 days or 336 hours</td>
</tr>
</tbody>
</table>
(8) If monitoring well data is collected during monitoring periods that span multiple years, the year which yields the highest (shallowest) soil wetness condition shall be applicable.

(f) Monitoring and Modeling Procedure: A combination of monitoring and modeling may be used to determine a soil wetness condition utilizing the following monitoring procedures and interpretation method.

(1) The procedures described for the Direct Monitoring Procedure in Subparagraphs (e)(1), (2), (3), (4), (5), and (6) of this Rule shall be used to monitor water surface elevation and precipitation for determining soil wetness conditions by a combination of direct observation and modeling, except that the rainfall gauge and each monitoring well shall use a recording device and a data file (DRAINMOD-compatible) shall be submitted with the report to the local health department (devices shall record rainfall at least hourly and well water level at least daily).

(2) The ground water simulation model DRAINMOD shall be used to predict daily water levels over at least a 30 year historic time period after the model is calibrated using the water surface and rainfall observations made on-site during the monitoring period. The soil wetness condition shall be determined as the highest level predicted by the model 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 at least 9 years in 30).

(A) Weather input files, required to run the DRAINMOD, shall be developed from hourly rainfall gauge data taken within a half-mile of the site and from daily temperature and hourly or daily rainfall data collected over a minimum 30-year period from the closest available National Weather Service, or equivalent, measuring station to the site. DRAINMOD weather data files on file with the Department shall be made available upon request to the applicant or applicant’s consultants. Daily maximum and minimum temperature data for the January 1 through April 30 monitoring period, plus for at least 30 days prior to this 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, estimated saturated hydraulic conductivity of each horizon, depth and spacing of drainage features and depression storage, shall be selected in accordance with procedures outlined in the DRAINMOD Users Guide, and guidance is also available in Reports 333 and 342 of the University of North Carolina’s Water Resources Research Institute. DRAINMOD soils data files on file with the Department shall be made available upon request to the applicant or applicant’s consultants.

(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 a best fit by least squares analysis of the daily observations over the whole monitoring period (mean absolute deviation between measured and predicted values no greater than eight inches), and to achieve the best possible match between the highest water table depth during the monitoring period (measured-vs-predicted) that is saturated for 14 consecutive days.

(D) For sites intended to receive over 1500 gallons per day, the soil wetness determination using DRAINMOD shall take into consideration the impact of wastewater application on the projected water table surface.

(E) The ground water simulation analysis shall be prepared and submitted to the local health department by individuals qualified to use DRAINMOD by training and experience and who are licensed or registered in North Carolina if required in G.S. 89C (Engineers), G.S. 89E (Geologists), and G.S. 89F (Soil Scientists). The local health department or Owner may request a technical review by the Department prior to approval of the soil wetness condition determination.

(g) Modeling Procedure: A soil wetness condition may be determined by application of DRAINMOD to predict daily water levels over at least a 30 year historic time period after all site-specific input parameters have been obtained, as outlined in the DRAINMOD Users Guide. This modeling procedure shall be used when a ground water lowering system is proposed for a site with Group III or IV soils within 36 inches of the naturally occurring soil surface. This procedure shall also be used to evaluate sites with Group III or IV soils within 36 inches of the naturally occurring soil surface, where the soil wetness condition was initially determined using a procedure described in Paragraphs (e) or (f) of this Rule and where drainage modifications are proposed or when fill is proposed to be used in conjunction with existing or proposed drainage modifications. The soil wetness condition shall be determined as the highest level predicted by the model 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 at least 9 years in 30).
Weather input files, required to run DRAINMOD, shall consist of hourly rainfall and daily temperature data collected over the entire period of record but for at least a 30-year period from the closest available National Weather Service, or equivalent, measuring station to the site. DRAINMOD weather data files on file with the Department shall be made available upon request to the applicant or applicant's consultants.

Soil and Site inputs for DRAINMOD, including a soils data file closest to the soil series identified, depths of soil horizons, hydraulic conductivity of each horizon, depth and spacing of proposed drainage features and surface storage and drainage parameters, shall be selected in accordance with procedures outlined in the DRAINMOD User's Guide. DRAINMOD soils data files on file with the Department shall be made available upon request to the applicant or applicant's consultants. Inputs shall include:

(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 saturated hydraulic conductivity measurements for at least three representative locations on the site and at each location for at least three most representative soil horizons within five feet of the surface. Conductivity 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, or other accepted values consistent with the simulation model; and

(F) A sensitivity analysis shall be conducted for the following model parameters:

(i) Soil input files for at least two other most closely related soil profiles;

(ii) Saturated hydraulic conductivity of each of horizons measured on-site;

(iii) Drain depth and spacing; and

(iv) 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, hydraulic conductivity input values based upon the range of hydraulic conductivity 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 soil wetness condition. Conservative values for the most critical parameters shall be used in applying the model to the site.

For sites designed to receive over 600 gallons per day, the soil wetness determination using DRAINMOD shall take into consideration the impact of wastewater application on the projected water table surface.

The ground water simulation analysis shall be prepared and submitted to the local health department by individuals qualified to use DRAINMOD by training and experience and who are licensed or registered in North Carolina if required in G.S. 89C (Engineers), G.S. 89E (Geologists), and G.S. 89F (Soil Scientists). The local health department shall submit the ground water simulation analysis to the Department for technical review prior to approval of the soil wetness condition determination.

A report of the investigations made for the Direct Monitoring Procedure, Monitoring and Modeling Procedure or Modeling Procedure pursuant to Paragraphs (e), (f), or (g) of this Rule shall be prepared prior to approval of the soil wetness condition determination. Reports prepared by a licensed or registered professional shall bear the professional seal of the person(s) whom conducted the investigation (Engineer, Geologist, Soil Scientist or Registered Sanitarian). A request for technical review of the report by the Department shall include digital copies of monitoring data and digital copies of model inputs, output data, and graphic results, as applicable.

Where the site is UNSUITABLE with respect to soil wetness conditions, it may be reclassified PROVISIONALLY SUITABLE if a modified, alternative or innovative system can be installed in accordance with 15A NCAC 18A.1956, .1957, or .1969.

History Note: Authority G.S. 130A-335(e):
Eff. July 1, 1982;
Amended Eff. January 1, 1990;
Temporary Amendment Eff. June 24, 2003; April 17, 2002;
15A NCAC 18A .1943   SOIL DEPTH
(a) Soil depths to saprolite, rock, or parent material greater than 48 inches shall be considered SUITABLE as to soil depth. Soil depths to saprolite, rock, or parent material between 36 inches and 48 inches shall be considered PROVISIONALLY SUITABLE as to soil depth. Soil depths to saprolite, rock, or parent material less than 36 inches shall be classified UNSUITABLE as to soil depth.
(b) Where the site is UNSUITABLE with respect to depth, it may be reclassified PROVISIONALLY SUITABLE after a special investigation indicates that a modified or alternative system can be installed in accordance with Rule .1956 or Rule .1957 of this Section.

History Note:  Authority G.S. 130A-335(e);
Eff. July 1, 1982;

15A NCAC 18A .1944   RESTRICTIVE HORIZONS
(a) Soils in which restrictive horizons are three inches or more in thickness and at depths greater than 48 inches below the naturally occurring soil surface shall be considered SUITABLE as to depth to restrictive horizons. Soils in which restrictive horizons are three inches or more in thickness and at depths between 36 inches and 48 inches shall be considered PROVISIONALLY SUITABLE as to depth to restrictive horizons. Soils in which restrictive horizons are three inches or more in thickness and at depths less than 36 inches shall be considered UNSUITABLE as to depth to restrictive horizons.
(b) Where the site is UNSUITABLE with respect to restrictive horizons, it may be reclassified PROVISIONALLY SUITABLE after an investigation indicates that a modified or alternative system can be installed in accordance with Rules .1956 or .1957 of this Section.

History Note:  Authority G.S. 130A-335(e);
Eff. July 1, 1982;

15A NCAC 18A .1945   AVAILABLE SPACE
(a) Sites shall have sufficient available space to permit the installation and proper functioning of ground absorption sewage treatment and disposal systems, based upon the square footage of nitrification field required for the long-term acceptance rate determined in accordance with these Rules.
(b) Sites shall have sufficient available space for a repair area separate from the area determined in Paragraph (a) of this Rule. The repair area shall be based upon the area of the nitrification field required to accommodate the installation of a replacement system as specified in Rule .1955, .1956, or .1957 of this Section. Prior to issuance of the initial Improvement Permit for a site, the local health department shall designate on the permit the original system layout, the repair area, and the type of replacement system.
(c) The repair area requirement of Paragraph (b) of this Rule shall not apply to a lot or tract of land:
   (1) which is specifically described in a document on file with the local health department on July 1, 1982, or which is specifically described in a recorded deed or a recorded plat on January 1, 1983; and
   (2) which is of insufficient size to satisfy the repair area requirement of Paragraph (b) of this Rule, as determined by the local health department; and
   (3) on which a ground absorption sewage treatment and disposal system with a design daily flow of:
      (A) no more than 480 gallons is to be installed; or
      (B) more than 480 gallons is to be installed if application for an improvement permit which meets the requirements of Rule .1937(c) of this Subchapter is received by the local health department on or before April 1, 1983.
(d) Although a lot or tract of land is exempted under Paragraph (c) from the repair area requirement of Paragraph (b), the maximum feasible area, as determined by the local health department, shall be allocated for a repair area.

History Note:  Authority G.S. 130A-335(e) and (f);
Eff. July 1, 1982;
Amended Eff. February 1, 1992; July 1, 1983; January 1, 1983.

15A NCAC 18A .1946   OTHER APPLICABLE FACTORS
The site evaluation shall include consideration of any other applicable factors involving accepted public health principles, such as, but need not be limited to:

1. The proximity of a large-capacity water-supply well, the cone of influence of which would dictate a larger separation distance than the minimum distance specified in Rule .1950 of this Section;

2. The potential public health hazard due to possible failures of soil absorption systems when specifically identified, would dictate larger separation distances than the minimums specified in Rule .1950 and Rule .1955(m) of this Section;

3. The potential public health hazard of possible massive failures of soil absorption systems proposed to serve large numbers of residences, as in residential subdivisions or mobile home parks;

4. For sites serving systems designed to handle over 3,000 gallons per day, as determined in Rule .1949 (a) or (b) of this Section, which include one or more nitrification fields with a design flow of greater than 1500 gallons per day, the applicant shall submit sufficient site-specific data to predict the height of the water table mound that will develop beneath the field (level sites) and the rate of lateral and vertical flow away from the nitrification trenches (sloping sites). The data submitted may include soil borings to depths greater than 48 inches, permeability and hydraulic conductivity measurements, water level readings, and other information determined to be necessary by the local health department or the State. The site shall be considered UNSUITABLE if the data indicate that the groundwater mound which will develop beneath the site cannot be maintained two feet or more below the bottom of the nitrification trenches or it is determined that effluent is likely to become exposed on the ground surface within, or adjacent to, the nitrification field.

History Note: Authority G.S. 130A-335(e);
Eff. July 1, 1982;

15A NCAC 18A .1947 DETERMINATION OF OVERALL SITE SUITABILITY
All of the criteria in Rules .1940 through .1946 of this Section shall be determined to be SUITABLE, PROVISIONALLY SUITABLE, or UNSUITABLE, as indicated. If all criteria are classified the same, that classification will prevail. Where there is a variation in classification of the several criteria, the most limiting uncorrectable characteristics shall be used to determine the overall site classification.

History Note: Authority G.S. 130A-335(e);
Eff. July 1, 1982;

15A NCAC 18A .1948 SITE CLASSIFICATION
(a) Sites classified as SUITABLE may be utilized for a ground absorption sewage treatment and disposal system consistent with these Rules. A suitable classification generally indicates soil and site conditions favorable for the operation of a ground absorption sewage treatment and disposal system or have slight limitations that are readily overcome by proper design and installation.

(b) Sites classified as PROVISIONALLY SUITABLE may be utilized for a ground absorption sewage treatment and disposal system consistent with these Rules but have moderate limitations. Sites classified Provisionally Suitable require some modifications and careful planning, design, and installation in order for a ground absorption sewage treatment and disposal system to function satisfactorily.

(c) Sites classified UNSUITABLE have severe limitations for the installation and use of a properly functioning ground absorption sewage treatment and disposal system. An improvement permit shall not be issued for a site which is classified as UNSUITABLE. However, where a site is UNSUITABLE, it may be reclassified PROVISIONALLY SUITABLE if a special investigation indicates that a modified or alternative system can be installed in accordance with Rules .1956 or .1957 of this Section.

(d) A site classified as UNSUITABLE may be used for a ground absorption sewage treatment and disposal system specifically identified in Rules .1955, .1956, or .1957 of this Section or a system approved under Rule .1969 if written documentation, including engineering, hydrogeologic, geologic or soil studies, indicates to the local health department that the proposed system can be expected to function satisfactorily. Such sites shall be reclassified as PROVISIONALLY SUITABLE if the local health department determines that the substantiating data indicate that:

1. a ground absorption system can be installed so that the effluent will be non-pathogenic, non-infectious, non-toxic, and non-hazardous;
(2) the effluent will not contaminate groundwater or surface water; and
(3) the effluent will not be exposed on the ground surface or be discharged to surface waters where it could come in contact with people, animals, or vectors.

The State shall review the substantiating data if requested by the local health department.

**History Note:**  
Authority G.S. 130A-335(e);  
Eff. July 1, 1982;  

**15A NCAC 18A.1949 SEWAGE FLOW RATES FOR DESIGN UNITS**

(a) In determining the volume of sewage from dwelling units, the flow rate shall be 120 gallons per day per bedroom. The minimum volume of sewage from each dwelling unit shall be 240 gallons per day and each additional bedroom above two bedrooms shall increase the volume of sewage by 120 gallons per day. In determining the number of bedrooms in a dwelling unit, each bedroom and any other room or addition that can reasonably be expected to function as a bedroom shall be considered a bedroom for design purposes. When the occupancy of a dwelling unit exceeds two persons per bedroom, the volume of sewage shall be determined by the maximum occupancy at a rate of 60 gallons per person per day.

(b) Table No. I shall be used to determine the minimum design daily flow of sewage required in calculating the design volume of sanitary sewage systems to serve selected types of establishments. The minimum design volume of sewage from any establishment shall be 100 gallons per day. Design of sewage treatment and disposal systems for establishments not identified in this Rule shall be determined using available flow data, water-using fixtures, occupancy or operation patterns, and other measured data.

<table>
<thead>
<tr>
<th>TYPE OF ESTABLISHMENT</th>
<th>DAILY FLOW FOR DESIGN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Airports</td>
<td>5 gal/passenger</td>
</tr>
<tr>
<td>(Also R.R. stations, bus terminals --not including food service facilities)</td>
<td></td>
</tr>
<tr>
<td>Barber Shops</td>
<td>50 gal/chair</td>
</tr>
<tr>
<td>Bars, Cocktail Lounges (Not including food service)</td>
<td></td>
</tr>
<tr>
<td>Beauty Shops (Style Shops)</td>
<td>20 gal/seat</td>
</tr>
<tr>
<td>Bowling Lanes</td>
<td>125 gal/chair</td>
</tr>
<tr>
<td>Businesses (other than those listed elsewhere in this table)</td>
<td>50 gal/lane</td>
</tr>
<tr>
<td>Camps</td>
<td>25 gal/employee</td>
</tr>
<tr>
<td>Construction or Work Camps</td>
<td>60 gal/person</td>
</tr>
<tr>
<td>Summer Camps</td>
<td>40 gal/person (with chemical toilets)</td>
</tr>
<tr>
<td>Campgrounds -- With Comfort Station (Without water and sewer hookups)</td>
<td>60 gal/person</td>
</tr>
<tr>
<td>Travel Trailer/Recreational Vehicle Park (With water and sewer hookups)</td>
<td>100 gal/campsite</td>
</tr>
<tr>
<td>Churches (Not including a Kitchen, Food Service Facility, Day Care or Camp)</td>
<td>120 gal/space</td>
</tr>
<tr>
<td>Churches (With a Kitchen but, not including a Food Service Facility, Day Care, or Camp)</td>
<td>3 gal/seat</td>
</tr>
<tr>
<td>Country Clubs</td>
<td>5 gal/seat</td>
</tr>
<tr>
<td>Day Care Facilities</td>
<td>20 gal/member</td>
</tr>
<tr>
<td>Factories (Exclusive of industrial waste)</td>
<td>15 gal/person</td>
</tr>
<tr>
<td>Add for showers</td>
<td>25 gal/person/shift</td>
</tr>
<tr>
<td>Food Service Facilities</td>
<td>10 gal/person/shift</td>
</tr>
<tr>
<td>Restaurants</td>
<td>40 gal/seat or</td>
</tr>
<tr>
<td></td>
<td>40 gal/15 ft2 of dining area, whichever is greater</td>
</tr>
<tr>
<td>Facility Type</td>
<td>Water Requirement</td>
</tr>
<tr>
<td>--------------------------------------</td>
<td>----------------------------------------</td>
</tr>
<tr>
<td>24-hour Restaurant</td>
<td>75 gal/seat</td>
</tr>
<tr>
<td>Food Stands</td>
<td></td>
</tr>
<tr>
<td>(1) Per 100 square feet of food stand floor space</td>
<td>50 gal</td>
</tr>
<tr>
<td>(2) Add per food employee</td>
<td>25 gal</td>
</tr>
<tr>
<td>Other Food Service Facilities</td>
<td>5 gal/meal</td>
</tr>
<tr>
<td>Hospitals</td>
<td>300 gal/bed</td>
</tr>
<tr>
<td>Marinas</td>
<td>10 gal/boat slip</td>
</tr>
<tr>
<td>With bathhouse</td>
<td>30 gal/boat slip</td>
</tr>
<tr>
<td>Meat Markets</td>
<td></td>
</tr>
<tr>
<td>(1) Per 100 square feet of market floor space</td>
<td>50 gal</td>
</tr>
<tr>
<td>(2) Add per market employee</td>
<td>25 gal</td>
</tr>
<tr>
<td>Motels/Hotels</td>
<td>120 gal/room</td>
</tr>
<tr>
<td>With cooking facilities</td>
<td>175 gal/room</td>
</tr>
<tr>
<td>Offices (per shift)</td>
<td>25 gal/person</td>
</tr>
<tr>
<td>Residential Care Facilities</td>
<td>60 gal/person</td>
</tr>
<tr>
<td>Rest Homes and Nursing Homes</td>
<td></td>
</tr>
<tr>
<td>With laundry</td>
<td>120 gal/bed</td>
</tr>
<tr>
<td>Without laundry</td>
<td>60 gal/bed</td>
</tr>
<tr>
<td>Schools</td>
<td></td>
</tr>
<tr>
<td>Day Schools</td>
<td></td>
</tr>
<tr>
<td>With cafeteria, gym, and showers</td>
<td>15 gal/student</td>
</tr>
<tr>
<td>With cafeteria only</td>
<td>12 gal/student</td>
</tr>
<tr>
<td>With neither cafeteria nor showers</td>
<td>10 gal/student</td>
</tr>
<tr>
<td>Boarding Schools</td>
<td>60 gal/person</td>
</tr>
<tr>
<td>Service Stations</td>
<td>250 gal/water</td>
</tr>
<tr>
<td>Stainless steel closet or urinal</td>
<td></td>
</tr>
<tr>
<td>Stores, Shopping Centers, and Malls</td>
<td></td>
</tr>
<tr>
<td>(Exclusive of food service and meat markets)</td>
<td>120 gal/1000 ft²</td>
</tr>
<tr>
<td>of retail sales area</td>
<td></td>
</tr>
<tr>
<td>Stadium, Auditorium, Theater, Drive-in</td>
<td>5 gal/seat or space</td>
</tr>
<tr>
<td>Swimming Pools, Spas, and Bathhouses</td>
<td>10 gal/person</td>
</tr>
</tbody>
</table>

(c) An adjusted design daily sewage flow may be granted by the local health department upon a showing as specified in Subparagraphs (c)(1) through (c)(2) that a sewage system is adequate to meet actual daily water consumption from a facility included in Paragraph (b) of this Rule.

(1) Documented data from that facility or a comparable facility justifying a flow rate reduction shall be submitted to the local health department and the State. The submitted data shall consist of at least 12 previous consecutive monthly total water consumption readings and at least 30 consecutive daily water consumption readings. The daily readings shall be taken during a projected normal or above normal sewage flow month. A peaking factor shall be derived by dividing the highest monthly flow as indicated from the 12 monthly readings by the sum of the 30 consecutive daily water consumption readings. The adjusted design daily sewage flow shall be determined by taking the numerical average of the greatest ten percent of the daily readings and multiplying by the peaking factor. Further adjustments shall be made in design sewage flow rate used for sizing nitrification fields and pretreatment systems when the sampled or projected wastewater characteristics exceed those of domestic sewage, such as wastewater from restaurants or meat markets.

(2) An adjusted daily sewage flow rate may be granted contingent upon use of extreme water-conserving fixtures, such as toilets which use 1.6 gallons per flush or less, spring-loaded faucets with flow rates of one gallon per minute or less, and showerheads with flow rates of two gallons per minute or less. The amount of sewage flow rate reduction shall be determined by the local health department and the State based upon the type of fixtures and documentation of the amount of flow reduction to be expected from the proposed facility. Adjusted daily flow rates based upon use of water-conserving fixtures shall apply only to design capacity requirements of dosing and distribution systems and nitrification fields. Minimum pretreatment capacities shall be determined by the design flow rate of Table I of this Rule.
15A NCAC 18A .1950  LOCATION OF SANITARY SEWAGE SYSTEMS

(a) Every sanitary sewage treatment and disposal system shall be located at least the minimum horizontal distance from the following:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Any private water supply source, including any well or spring</td>
<td>100 feet;</td>
</tr>
<tr>
<td>2</td>
<td>Any public water supply source</td>
<td>100 feet;</td>
</tr>
<tr>
<td>3</td>
<td>Streams classified as WS-I</td>
<td>100 feet;</td>
</tr>
<tr>
<td>4</td>
<td>Waters classified as S.A.</td>
<td>100 feet, from mean high water mark;</td>
</tr>
<tr>
<td>5</td>
<td>Other coastal waters</td>
<td>50 feet, from mean high water mark;</td>
</tr>
<tr>
<td>6</td>
<td>Any other stream, canal, marsh, or other surface waters</td>
<td>50 feet;</td>
</tr>
<tr>
<td>7</td>
<td>Any Class I or Class II reservoir</td>
<td>100 feet, from normal pool elevation;</td>
</tr>
<tr>
<td>8</td>
<td>Any permanent storm water retention pond</td>
<td>50 feet, from flood pool elevation;</td>
</tr>
<tr>
<td>9</td>
<td>Any other lake or pond</td>
<td>50 feet, from normal pool elevation;</td>
</tr>
<tr>
<td>10</td>
<td>Any building foundation</td>
<td>5 feet;</td>
</tr>
<tr>
<td>11</td>
<td>Any basement</td>
<td>15 feet;</td>
</tr>
<tr>
<td>12</td>
<td>Any property line</td>
<td>10 feet;</td>
</tr>
<tr>
<td>13</td>
<td>Top of slope of embankments or cuts of 2 feet or more vertical height</td>
<td>15 feet;</td>
</tr>
<tr>
<td>14</td>
<td>Any water line</td>
<td>10 feet;</td>
</tr>
<tr>
<td>15</td>
<td>Drainage Systems:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(A) Interceptor drains, foundation drains, and storm water diversions</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(i) upslope</td>
<td>10 feet,</td>
</tr>
<tr>
<td></td>
<td>(ii) sideslope</td>
<td>15 feet, and</td>
</tr>
<tr>
<td></td>
<td>(iii) downslope</td>
<td>25 feet;</td>
</tr>
<tr>
<td></td>
<td>(B) Groundwater lowering ditches and devices</td>
<td>25 feet;</td>
</tr>
<tr>
<td>16</td>
<td>Any swimming pool</td>
<td>15 feet;</td>
</tr>
<tr>
<td>17</td>
<td>Any other nitrification field (except repair area)</td>
<td>20 feet;</td>
</tr>
</tbody>
</table>

(b) Ground absorption sewage treatment and disposal systems may be located closer than 100 feet from a private water supply, except springs and uncased wells located downslope and used as a source of drinking water, for repairs, space limitations, and other site-planning considerations but shall be located the maximum feasible distance and in no case less than 50 feet.

(c) Nitrification fields and repair areas shall not be located under paved areas or areas subject to vehicular traffic. If effluent is to be conveyed under areas subject to vehicular traffic, ductile iron or its equivalent pipe shall be used. However, pipe specified in Rule .1955 (e) may be used if a minimum of 30 inches of compacted cover is provided over the pipe.

(d) In addition to the requirements of Paragraph (a) of this Rule, sites to be used for subsurface disposal for design units with flows over 3,000 gallons per day, as determined in Rule .1949 (a) or (b) of this Section, which include one or more nitrification fields with individual capacities of greater than 1,500 gallons per day, shall be located at least the minimum horizontal distance from the following:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Any Class I or II reservoir or any public water supply source utilizing a shallow (under 50 feet) groundwater aquifer</td>
<td>500 feet;</td>
</tr>
<tr>
<td>2</td>
<td>Any other public water supply source, unless determined to utilize a confined aquifer</td>
<td>200 feet;</td>
</tr>
<tr>
<td>3</td>
<td>Any private water supply source, unless determined to utilize a confined aquifer</td>
<td>100 feet;</td>
</tr>
<tr>
<td>4</td>
<td>Waters classified as SA</td>
<td>200 feet, from</td>
</tr>
</tbody>
</table>
(5) Any waters classified as WS-I
(6) Any surface waters classified as WS-II, WS-III, B, or SB
(7) Any property line

(c) Collection sewers, force mains, and supply lines shall be located at least the minimum horizontal distance from the following:

| (1) | Any public water supply source, including wells, springs, and Class I or Class II reservoirs | 100 feet, unless constructed of leakproof pipe, such as ductile iron pipe with mechanical joints equivalent to water main standards, in which case the minimum setback may be reduced to 50 feet; |
| (2) | Any private water supply source, including wells and springs | 50 feet, unless constructed of similar leakproof pipe, such as ductile iron pipe with mechanical joints equivalent to water main standards, in which case the minimum setback may be reduced to 25 feet; |
| (3) | Any waters classified as WS-I, WS-II, WS-III, B, SA, or SB | 50 feet, unless constructed of similar leakproof pipe, such as ductile iron pipe with mechanical joints equivalent to water main standards, in which case the minimum setback may be reduced to 10 feet; |
| (4) | Any other stream, canal, marsh, coastal waters, lakes and other impoundments, or other surface waters | 10 feet; |
| (5) | Any basement | 10 feet; |
| (6) | Any property line | 5 feet; |
| (7) | Top of slope of embankments or cuts of two feet or more vertical height | 10 feet; |
| (8) | Drainage Systems: |
| (A) | Interceptor drains, storm drains, and storm water diversions | 5 feet; |
| (B) | Ground-water lowering ditches and devices | 10 feet; |
| (9) | Any swimming pool | 10 feet; |
| (10) | Any other nitrification field | 5 feet. |

(f) Sewer lines may cross a water line if 18 inches clear separation distance is maintained, with the sewer line passing under the water line. When conditions prevent an 18-inch clear separation from being maintained or whenever it is necessary for the water line to cross under the sewer, the sewer line shall be constructed of ductile iron pipe or its equivalent and the water line shall be constructed of ferrous materials equivalent to water main standards for a distance of at least ten feet on each side of the point of crossing, with full sections of pipe centered at the point of crossing.

(g) Sewer lines may cross a storm drain if:

| (1) | 12 inches clear separation distance is maintained; or |
| (2) | the sewer is of ductile iron pipe or encased in concrete or ductile iron pipe for at least five feet on either side of the crossing. |
septic tanks shall be of two compartments. The inlet compartment of a two-compartment tank shall hold between two-thirds and three-fourths of the total tank capacity. Septic tanks shall have an approved effluent filter and access devices.
The effluent filter shall function without a bypass of unfiltered wastewater, sludge or scum. The effluent filter case shall be designed to function as a sanitary tee with the inlet extending down to between 25 and 40 percent of the liquid depth. The requirement(s) for an effluent filter and access devices shall apply to septic tanks for which a Construction Authorization is issued on or after January 1, 1999. A properly designed dosing siphon or pump shall be used for discharging sewage effluent into nitrification lines when the total length of such lines exceeds 750 linear feet in a single system and as required for any pressure-dosed system. When the design daily flow from a single system exceeds 3,000 gallons per day or when the total length of nitrification lines exceeds 2,000 linear feet in a single system, alternating siphons or pumps shall be used which shall discharge to separate nitrification fields. The dose volume from pump or siphon systems shall be of such design so as to fill the nitrification lines from 66 percent to 75 percent of their capacity at each discharge except as required for low-pressure distribution systems. The discharge rate from dosing systems shall be designed to maximize the distribution of the effluent throughout the nitrification field. Septic tanks installed where the top will be deeper than six inches below the finished grade shall have an access manhole over each compartment with cover, extending to within six inches of the finished grade, having a minimum opening adequate to accommodate the installation or removal of the septic tank lid, septage removal, and maintenance of the effluent filter. When the top of the septic tank or access manhole is below the finished grade, the location of each manhole shall be visibly marked at finished grade. Any system serving a design unit with a design sewage flow greater than 3,000 gallons per day shall have access manholes that extend at least to finished grade and be designed and maintained to prevent surface water inflow. The manholes shall be sized to allow proper inspection and maintenance. All dosing tanks shall have a properly functioning high-water alarm. The alarm shall be audible and visible by system users and weatherproof if installed outdoors. The alarm circuit shall be provided with a manual disconnect in a watertight, corrosion-resistant outside enclosure (NEMA 4X or equivalent) adjacent to the dosing tank.

(b) Minimum liquid capacities for septic tanks shall be in accordance with the following:

<table>
<thead>
<tr>
<th>(1)</th>
<th>Residential Septic Tanks (for each individual residence or dwelling unit):</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number of Bedrooms</td>
</tr>
<tr>
<td>3 or less</td>
<td>900 gallons</td>
</tr>
<tr>
<td>4</td>
<td>1,000 gallons</td>
</tr>
<tr>
<td>5</td>
<td>1,250 gallons</td>
</tr>
</tbody>
</table>

(2) Septic tanks for large residences, multiple dwelling units, or places of business or public assembly shall be in accordance with the following:

(A) The liquid capacity of septic tanks for places of business or places of public assembly with a design sewage flow of 600 gallons per day or less shall be determined in accordance with the following: \( V = 2Q \); where \( V \) is the liquid capacity of the septic tank and \( Q \) is the design daily sewage flow. However, the minimum capacity of any septic tanks shall be 750 gallons.

(B) Individual residences with more than five bedrooms, multiple-family residences, individual septic tank systems serving two or more residences, or any place of business or public assembly where the design sewage flow is greater than 600 gallons per day, but less than 1,500 gallons per day, the liquid capacity of the septic tank shall be designed in accordance with the following: \( V = 1.17Q + 500 \); where \( V \) is the liquid capacity of the septic tank and \( Q \) is the design daily sewage flow. The minimum liquid capacity of a septic tank serving two or more residences shall be 1,500 gallons.

(C) Where the design sewage flow is between 1,500 gallons per day and 4,500 gallons per day, the liquid capacity of the septic tank shall be designed in accordance with the following: \( V = 0.75Q + 1,125 \); where \( V \) is the liquid capacity of the septic tank and \( Q \) is the design daily sewage flow.

(D) Where the design sewage flow exceeds 4,500 gallons per day, the septic tank shall be designed in accordance with the following: \( V = Q \); where \( V \) is the liquid capacity of the septic tank and \( Q \) is the design daily sewage flow.

(E) The minimum liquid capacity requirements of Subparagraph (b)(2) of this Rule shall be met by use of a single two-compartment septic tank or by two tanks installed in series, provided the first tank is constructed without a baffle wall and contains at least two-thirds of the total required liquid capacity.

(c) The following are minimum standards of design and construction of pump tanks and pump dosing systems:

| (1) | The liquid capacity of a pump tank shall be considered as the entire internal volume with no additional requirement for freeboard. Pump tanks shall have a minimum liquid capacity in accordance with the following: |

| (E) | The minimum liquid capacity requirements of Subparagraph (b)(2) of this Rule shall be met by use of a single two-compartment septic tank or by two tanks installed in series, provided the first tank is constructed without a baffle wall and contains at least two-thirds of the total required liquid capacity. |
(A) Pump tanks for systems with nitrification fields installed in Soil Group I, II, or III soils, as defined in these Rules, shall have a minimum liquid capacity equal to two-thirds of the required septic tank liquid capacity.

(B) Pump tanks for systems installed in Group IV soils shall have a minimum liquid capacity equal to the required septic tank liquid capacity.

(C) The minimum liquid capacity of any pump tank shall be 750 gallons.

(D) An alternate method to determine minimum liquid capacity of a pump tank shall be to provide for the minimum pump submergence requirement (Subparagraph (c)(5) of this Rule), the minimum dose volume requirement (Paragraph (a) of this Rule), and the minimum emergency storage capacity requirement. The emergency storage capacity requirement is determined based on the type of facility served, the classification of surface waters which would be impacted by a pump tank failure, and the availability of standby power devices and emergency maintenance personnel. The emergency storage capacity shall be the freeboard space in the pump tank above the high-water alarm activation level plus the available freeboard space in previous tankage and in the collection system below the lowest ground elevation between the pump tank and the lowest connected building drain invert. The minimum emergency storage capacity for residential systems and other systems in full-time use on sites draining into WS-I, WS-II, WS-III, SA, SB, and B waters shall be 24 hours, without standby power, or 12 hours with standby power manually activated, or four hours with standby power automatically activated or with a high-water alarm automatically contacting a 24-hour maintenance service. The minimum emergency storage capacity for systems not in full-time use and for all systems at sites draining into all other surface waters shall be 12 hours without standby power, or eight hours with standby power manually activated, or four hours with standby power automatically activated or with a high-water alarm automatically contacting a 24-hour maintenance service.

(E) Notwithstanding Paragraphs (c)(1)(A)-(D), other criteria for pump tank capacity may be approved by the local health department and the State for raw sewage lift stations, pressure sewer systems, and systems with design flows exceeding 3,000 gallons per day.

(2) The effluent pump shall be capable of handling at least one-half inch solids and designed to meet the discharge rate and total dynamic head requirements of the effluent distribution system. The pump shall be listed by Underwriter's Laboratory or an equivalent third party electrical testing and listing agency, unless the proposed pump model is specified by a registered professional engineer.

(3) Pump discharge piping shall be of Schedule 40 PVC or stronger material and adequately secured. Fittings and valves shall be of compatible corrosion-resistant material. A threaded union, flange, or similar disconnect device shall be provided in each pump discharge line. All submersible pumps shall be provided with a corrosion-resistant rope or chain attached to each pump enabling pump removal from the ground surface without requiring dewatering or entrance into the tank. Valves shall also be readily accessible from the ground surface.

(4) Antisiphon holes (three-sixteenth inch) shall be provided when the discharge or invert elevation of the distribution system is below the high-water alarm elevation in the pump tank, or in accordance with pump manufacturer's specifications. Check valves shall be provided when the volume of the supply line is greater than 25 percent of the dosing volume, or in accordance with pump manufacturer's specifications. When provided, the antisiphon hole shall be located between the pump and the check valve.

(5) Sealed mercury control floats or similar devices designed for detecting liquid levels in septic tank effluent shall be provided to control pump cycles. A separate level sensing device shall be provided to activate the high-water alarm. Pump-off level shall be set to keep the pump submerged at all times or in accordance with the manufacturer's specifications. A minimum of 12 inches of effluent shall be maintained in the bottom of the pump tank. The high-water alarm float shall be set to activate within six inches of the pump-on level. The lag pump float switch, where provided, shall be located at or above the high-water alarm activation level.

(6) Pump and control circuits shall be provided with manual circuit disconnects within a watertight, corrosion-resistant, outside enclosure (NEMA 4X or equivalent) adjacent to the pump tank, securely mounted at least 12 inches above the finished grade. The pump(s) shall be manually operable without requiring the use of special tools or entrance into the tank for testing purposes. Conductors shall be conveyed to the disconnect enclosure through waterproof, gasproof, and corrosion-resistant conduits, with
no splices or junction boxes provided inside the tank. Wire grips, duct seal, or other suitable material shall be used to seal around wire and wire conduit openings inside the pump tank and disconnect enclosure.

(7) For systems requiring duplex and multiplex pumps, a control panel shall be provided which shall include short-circuit protection for each pump and for the control system, independent disconnects, automatic pump sequencer, hand-off-automatic (H-O-A) switches, run lights, and elapsed time counters for each pump. Alarm circuits shall be supplied ahead of any pump overload or short circuit protective devices. The control panel must be in a watertight, corrosion-resistant enclosure (NEMA 4X or equivalent) unless installed within a weathertight building. The panel shall be protected from intense solar heating.

(8) Dual and multiple fields shall be independently dosed by separate pumps which shall automatically alternate. The supply lines shall be "H" connected to permit manual alternation between fields dosed by each pump. "H" connection valving shall be readily accessible from the ground surface, either from the pump tank access manhole or in a separate valve chamber outside the pump tank. Other equivalent methods of dosing dual or multiple fields may be approved by the State.

(9) The pump tank shall have a properly functioning high-water alarm. The alarm circuit shall be supplied ahead of any pump overload and short circuit protective devices. The alarm shall be audible and visible by system users and weatherproof if installed outdoors in an enclosure (NEMA 4X or equivalent).

(d) Siphons and siphon dosing tanks may be used when at least two feet of elevation drop can be maintained between the siphon outlet invert and the inlet invert in the nitrification field distribution system.

(1) Siphon dosing tanks shall be designed in accordance with the minimum dose requirements in this Rule and shall meet the construction requirements of this Section. The siphon dose tank shall provide at least 12 inches of freeboard, and the inlet pipe shall be at least three inches above the siphon trip level. The high-water alarm shall be set to activate within two inches of the siphon trip level.

(2) Siphon dosing tanks shall have a watertight access opening over each siphon with a minimum diameter of 24 inches and extending to finished grade and designed to prevent surface water inflow.

(3) The 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 dosing tank or otherwise designed to not serve as an overflow for the tank.

(4) All siphon parts shall be installed in accordance with the manufacturer’s specifications. All materials must be corrosion-resistant, of cast iron, high density plastic, fiberglass, stainless steel, or equal.

(5) Siphon dosing tanks shall have a properly functioning high-water alarm that is audible and visible by system users and weatherproof if installed outdoors in an enclosure (NEMA 4X or equivalent).

(e) Raw sewage lift stations shall meet the construction standards of this Section and all horizontal setback requirements for sewage treatment and disposal systems in accordance with Rule .1950(a) of this Section unless the station is a sealed, watertight chamber, in which case the setback requirements for collection sewers in Rule .1950(e) of this Section shall apply. Sealed, watertight chambers shall be of a single, prefabricated unit, such as fiberglass, with sealed top cover, and preformed inlet and outlet pipe openings connected with solvent welds, O-ring seals, rubber boots, stainless steel straps, or equivalent. Dual pumps shall be provided for stations serving two or more buildings or for a facility with more than six water closets. Pumps shall be listed by Underwriter’s Laboratories or an equivalent third party electrical testing and listing agency, and shall be grinder pumps or solids-handling pumps capable of handling at least three-inch spheres unless the station serves no more than a single water closet, lavatory, and shower, in which case two-inch solids handling pumps shall be acceptable. Minimum pump capacity shall be 2.5 times the average daily flow rate. The dosing volume shall be set so that the pump-off time does not exceed 30 minutes, except for stations serving single buildings, and pump run-time shall be from three to ten minutes at average flow. Pump station emergency storage capacity and total liquid capacity shall be determined in accordance with Paragraph (c)(1)(D) of this Rule except for a sealed, watertight chamber serving an individual building, in which case a minimum storage capacity of eight hours shall be required. All other applicable requirements for pump tanks and pump dosing systems in accordance with Paragraph (c) of this Rule shall also apply to raw sewage lift stations.


15A NCAC 18A .1953  PREFabricATED SEPTIC TANKS AND PUMP TANKS
When prefabricated concrete tanks or tanks of other material are used, they shall be constructed in accordance with the plans which have been approved by the State and shall comply with all requirements of this Section. At least three complete sets of plans and specifications for the initial design of the prefabricated septic tank or subsequent changes and modifications shall be submitted to the Department of Environment, and Natural Resources, On-Site Wastewater Section, PO Box 29594, Raleigh, North Carolina 27626-0594. Separate plans and specifications for the design of each septic tank or pump tank to be produced shall be submitted to the On-Site Wastewater Section for approval. These plans and specifications shall show the design of the septic tank in detail, including:

(1) All pertinent dimensions;
(2) Reinforcement material and location;
(3) Material strength;
(4) Liquid depth;
(5) Pipe penetration, joint material and method of sealing;
(6) Access manhole riser, lid, and other proposed appurtenances to the septic tank;
(7) Approved effluent filter(s), filter support detail and filter access detail; and
(8) Other design features.

History Note: Authority G.S. 130A-335 (e)(f)[1][2nd];
      Eff. July 1, 1982;
      Amended Eff. January 1, 1990;
      Temporary Amendment Eff. January 1, 1999;

15A NCAC 18A .1954 MINIMUM STANDARDS FOR PRECAST REINFORCED CONCRETE TANKS
(a) The following are minimum standards of design and construction of precast reinforced concrete septic tanks:

(1) The minimum requirement for the liquid depth is 36 inches.
(2) A minimum of nine inches freeboard is required, the freeboard being the air space between the top of the liquid and the bottom side of the lid or cap of the tank.
(3) The length of the septic tank shall be at least twice as long as the width.
(4) 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. The blockouts for these openings shall leave a concrete thickness of not less than one inch in the tank wall. The blockouts shall be made for a minimum of four-inch pipe or a maximum of six-inch pipe. The outlet pipe penetration of the tank shall be through a resilient, watertight, sealed, non-corrosive and flexible connective sleeve. The outlet pipe penetration shall be precast to be compatible with the connective sleeve. No pipe penetration points or openings shall be permitted below the tank liquid level.
(5) The inlet pipe in the tank shall be a straight pipe.
(6) The outlet shall be through an approved effluent filter secured in place in an effluent filter support case. The effluent filter support case shall serve as a functioning sanitary tee with the bottom inlet extending down between 25 and 40 percent of the liquid depth. The approved effluent filter and support case shall be furnished by the septic tank manufacturer. The invert of the outlet shall be at least two inches lower in elevation than the invert of the inlet.
(7) Other equivalent methods of supporting the effluent filter and for making the pipe penetrations shall be approved by the On-Site Wastewater Section.
(8) In order to obtain approval of an effluent filter, the filter manufacturer shall submit to the State the following information with supporting documentation:
   (A) For each septic tank system that is designed to treat 3,000 gallons per day or less of sewage, a written certification that the effluent filter is designed, constructed, and performs in compliance with G.S. 130A-335.1(a)(1)(2)(3), and (4);
   (B) Sizing as to capacity and wastewater strength for all models of proposed filters to be approved; and
   (C) Specifications for application, installation, operation, and maintenance.
(9) All tanks shall be manufactured with a cast-in-place partition so that the tank contains two compartments. The partition shall be located at a point not less than two-thirds nor more than three-fourths the length of the tank from the inlet end. The top of the partition shall terminate two inches below the bottom side of the tank top in order to leave space for air or gas passage between compartments. The top and bottom halves of the partition shall be cast in such manner as to leave a water passage slot four inches high for the full
Adequate access openings must be provided in the tank top. Access shall be provided for cleaning or rodding out of the inlet pipe, for cleaning or clearing the air or gas passage space above the partition, for pumping of each compartment, and for the maintenance of the effluent filter. This shall be accomplished by properly locating two manholes or access openings with each having a minimum opening of 15 inches by 15 inches or 17 inches in diameter as the opening cuts the plane of the bottom side of the top of the tank or other equidimensional opening with at least 225 square inches. The manhole covers shall be beveled on all sides in such manner as to accommodate a uniform load of 150 pounds per square foot without damage to the cover or the top of the tank. If the top of the tank is to be multislab construction, the slabs over the inlet of the tank, partition, and outlet of the tank must not weigh in excess of 150 pounds each. Multislab construction allows for the elimination of the manholes. Manhole covers, tank lids, access opening covers, or slabs shall have a handle of steel or other rot-resistant material equivalent in strength to a No. 3 reinforcing rod (rebar).

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 in the top, bottom ends, and sides of the tank. The reinforcing wire shall be lapped at least six inches. Concrete cover shall be required for all reinforcement. Reinforcement shall be placed to maximize the structural integrity of the tank. The tank, tank lid, riser and riser cover shall be able to withstand a uniform live loading of 150 pounds per square foot in addition to all loads to which an underground tanks, riser, or riser cover is normally subjected, such as the dead weight of the concrete and soil cover, active soil pressure on tank walls, and the uplifting force of the ground water. Additional reinforcement shall be required when the loads on a concrete tank, riser, or riser cover are exceeded by subjecting it to vehicular traffic or when the top of the tank is placed deeper than three feet below the finished grade.

The top, bottom, ends, and sides of the tank must have a minimum thickness of two and one-half inches.

A minimum 28-day concrete compressive strength of 3,500 pounds per square inch shall be used in the construction of the septic tank, concrete access riser and riser cover. The concrete shall achieve a minimum compressive strength of 3,000 pounds per square inch prior to removal of the tank from the place of manufacture. It shall be the responsibility of the manufacturer to certify that this condition has been met prior to shipment. A septic tank shall be subject to testing to ascertain the strength of the concrete prior to its being approved for installation. Recognized devices for testing the strength of concrete include a properly calibrated Schmidt Rebound Hammer or Windsor Probe Test. Accelerated curing in the mold by use of propane gas or other fuels is prohibited, except in accordance with accepted methods and upon prior approval of the State.

After curing, tanks manufactured in two sections and as required, concrete risers shall be joined and sealed at the joint by using a mastic, butyl rubber, or other pliable sealant that is waterproof, corrosion-resistant, and approved for use in septic tanks. The sealant shall have a minimum size of one inch nominal diameter or equivalent. Before sealing, the joint shall be smooth, intact, and free of all deleterious substances. Tank halves shall be properly aligned to ensure a tight seal. The sealant shall be provided by the manufacturer.

All tanks produced shall bear an imprint identifying the manufacturer, the serial number assigned to the manufacturer’s plans and specifications approved by the State, and the liquid or working capacity of the tanks. This imprint shall be located to the right of the blockout made for the outlet pipe on the outlet end of the tank. All tanks shall also be permanently marked with the date of manufacture adjacent to the tank imprint or on the top of the tank directly above the imprint.

Risers and access covers shall have a clear opening sized to allow for maintenance and removal of internal devices of the septic tank and shall not allow accidental entry. The access cover and tank lid shall be designed, constructed, and maintained to prevent unauthorized access. Risers shall be sealed watertight where they join the top of the septic tank, and constructed to prevent water inflow through the lid or cover.

(b) Pump tanks shall meet the construction requirements of Paragraph (a) of this Rule with the following modifications.
(1) Tanks shall be cast with a single compartment, or, if a partition is provided, the partition shall be cast to contain a minimum of two four-inch diameter circular openings, or equivalent, located no more than 12 inches above the tank bottom.

(2) There shall be no requirement as to tank length, width, or shape, provided the tank satisfies all other requirements of this Section.

(3) 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.

(4) After joining, tanks manufactured in two sections shall be plastered along the joint with hydraulic cement, cement mortar, or other waterproofing sealant. Other methods of waterproofing tanks may be used as specifically approved in the plans and specifications for the tank. Prior to backfilling, the local health department shall make a finding that a two section tank is watertight if a soil wetness condition is present within five feet of the elevation of the top of the tank.

(5) Tanks shall be vented and accessible for routine maintenance. A watertight access manhole with removable lid shall be provided over the pump with a minimum diameter of 24 inches. The access manhole shall extend at least to six inches above finished grade and be designed and maintained to prevent surface water inflow. Larger or multiple manholes shall be provided when two or more pumps are required. Pumps shall be removable without requiring entrance into the tank. Manhole lids and electrical controls shall be secured against unauthorized access. Manhole risers shall be joined to the tank top and sealed in accordance with Paragraphs (a)(14) and (b)(4) of this Rule.

(6) All pump tanks shall bear an imprint identifying the manufacturer, pump tank serial number assigned by the Division of Environmental Health, and the liquid or working capacity of the tank. The imprint shall be located to the left of the outlet blockout. All tanks shall also be permanently marked with the date of manufacture adjacent to the tank imprint or on the top of the tank directly above the imprint.

(c) Plans for prefabricated tanks, risers and riser covers, other than those approved under Paragraph (a) or (b) of this Rule shall be approved on an individual basis as determined by the information furnished by the designer which indicates the tank, riser or riser cover will provide equivalent effectiveness as those designed in accordance with the provisions of Paragraphs (a) and (b) of this Rule.

(d) Tanks other than approved prefabricated tanks shall be constructed consistent with the provisions of this Rule except as follows:

(1) Cast-in-place concrete septic and pump tanks shall have a minimum wall thickness of six inches.

(2) Concrete block or brick masonry tanks shall have a minimum wall thickness of at least six inches when the design volume is less than 1,000 gallons and a minimum wall thickness of at least eight inches when the design volume is 1,000 gallons or more. All joints between masonry units shall be mortared using masonry cement mortar or equivalent. The joints shall have a nominal thickness of three-eighths inch. All concrete block masonry tanks shall have a minimum wall reinforcement of number three reinforcing bars on 20-inch centers, or equivalent. The maximum allowable reinforcement spacing in either direction shall be four feet. All block wall cores shall be filled with concrete with a minimum compressive strength of 3,000 pounds per square inch. All tanks constructed of block or brick shall be plastered on the inside with a 1:3 mix (one part cement, three parts sand) of Portland cement at least three-eighths inch thick or the equivalent using other approved waterproofing material.

(3) The bottom of the built-in-place tank shall be poured concrete with a minimum thickness of four inches. All built-in-place tanks shall be reinforced to satisfy the structural strength requirements of Paragraph (a)(9) of this Rule. Reinforcement shall be placed in both directions throughout the entire tank, including top, bottom, walls, and ends.

(e) Manufacturers of septic tanks, effluent filters, pump tanks, risers, and riser locators shall comply with the General Statutes, this Section, and Approval conditions. If the approved products or materials are found to be in non-compliance, the Operation Permit shall not be issued or shall be denied. The State shall suspend or revoke the product approval upon a finding that the information submitted is falsified, the product has been subsequently altered, or subsequent experience with the product results in altered conclusions about its design or performance. Suspension or revocation of the product approval shall not affect systems previously installed pursuant to the approval.

History Note: Authority G.S. 130A-335 (e)(f)1)(2nd); Eff. July 1, 1982; Amended Eff. August 1, 1991; January 1, 1990; Temporary Amendment Eff. January 1, 1999;

15A NCAC 18A .1955 DESIGN INSTALLATION CRITERIA FOR CONVENTIONAL SEWAGE SYSTEMS
(a) Conventional septic tank systems shall utilize a septic tank of approved construction with an approved effluent filter and support case, access devices, and design volume which provides primary treatment of the sewage in accordance with the provisions of these Rules. The effluent filter support case shall be solvent welded to a PVC Schedule 40 outlet pipe with a minimum diameter of three inches inserted through the outlet connective sleeve creating a watertight and mechanically sound joint and shall extend at least 24 inches beyond the tank outlet. The filter and support case shall be installed and maintained in accordance with the filter manufacturer’s specifications. The effluent filter shall be accessible without the operator entering the septic tank and removable by hand. The effluent filter shall be secured in the support case and located under the outlet access opening or manhole. When the top of the septic tank or access manhole is installed below finished grade, the location of each access opening or manhole shall be visibly marked at finished grade. The visible marker(s) shall be located over or within a five foot radius of each access opening or manhole. The marker(s) shall be identified as a septic tank locator. When not placed over each access opening or manhole, the marker(s) shall indicate location of tank access opening(s) or manhole(s). The filtered effluent from the septic tank shall be conveyed to an approved nitrification line where the soil provides for final treatment and disposal of the sewage.

(b) Table II shall be used in determining the maximum long-term acceptance rate for septic tank systems of conventional trench design. The long-term acceptance rate shall be based on the most hydraulically limiting naturally occurring soil horizon within three feet of the ground surface or to a depth of one foot below trench bottom, whichever is deeper.

<table>
<thead>
<tr>
<th>SOIL GROUP</th>
<th>SOIL TEXTURE CLASSES (USDA CLASSIFICATION)</th>
<th>LONG-TERM ACCEPTANCE RATE gpd/ft2</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Sands (With S or PS structure and clay mineralogy)</td>
<td>Sand Loamy Sand</td>
</tr>
<tr>
<td>II</td>
<td>Coarse Loams (With S or PS structure and clay mineralogy)</td>
<td>Sandy Loam Loam</td>
</tr>
<tr>
<td>III</td>
<td>Fine Loams (With S or PS structure and clay mineralogy)</td>
<td>Sandy Clay Loam Silt Loam Clay Loam Silty Clay Loam Silt</td>
</tr>
<tr>
<td>IV</td>
<td>Clays (With S or PS structure and clay mineralogy)</td>
<td>Sandy Clay Silty Clay Clay</td>
</tr>
</tbody>
</table>

The long-term acceptance rate shall not exceed the mean rate for the applicable soil group for food service facilities, meat markets, and other places of business where accumulation of grease can cause premature failure of a soil absorption system. Long-term acceptance rates up to the maximum for the applicable soil group may be permitted for facilities where data from comparable facilities indicates that the grease and oil content of the effluent will be less than 30 mg/l and the chemical oxygen demand (COD) will be less than 500 mg/l.

(c) The design daily sewage flow shall be divided by the long-term acceptance rate to determine the minimum area of nitrification trench bottom. The total length of the nitrification line shall be determined by dividing the required area of
nitrification trench bottom by the trench width, not to exceed 36 inches. Trenches shall be located not less than three times the trench width on centers with a minimum spacing of five feet on centers.

(d) The local health department may permit the use of a bed system on sites where the soil texture can be classified into either Soil Groups I, II, or III, meeting the other requirements of this Section, and only on lots which are limited by topography, space, or other site-planning considerations. In such cases, the number of square feet of bottom area needed shall be increased by 50 percent over what would be required for a trench system. Nitrification lines shall be at least 18 inches from the side of the bed and shall have lines on three-foot centers. When the design daily flow exceeds 600 gallons per day, bed systems shall not be used.

(e) The pipe or tubing used between the septic tank and the nitrification line shall be a minimum of three-inch nominal size Schedule 40 polyvinyl chloride (PVC), polyethylene (PE), or acrylonitrile-butadiene-styrene (ABS) or equivalent with a minimum fall of one-eighth inch per foot. However, three-inch or greater nonperforated polyethylene (PE) corrugated tubing may be substituted for Schedule 40 pipe between a distribution device and the nitrification line if the following conditions are met:

1. the trench has a minimum bottom width of one foot;
2. the trench bed is compacted, smooth, and at a uniform grade;
3. the pipe is placed in the middle of the trench with a minimum of three inches of clearance between the pipe and the trench walls;
4. washed stone or washed gravel envelope is placed in the trench on both sides of the pipe and up to a point at least two inches above the top of the pipe;
5. a minimum of six inches of soil cover is placed and compacted over the stone or gravel envelope; and
6. earthen dams consisting of two feet of undisturbed or compacted soil are placed at both ends of the trench separating the trench from the distribution device and the nitrification line.

All joints from the septic tank to the nitrification line shall be watertight.

(f) When four or six-inch diameter corrugated plastic tubing is used for nitrification lines, it shall be certified as complying with ASTM F 405, Standard Specification for Corrugated Polyethylene (PE) Tubing and Fittings, which is hereby adopted by reference in accordance with G.S. 150B-21.6. The corrugated tubing 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 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 nitrification lines provided the pipe satisfies the requirements of this Section for hole size and spacing and the pipe has a stiffness equivalent to corrugated polyethylene tubing (ASTM F-405) or stronger. The nitrification line shall be located in the center of the nitrification trench.

(g) Nitrification trenches shall be constructed as level as possible but in no case shall the fall in a single trench bottom exceed one-fourth inch in 10 feet as determined by an engineer's level or equivalent. When surface slopes are greater than two percent, the bottom of the nitrification trenches shall follow the contour of the ground. An engineer's level or equivalent shall be used for installation and inspection. The nitrification trench shall not exceed a width of three feet and a depth of three feet, except as approved by the local health department.

(h) Rock used in soil absorption systems shall be clean, washed gravel or crushed stone and graded or sized in accordance with size numbers 3, 4, 5, 57, or 6 of ASTM D-448 (standard sizes of coarse aggregate) which is hereby adopted by reference in accordance with G.S.150B-21.6. Copies may be inspected in, and copies obtained from the Division of Environmental Health, P.O. Box 27687, Raleigh, North Carolina 27611-7687. The rock shall be placed a minimum of one foot deep with at least six inches below the pipe and two inches over the pipe and distributed uniformly across the trench bottom and over the pipe.

(i) The soil cover over the nitrification field shall be to a depth of at least six inches. The finished grade over the nitrification field shall be landscaped to prevent the ponding of surface water and runoff of surface water shall be diverted away from the nitrification field. Soil cover above the original grade shall be placed at a uniform depth over the entire nitrification field, except as required to prevent the ponding of surface water, and shall extend laterally five feet beyond the nitrification trench. The soil cover shall be placed over a nitrification field only after proper preparation of the original ground surface. The type of soil cover and placement shall be approved by the local health department.

(j) Effluent distribution devices, including distribution boxes, flow dividers, and flow diversion devices, shall be of sound construction, watertight, not subject to excessive corrosion, and of adequate design as approved by the local health department. Effluent distribution devices shall be separated from the septic tank and nitrification lines by a minimum of two feet of undisturbed or compacted soil and shall be placed level on a solid foundation of soil or concrete to prevent differential settlement of the device. The installer shall demonstrate that the distribution devices perform as designed.
(k) Grease traps or grease interceptors shall be required at food service facilities, meat markets, and other places of business where the accumulation of grease can cause premature failure of a soil absorption system. The following design criteria shall be met:

1. The grease trap shall be plumbed to receive all wastes associated with food handling and no toilet wastes;
2. The grease trap liquid capacity shall be sufficient to provide for at least five gallons of storage per meal served per day, or at least two-thirds of the required septic tank liquid capacity, or a capacity as determined in accordance with the following:

\[ LC = D \times GL \times ST \times HR/2 \times LF \]

where:
- \( LC \) = grease trap liquid capacity (gallons)
- \( D \) = number of seats in dining area
- \( GL \) = gallons of wastewater per meal (1.5 single-service; 2.5 full service)
- \( ST \) = storage capacity factor = 2.5
- \( HR \) = number of hours open
- \( LF \) = loading factor = (1.25 interstate highway = 1.0 other highways and recreational areas = 0.8 secondary roads)

3. Two or more chambers must be provided, with total length-to-width ratio at least 2:1. Chamber opening and outlet sanitary tee must extend down at least 50 percent of the liquid depth.
4. Access manholes, with a minimum diameter of 24 inches, shall be provided over each chamber and sanitary tee. The access manholes shall extend at least to finished grade and be designed and maintained to prevent surface water infiltration. The manholes shall also have readily removable covers to facilitate inspection, filter maintenance, and grease removal.
5. One tank or multiple tanks, in series, shall be constructed in accordance with Rules .1952, .1953, and .1954 of this Section, and the provisions of Paragraphs (k)(3) and (k)(4) of this Rule.
6. Where it has been demonstrated that specially designed grease interceptors will provide improved performance, the grease trap liquid capacity may be reduced by up to 50 percent.

(l) Stepdowns or drop boxes may be used where it is determined by the local health department that topography prohibits the placement of nitrification trenches on level grade. Stepdowns shall be constructed of two linear feet of undisturbed soil and constructed to a height which fully utilizes the upstream nitrification trench. Effluent shall be conveyed over the stepdown through nonperforated pipe or tubing and backfilled with compacted soil. Drop boxes shall be constructed so that the invert of the inlet supply pipe is one inch above the invert of the outlet supply pipe which is connected to the next lower drop box. The top of the trench outlet laterals, which allow effluent to move to the nitrification lines, shall be two inches below the invert of the outlet supply line. Area taken up by stepdowns and drop boxes shall not be included as part of the minimum area required for nitrification trench bottoms.

(m) Nitrification trenches shall be installed with at least one foot of naturally occurring soil between the trench bottom and saprolite, rock, or any soil horizon unsuitable as to structure, clay mineralogy or wetness. If the separation between the bottom of the nitrification trench and any soil wetness condition is less than 18 inches, and if more than six inches of this separation consists of Group I soils, a low pressure pipe system shall be required.

(n) If sewage effluent pumps are used, the applicable requirements of Rule .1952 of this Section shall apply.

(o) Collection sewers shall be designed and constructed in accordance with the following minimum criteria:

1. Building drains and building sewers shall be in accordance with the state plumbing code and approved by the local building inspector.
2. Pipe material shall be specified to comply with the applicable ASTM standards, with methods of joining and other special installation procedures specified which are appropriate for the pipe to be used.
3. Gravity sewers shall be designed to maintain scour velocities of at least two feet per second with the pipe half full and a minimum of one foot per second at the peak projected instantaneous flow rate. Force mains shall be sized to obtain at least a two-foot per second scour velocity at the projected pump operating flow rate.
4. Infiltration and exfiltration shall not exceed 100 gallons per day per inch diameter per mile of gravity sewer pipe or 20 gallons per day per inch diameter per mile of pressure pipe in force mains and supply lines.
Three-foot minimum cover shall be provided for all sewers unless ferrous material pipe is specified. Ferrous material pipe or other pipe with proper bedding to develop design-supporting strength shall be provided where sewers are subject to traffic-bearing loads.

Manholes shall be used for sewers at any bends, junctions, and at least every 425 feet along the sewer lines. Drop manholes are required where the inlet to outlet elevation difference exceeds 2.5 feet. Manhole lids shall be watertight if located below the 100-year flood elevation, within 100 feet of any public water supply source, or within 50 feet of any private water supply source or any surface waters classified WS-I, WS-II, WS-III, SA, SB, or B.

Manholes shall be used for sewers at any bends, junctions, and at least every 425 feet along the sewer lines. When used, cleanouts are required at least every 50 feet for four-inch sewers and every 100 feet for six-inch sewers and at all junctions and bends which exceed 45 degrees.

Alternating dual field nitrification systems may be utilized where soils are limited by high clogging potentials (Soil Groups III and IV) and where the potential for malfunction and need for immediate repair is required. Alternating dual nitrification fields shall be designed with two complete nitrification fields, each sized a minimum of 75 percent of the total area required for a single field and separated by an effluent flow diversion valve. The diversion valve shall be constructed to resist 500 pounds crushing strength, structurally sound, and shall be resistant to corrosion. Valves placed below ground level shall be provided with a valve box and suitable valve stem so that they may be operated from the ground surface.

History Note:  Authority G.S. 130A-335 (e)(f)(f1)[2nd];
Eff. July 1, 1982;
Amended Eff. August 1, 1991; January 1, 1990; August 1, 1988; February 1, 1987;
Temporary Amendment Eff. January 1, 1999;

15A NCAC 18A .1956 MODIFICATIONS TO SEPTIC TANK SYSTEMS
The following are modifications to septic tank systems or sites which may be utilized singly or in combination to overcome selected soil and site limitations. Except as required in this Rule, the provisions for design and installation of Rule .1955 and .1970 of this Section shall apply:

1) SHALLOW SYSTEMS: Sites classified UNSUITABLE as to soil depth or soil wetness may be reclassified as PROVISIONALLY SUITABLE with respect to soil depth or soil wetness conditions by utilizing shallow placement of nitrification trenches in the naturally occurring soil. Shallow trenches may be used where at least 24 inches of naturally occurring soil are present above saprolite, rock, or soil wetness conditions and all other factors are PROVISIONALLY SUITABLE or SUITABLE. Shallow trenches shall be designed and constructed to meet the vertical separation requirements in Rule .1955(m) or .1970 of this Section. The long-term acceptance rate shall be based on the most hydraulically limiting naturally occurring soil horizon within 24 inches of the ground surface or to a depth of one foot below the trench bottom, whichever is deeper. Soil cover above the original grade shall be placed at a uniform depth over the entire nitrification field and shall extend laterally five feet beyond the nitrification trench. The type and placement of soil cover shall be approved by the local health department.

2) DRAINAGE AND RESTRICTIVE HORIZONS: Sites classified UNSUITABLE as to soil wetness conditions or restrictive horizons may be reclassified PROVISIONALLY SUITABLE as to soil wetness conditions or restrictive horizons when:
   (a) Soils are Soil Groups I or II with SUITABLE structure, and clay mineralogy;
   (b) Restrictive horizons, if present, are less than three inches thick or less than 12 inches from the soil surface;
   (c) Modifications can be made to meet the requirements in Rule .1955(m) of this Section for the separation between the water table and the bottom of the nitrification trench at all times and when provisions are made for maintenance of the drainage systems;
   (d) Easements are recorded and have adequate width for egress and ingress for maintenance of drainage systems serving two or more lots; and
   (e) Maintenance of the drainage system is made a condition of any permit issued for the use or operation of a sanitary sewage system.
Drainage may be used in other types of soil when the requirements of Rule .1942, .1970 or .1948(d) in this Section are met.

(3) MODIFIED TRENCHES: Modified nitrification trenches or lines, including large diameter pipe (greater than four inches I.D.), and specially designed porous block systems may be permitted by the local health department as follows:

(a) GRAVELLESS TRENCHES: Gravelless nitrification trench systems may be substituted for conventional trench systems on any site found to be SUITABLE or PROVISIONALLY SUITABLE in accordance with Rules .1940 to .1948 of this Section to eliminate the need for gravel, minimize site disturbance, or for other site planning considerations. Gravelless nitrification trench systems shall not be used, however, where wastes contain high amounts of grease and oil, such as restaurants. Large diameter pipe systems and porous block systems may be permitted by the local health department as follows:

(i) Large diameter pipe systems shall consist of eight-inch or 10-inch (inside diameter), corrugated, polyethylene tubing encased in a nylon, polyester, or nylon/polyester blend filter wrap installed in a nitrification trench, 12 or more inches wide and backfilled with soil classified as soil group I, II, or III. Nitrification area requirement shall be determined in accordance with Rules .1955(b) and .1955(c), or in Rule .1956(6)(b), Table III(a) of this Section, when applicable, with eight-inch tubing considered equivalent to a two-foot-wide conventional trench and 10-inch tubing considered equivalent to a two and one-half-foot-wide conventional trench. The long-term acceptance rate shall not exceed 0.8 gallons per day per square foot. Tubing and fittings shall comply with the requirements of ASTM F-667, "Standard Specification for Large Diameter Corrugated Polyethylene Pipe and Fittings," which is hereby incorporated by reference including any subsequent amendments and editions. Copies of the standards may be inspected at the Division of Environmental Health Central Office, located at 2728 Capital Blvd., Raleigh, NC, and copies may be downloaded from the Internet at http://www.astm.org, or obtained from ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19438-2959, at a cost of thirty dollars ($30.00). The corrugated tubing shall have two rows of holes, each hole between three-eighths and one-half-inch in diameter, located 120 degrees apart along the bottom half of the pipe (each 60 degrees from the bottom center line) and staggered so that one hole is present in the valley of each corrugation. The tubing shall be marked with a visible top location indicator, 120 degrees away from each row of holes. Filter wrap shall be spun, bonded, or spunlaced nylon, polyester, or nylon/polyester blend nylon filter wrap meeting the minimum requirements in Table III(a):

<table>
<thead>
<tr>
<th>PROPERTY</th>
<th>VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit Weight</td>
<td>1.0 ounce per square yard</td>
</tr>
<tr>
<td>Sheet Grab Tensile Strength</td>
<td>Machine Direction: 23 pounds</td>
</tr>
<tr>
<td>Trapezoid Tear Strength</td>
<td>Machine Direction: 6.2 pounds</td>
</tr>
<tr>
<td></td>
<td>Cross Direction: 5.1 pounds</td>
</tr>
<tr>
<td>Mullen Burst Strength</td>
<td>40 pounds per square inch or 276 kilopascals</td>
</tr>
<tr>
<td>Frazier Air Permeability</td>
<td>500 cubic feet per minute per square foot at pressure differential of 0.5 inches of water</td>
</tr>
</tbody>
</table>

Corrugated tubing shall be covered with filter wrap at the factory and each joint shall be immediately encased in a black polyethylene sleeve which shall continue to encase the large diameter pipe and wrap until just prior to installation in the trench to prevent physical damage and ultraviolet radiation deterioration of the filter wrap. Large diameter pipe systems shall be installed in accordance with this Rule and the manufacturer's guidelines. The trench bottom and pipe shall be level (with a maximum fall of one inch in 100 feet). Rocks and large soil clumps shall be removed from backfill material prior
to being used. Clayey soils (soil group IV) shall not be used for backfill. The near end of the large diameter pipe shall have an eight-inch by four-inch offset adapter (small end opening at top) suitable for receiving the pipe from the septic tank or distribution device and making a mechanical joint in the nitrification trench.

(ii) A Prefabricated, Permeable Block Panel System (PPBPS), utilizing both horizontal and vertical air chambers and constructed to promote downline and horizontal distribution of effluent, may be used under the following conditions:

(A) the soil and site criteria of this Section shall be met;
(B) in calculating the required linear footage for a PPBPS's nitrification field, the linear footage for the nitrification line as determined in Rule .1955 (b) and (c), or in Rule .1956 (6)(b), Table III(a) of this Section when applicable, shall be multiplied by 0.5 for a 16 inch PPBPS;
(C) installation of the PPBPS shall be in accordance with Rule .1955 except:
   (I) the PPBPS trench shall be located not less than eight feet on centers;
   (II) the installation shall be in accordance with the manufacturer's specifications; and
   (III) the sidewalls of nitrification trenches placed in Group IV soils shall be raked to open pores which were damaged or sealed during excavation;
(D) where design sewage flow is more than 480 gallons per day, the system shall be pressure-dosed; and
(E) the long-term acceptance rate shall not exceed 0.8 gallons per day per square foot.

(b) Other types of nitrification trenches or lines may be approved by the local health department on a site-specific basis in accordance with Rule .1969 of this Section.

(4) INTERCEPTOR DRAINS: Sites classified as UNSUITABLE as to soil wetness conditions because of the presence of lateral water movement may be reclassified PROVISIONALLY SUITABLE as to soil wetness conditions when such water is intercepted and diverted to prevent saturation of the soil absorption system.

(5) STEEP SLOPES: Stable slopes greater than 30 percent may be reclassified as PROVISIONALLY SUITABLE when:

(a) The soil characteristics can be classified as SUITABLE or PROVISIONALLY SUITABLE to a depth of at least one foot below the bottom of the nitrification trench at the upslope side of the trench;
(b) Surface water runoff is diverted around the nitrification field if necessary to prevent scouring or erosion of the soil over the field; and
(c) The finished grade over the nitrification field site is returned to the original topography and seeded to establish a permanent vegetative cover, unless otherwise specified by the local health department.

(6) SAPROLITE SYSTEM: Sites classified UNSUITABLE as to soil depth, with saprolite present, may be reclassified PROVISIONALLY SUITABLE as to soil depth when:

(a) An investigation of the site using pits at locations specified by the local health department is conducted. The following physical properties and characteristics shall be present in the two feet of saprolite below the proposed trench bottom:
   (i) the saprolite texture is sand, loamy sand, sandy loam, loam, or silt loam;
   (ii) clay mineralogy is suitable;
   (iii) greater than two-thirds of the material has a moist consistence that is loose, very friable, friable, or firm;
   (iv) the saprolite wet consistence is nonsticky or slightly sticky and nonplastic or slightly plastic;
   (v) the saprolite is in an undisturbed, naturally occurring state; and
   (vi) the saprolite has no open and continuous joints, quartz veins, or fractures that are relic of parent rock to a depth of two feet below the proposed trench bottom.
(b) Table III(b) is used in determining the long-term acceptance rate. The long-term acceptance rate shall be based on the most hydraulically limiting, naturally occurring saprolite to a depth of two feet below trench bottom.
<table>
<thead>
<tr>
<th>SAPROLITE GROUP</th>
<th>SAPROLITE TEXTURAL CLASS</th>
<th>LONG-TERM ACCEPTANCE RATE (gallons per day per square foot)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Sands</td>
<td>0.8 – 0.6</td>
</tr>
<tr>
<td></td>
<td>Loamy Sand</td>
<td>0.7 – 0.5</td>
</tr>
<tr>
<td>II</td>
<td>Loams</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sandy Loam</td>
<td>0.6 – 0.4</td>
</tr>
<tr>
<td></td>
<td>Loam</td>
<td>0.4 – 0.2</td>
</tr>
<tr>
<td></td>
<td>Silt Loam</td>
<td>0.3 – 0.1</td>
</tr>
</tbody>
</table>

If a low pressure pipe system is used, the long-term acceptance rate in Table III(b) shall be reduced by one-half and the system shall be designed in accordance with Rule .1957(a) of this Section, except that Rule .1957(a)(2)(B) and Rule .1957(a)(3) shall not apply. Other design criteria may also be used in conjunction with an advanced pretreatment system pursuant to Rule .1970. Saprolite textural classifications shall be determined from disturbed materials and determined by Rule .1941(a)(1) of this Section. Low-pressure distribution shall be used when the total length of nitrification lines exceeds 750 feet in a single system.

(c) The design daily flow does not exceed 1000 gallons.

(d) The nitrification field is constructed using nitrification trenches with a maximum width of three feet and a maximum depth of three feet on the downslope side of the nitrification trench. The bottom of a nitrification trench shall be a minimum of two feet above rock or saprolite that does not meet the requirements of Subparagraph (6)(a) of this Rule, or the requirements of Subparagraph (h)(2) of Rule .1970 in conjunction with an advanced pretreatment system. However, where SUITABLE or PROVISIONALLY SUITABLE soil underlies the trench bottom, this separation distance may be reduced by subtracting the actual soil depth beneath the trench bottom from 24 inches to establish the minimum separation distance from the trench bottom to rock.

(e) The bottom of any nitrification trench is a minimum of two feet above any wetness condition.

(f) Surface and subsurface interceptor drains are required on sites with more slowly permeable horizons above the usable saprolite to intercept laterally flowing waters or perched waters. Exceptions to the provisions of Rule .1950(a) found in Rule .1950 and .1951 of this Section shall not apply to systems installed pursuant to this Item [Rule .1956(6)]. Other saprolite systems may be approved on a site-specific basis in accordance with Rule .1948(d) or .1970 of this Section.

(7) SAND LINED TRENCH SYSTEM: Sites classified UNSUITABLE as to soil wetness, soil morphology, restrictive horizon or soil depth where a horizon with higher permeability underlies less permeable horizons, may be reclassified PROVISIONALLY SUITABLE as to soil wetness, soil morphology, restrictive horizon or soil depth (soil depth to parent material, not rock) when:

(a) An investigation of the site using pits or auger borings at locations specified by the local health department is conducted. The following physical properties and characteristics shall be present:

(i) if the receiving permeable horizon is deeper than five feet below the natural grade, the effluent is to receive pretreatment to TS-I or TS-II level prior to pressure dispersal in the sand lined trenches. If the receiving permeable horizon is encountered at depths of five feet or less below the natural grade, pretreatment to TS-I or TS-II level and pressure dispersal is not required;

(ii) the texture of the receiving permeable horizon is sand, loamy sand, sandy loam, loam, or silt loam;

(iii) the structure of the receiving horizon is classified as SUITABLE or PROVISIONALLY SUITABLE;

(iv) the moist consistence of the receiving permeable horizon is loose, very friable, friable, or firm;

(v) if the receiving permeable horizon has zones of heavier textured materials, these zones are discontinuous with an average thickness not exceeding 1/3 of the required thickness of the receiving permeable horizon;
(vi) if the texture of the receiving permeable horizon is sandy loam or loam, and the system design flow is greater than 600 gallons per day, the saturated hydraulic conductivity of the permeable horizon shall be field-determined; and

(vii) if the texture of the receiving permeable horizon is silt loam, the saturated hydraulic conductivity of the permeable horizon shall be field-determined.

(b) The minimum thickness required of the receiving permeable horizon is dependent upon the texture of the receiving horizon as follows:
(i) sand or loamy sand – 1 foot thick;
(ii) sandy loam or loam – 2 feet thick; or
(iii) silt loam – 3 feet thick.

(c) Table III(c) is used in determining the long-term acceptance rate (LTAR) for all sand-lined trench systems. The long-term acceptance rate shall be:
(i) the rate set forth in Table III(c), based on the most hydraulically limiting, naturally occurring soils overlying the permeable receiving layer, or
(ii) when the saturated hydraulic conductivity of the underlying horizons is required to be determined pursuant to Subitem (7)(a)(vi) or Subitem (7)(a)(vii) of this Rule, either the rate set forth in Table III(c), based on the most hydraulically limiting, naturally occurring soils overlying the permeable receiving layer, or 10 percent of the saturated hydraulic conductivity of the underlying permeable horizon (or 20 percent with TS-I or TS-II pretreatment), whichever is less.

<table>
<thead>
<tr>
<th>SOIL GROUP</th>
<th>TEXTURAL CLASS OF MOST HYDRAULICALLY LIMITING OVERLYING SOIL HORIZON</th>
<th>DISTRIBUTION OR PRETREATMENT CONDITION</th>
<th>LONG-TERM ACCEPTANCE RATE (LTAR) (gallons per day per square foot, on trench bottom area basis)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Sands (Sand, Loamy Sand)</td>
<td>Gravity Distribution</td>
<td>0.7 – 0.9</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pressure Dispersal</td>
<td>0.8 – 1.2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pressure Dispersal and TS-I or TS-II pretreatment</td>
<td>0.9 – 1.4</td>
</tr>
<tr>
<td>II</td>
<td>Coarse Loams (Sandy Loam, Loam)</td>
<td>Gravity Distribution</td>
<td>0.5 – 0.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pressure Dispersal</td>
<td>0.6 – 0.8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pressure Dispersal and TS-I or TS-II pretreatment</td>
<td>0.7 – 1.0</td>
</tr>
<tr>
<td>III</td>
<td>Fine Loams (Sandy Clay Loam, Silt Loam, Clay Loam, Silty Clay Loam, Silt)</td>
<td>Gravity Distribution</td>
<td>0.2 – 0.4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pressure Dispersal</td>
<td>0.3 – 0.6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pressure Dispersal and TS-I or TS-II pretreatment</td>
<td>0.4 – 0.8</td>
</tr>
<tr>
<td>IV</td>
<td>Clays (Clay, Sandy Clay, Silty Clay)</td>
<td>Gravity Distribution</td>
<td>0.1 – 0.2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pressure Dispersal</td>
<td>0.15 – 0.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pressure Dispersal and TS-I or TS-II pretreatment</td>
<td>0.2 – 0.4</td>
</tr>
</tbody>
</table>

*The LTAR for all sand-lined trench systems shall not exceed the loading rates set forth in this table or 10 percent of the saturated hydraulic conductivity of the underlying permeable horizon (or 20 percent with TS-I or TS-II pretreatment) when required to be determined pursuant to Subitem (7)(a)(vi) or Subitem (7)(a)(vii) of this Rule, whichever is less. There shall be no reduction in trench length compared to a conventional gravel trench when accepted or innovative nitrification trenches are used.

If a low pressure pipe system is used, the system shall be designed in accordance with Rule .1957(a) of this Section, except that Rule .1957 (a)(2)(B) and Rule .1957(a)(3) shall not apply and trenches shall be a maximum of three feet in width. Textural classifications of the overlying soils shall be field-determined.
material shall be determined from disturbed materials and determined by Rule .1941(a)(1) of this Section. Pressure distribution shall be used when the total length of nitrification lines exceed 600 linear feet in a single system and pressure dispersal such as LPP or drip irrigation shall be used when the total length of nitrification lines exceeds 1200 linear feet in a single system.

(d) A Certified Operator or a Public Management Entity with a Certified Operator is required for all sand lined trench systems, if required by Article 3 of G.S. 90A. A Public Management Entity with a Certified Operator, if required by Article 3 of G.S. 90A, shall be required for sand lined trench systems when drainage is utilized to lower the water table on a site.

(e) The sand lined trench system is classified as a type V system in accordance with Rule .1961 of this Section, except that the required inspection frequency shall be at least once per year by the operator and greater frequency for advanced pretreatment and pressure dispersal systems as required by Rule .1961, Rule .1969 or Rule .1970.

(f) The design daily flow does not exceed 1000 gallons.

(g) The nitrification field is constructed using nitrification trenches with a maximum width of three feet. The bottom of the gravel portion of the sand lined trench shall be no deeper than 24 inches below finished grade.

(h) The sand lined trenches are constructed to extend into the permeable horizon. If the sand lined trench bottoms are deeper than five feet below the natural grade, the effluent shall receive pretreatment to TS-I or TS-II level prior to dispersal in the sand lined trench.

(i) Filter media used in the sand lined portion of the trench is sand or loamy sand in texture. If required by the local health department in the Construction Authorization, the installer shall provide written laboratory verification of the media textural classification and quality prior to the sand lined trench being installed. When laboratory analysis is required, the material shall be determined to be a clean, uncoated fine, medium, or coarse sand with at least 90 percent in sizes ranging from 0.1 to 1.0 millimeters, with no more than one percent smaller than 0.002 millimeters.

(j) Drainage is required when the sand lined trench is used and soil wetness conditions are present that are not related to lateral water movement. Drainage shall extend into the permeable layer. Drainage shall be maintained on the site to provide for 18 inches of separation between the water table and the bottom of the gravel portion of the trench. This separation distance may be reduced to 12 inches if pressure dispersal is utilized, nine inches if advanced pretreatment meeting TS-I or TS-II is utilized and six inches if both pressure dispersal and TS-I or TS-II pretreatment are utilized.

(k) The drainage plan is prepared by a person or persons who are licensed or registered to consult, investigate, evaluate, plan or design wastewater systems, soil and rock characteristics, ground water hydrology, or drainage systems if required in G.S. 89C, 89E, 89F, or 90A Article 4. The drainage shall have an outlet accessed by gravity or by a designed pump drainage system. The outlet location and elevation must be shown with relative water level elevations and drainfield site elevations labeled on the drainage plan.

(l) Plans and specifications for a drainage system serving two or more lots are prepared in accordance with Rule .1938(c) of this Section.

(m) All required drainage components are considered to be a part of the wastewater system and subject to ownership and easement requirements in Sub-item (2)(d) of this Rule and Paragraphs (c) and (j) of Rule .1938.

(n) Side ditches or surface swales in a U shape around the system are used to facilitate surface water removal. Swales shall be at least 18 inches deep and located at least 25 feet from the outer edge of the nitrification trenches.

(o) The drainfield area is crowned at a minimum grade of one percent as measured from the centerline of the drainfield to the top of the bank of the side ditches or surface swales.

(p) No depressions are allowed over the drainfield area, including no linear depressions shall be allowed over the trenches.

Exceptions to the provisions of Rule .1950(a) found in Rule .1950 and .1951 of this Section shall not apply to systems installed pursuant to this Item [Rule .1956(7)]. Other sand lined trench systems may be approved by the local health department on a site-specific basis in accordance with Rule .1948(d) of this Section.
15A NCAC 18A .1957  CRITERIA FOR DESIGN OF ALTERNATIVE SEWAGE SYSTEMS
(a) LOW-PRESSURE PIPE SYSTEMS: Low-pressure pipe (LPP) systems with a two to five-foot pressure head may be utilized on sites which are SUITABLE or PROVISIONALLY SUITABLE for conventional or modified systems or on sites where soil and site conditions prohibit the installation of a conventional or modified septic tank system if the requirements of this Paragraph are met.

(1) The LPP system shall consist of the following basic components:
(A) a network of small-diameter (one to two inches) perforated PVC 160 pounds per square inch (psi) or stronger pressure-rated pipe placed in naturally occurring soil at shallow depths (generally 12 to 18 inches) in narrow trenches not less than eight inches in width and spaced not less than five feet on center. Trenches shall include at least five inches of washed stone or washed gravel below the pipe and two inches above the pipe; and four inches of soil cover.
(B) an approved, two-compartment septic tank or other approved pretreatment system, and a pumping or dosing tank;
(C) a watertight supply manifold pipe, of Schedule 40 PVC or stronger pressure-rated material or other pressure rated pipe specified in a system designed by a registered professional engineer, for conveying effluent from the dosing chamber to the low-pressure network.

(2) The soil and site criteria for LPP systems shall meet the following requirements:
(A) LPP nitrification fields shall not be installed on slopes in excess of ten percent unless design procedures to assure proper distribution of effluent over the nitrification field are approved. Landscaping of the LPP distribution field shall be constructed to shed rainwater or runoff. All other requirements of Rule .1940 of this Section shall be met.
(B) Site suitability for an LPP system shall be based on the first 24 inches of soil beneath the naturally occurring soil surface. This 24 inches shall consist of SUITABLE or PROVISIONALLY SUITABLE soil as determined in accordance with Rules .1941 through .1944 and .1956 of this Section.
(C) Location of the septic tank, other approved pretreatment unit, pumping or dosing chamber, and nitrification field shall be in accordance with Rule .1950 of this Section. Horizontal distances from the nitrification field shall be measured from a margin two and one-half feet beyond the lateral and manifold pipes.
(D) There shall be no soil disturbance of the site or repair area for an LPP system except the minimum required for installation.
(E) The available space requirements of Rule .1945 of this Section shall apply.

(3) Table IV shall be used in determining the long-term acceptance rate for LPP systems. The long-term acceptance rate shall be based on the most hydraulically limiting, naturally occurring soil horizon within two feet of the ground surface or to a depth of one foot below the trench bottom, whichever is deeper.

<table>
<thead>
<tr>
<th>SOIL GROUP</th>
<th>SOIL TEXTURAL CLASS</th>
<th>USDA CLASSIFICATION</th>
<th>LONG-TERM ACCEPTANCE RATE (gallons per day per square foot)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Sands (with suitable or provisionally suitable clay mineralogy)</td>
<td>Sand Loamy Sand</td>
<td>0.6 – 0.4</td>
</tr>
<tr>
<td>II</td>
<td>Coarse Loams (with suitable or provisionally suitable clay mineralogy)</td>
<td>Sandy Loam Loam</td>
<td>0.4 – 0.3</td>
</tr>
</tbody>
</table>
The long-term acceptance rate shall not exceed 0.5, 0.35, 0.225 or 0.125 gallons per day per square foot for Soil Groups I, II, III, or IV, respectively, for food service facilities, meat markets, and other places of business where accumulation of grease can cause premature failure of a soil absorption system unless data from comparable facilities indicates that the grease and oil content of the effluent will be less than 30 milligrams per liter (mg/l) and the chemical oxygen demand (COD) will be less than 500 mg/l or an approved pretreatment system is used which is designed to produce equal or better effluent quality.

(4) In calculating the number of square feet for the nitrification field, the design sewage flow shall be divided by the long-term acceptance rate from Table IV. In calculating the minimum length of trenches in the LPP system, the total square footage of the nitrification field shall be divided by five feet.

(5) Low-pressure systems shall be designed for uniform distribution of effluent. The trenches shall be level and parallel to the ground elevation contours. Laterals, manifolds and LPP drainfields shall comply with the following design criteria:

(A) The maximum lateral length shall yield no more than a ten-percent difference in discharge rate between the first and last hole along the lateral.

(B) Minimum hole size shall be 5/32-inch for at least two-thirds of the field lateral lines. Smaller holes (no less than 1/8-inch) may be used in no more than one-third of the lateral lines where necessary to balance flow distribution on sloping sites. However, for systems serving restaurants, foodstands, meat markets and other establishments where effluent is expected to have a high clogging potential, the minimum hole size shall be 5/32-inch.

(C) Maximum hole spacing shall be as follows: Soil Group I, five feet; Soil Group II, six feet; Soil Group III, eight feet; and Soil Group IV, ten feet.

(D) The following design provisions are required for sloping sites:
   (i) Separately valved manifolds are required for all subfield segments where the elevation difference between the highest and lowest laterals exceeds three feet.
   (ii) The hole spacing, hole size or both shall be adjusted to compensate for relative head differences between laterals branching off a common supply manifold and to compensate for the bottom lines receiving more effluent at the beginning and end of a dosing cycle. The lateral network shall be designed to achieve a ten to 30 percent higher steady state (pipe full) flow rate into the upper lines, relative to the lower lines, depending on the amount of elevation difference.
   (iii) Maximum elevation difference between the highest and lowest laterals in a field shall not exceed ten feet unless the flow is hydraulically split between subfield segments without requiring simultaneous adjustment of multiple valves.

(E) Turn-ups shall be provided at the ends of each lateral, constructed of Schedule 40 PVC pipe or stronger pressure-rated pipe, and protected with sleeves of larger diameter pipe (six inches or greater). Turn-ups and sleeves shall be cut off and capped at or above the ground surface, designed to be protected from damage, and easily accessible.

(F) The supply manifold shall be sized large enough relative to the size and number of laterals served so that friction losses and differential entry losses along the manifold do not result in more than a 15 percent variation in discharge rate between the first and last laterals. The supply manifold shall comply with the following design criteria:
   (i) 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.
(ii) The reduction between the manifold and connecting laterals shall be made directly off the manifold using reducing tees.

(iii) Cleanouts to the ground surface shall be installed at the ends of the supply manifold.

(G) Gate valves shall be provided for pressure adjustment at the fields whenever the supply line exceeds 100 feet in length. Valves shall be readily accessible from the ground surface and protected in valve boxes.

(6) Septic tanks, pump tanks, pump dosing systems, siphons, and siphon dosing tanks shall be provided in accordance with Rule .1952 of this Section. The LPP dosing system shall comply with the following design criteria:

(A) Design flow rate shall be based upon delivering two feet to five feet of static pressure head at the distal end of all lateral lines.

(B) Dose volume shall be between five and ten 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.

(b) FILL SYSTEM: A fill system (including new and existing fill) is a system in which all or part of the nitrification trench(es) is installed in fill material. A fill system, including an existing fill site, shall be approved where soil and site conditions prohibit the installation of a conventional or modified septic tank system if the requirements of Subparagraphs (b)(1) or (b)(2) of this Rule are met.

(1) Fill systems may be installed on sites where at least the first 18 inches below the naturally occurring soil surface consists of soil that is SUITABLE or PROVISIONALLY SUITABLE with respect to soil structure and clay mineralogy, and where organic soils, restrictive horizons, saprolite or rock are not encountered. Further, no soil wetness condition shall exist within the first 12 inches below the naturally occurring soil surface and a groundwater lowering system shall not be used to meet this requirement. Fill systems shall not be utilized on designated wetlands unless the proposed use is specifically approved in writing by the designating agency. The following requirements shall also be met:

(A) Nitrification trenches shall be installed with at least 24 inches separating the trench bottom and any soil horizon UNSUITABLE as to soil structure, clay mineralogy, organic soil, rock or saprolite. However, if a low pressure pipe system is used, the minimum separation distance shall be 18 inches.

(B) Nitrification trenches shall be installed with at least 18 inches separating the trench bottom and any soil wetness condition. This separation requirement for soil wetness conditions may be met with the use of a groundwater lowering system only in Soil Groups I and II, with SUITABLE structure and clay mineralogy. However, if a low pressure pipe system is used, the minimum separation distance shall be 12 inches.

(C) Systems shall be installed only on sites with uniform slopes less than 15 percent. Storm water diversions and subsurface interceptor drains or swales may be required upslope of the system to divert surface runoff or lateral flow from passing over or into the system.

(D) The long-term acceptance rate shall be based on the most hydraulically limiting soil horizon within 18 inches of the naturally occurring soil surface or to a depth one foot below the trench bottom, whichever is deeper. The lowest long-term acceptance rate for the applicable soil group shall be used for systems installed pursuant to this Rule. However, the long-term acceptance rate shall not exceed 1.0 gallons per day per square foot for gravity distribution or 0.5 gallons per day per square foot for low-pressure pipe systems installed on sites with at least 18 inches of Group I soils below the naturally occurring soil surface or to a depth of one foot below the trench bottom, whichever is deeper.

(E) If the fill system uses low-pressure pipe distribution, all the requirements of Paragraph (a) of this Rule, except Paragraph (a)(2)(B), shall apply. Systems with a design daily flow greater than 480 gallons per day shall use low-pressure pipe distribution.

(F) Fill material shall have such soil texture to be classified as sand or loamy sand (Soil Group I) up to the top of the nitrification trenches. The final six inches of fill used to cover the system shall have a finer texture (such as Group II, III) for the establishment of a vegetative cover. Existing fill material shall have no more than ten percent by volume of fibrous organics, building rubble, or other debris and shall not have discreet layers containing greater than 35 percent of shell fragments.
Where fill material is added, the fill material and the existing soil shall be mixed to a depth of six inches below the interface. Heavy vegetative cover or organic litter shall be removed before the additional fill material is incorporated.

The fill system shall be constructed as an elongated berm with the long axis parallel to the ground elevation contours of the slope.

The side slope of the fill shall not exceed a rise to run ratio of 1:4. However, 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.

The outside edge of the nitrification trench shall be located at least five feet horizontally from the top of the side slope.

The fill system shall be shaped to shed surface water and shall be stabilized with a vegetative cover against erosion.

The setback requirements shall be measured from the projected toe of the slope. However, if this setback cannot be met, the setback requirements shall be measured from a point five feet from the nearest edge of the nitrification trench if the following conditions are met:

(i) Slope of the site shall not exceed two percent;
(ii) The first 18 inches of soil beneath the naturally occurring soil surface shall consist of Group I soils;
(iii) The lot or tract of land was recorded on or before December 31, 1989; and
(iv) A condition is placed upon the Improvement Permit to require connection to a public or community sewage system within 90 days after such system is available for connection and after it is determined that 300 feet or less of sewer line is required for connection.

The available space requirements of Rule .1945 of this Section shall apply.

An existing fill site that does not meet the requirements of Paragraph (b)(1) of this Rule may be utilized for a sanitary sewage system if the following requirements are met:

(A) Substantiating data are provided by the lot owner (if not readily available to the local health department) indicating that the fill material was placed on the site prior to July 1, 1977.

(B) The fill material placed on the site prior to July 1, 1977 shall have such soil texture to be classified as sand or loamy sand (Group I) for a depth of at least 24 inches below the existing ground surface. This fill material shall have no more than ten percent by volume of fibrous organics, building rubble, or other debris. This fill shall not have discreet layers containing greater than 35 percent of shell fragments. However, if at least 24 inches of Group I fill material was in place prior to July 1, 1977, additional fill with soil texture classified as Group I may be added to meet the separation requirements of Paragraph (b)(2)(D) of this Rule.

(C) Soil wetness conditions, as determined by Rule .1942(a) in this Section, are 18 inches or greater below the ground surface of the fill placed on the lot prior to July 1, 1977. This requirement shall be met without the use of a groundwater lowering system.

(D) Low-pressure pipe distribution shall be used and shall meet all the requirements of Paragraph (a) of this Rule, except (a)(2)(B). The long-term acceptance rate shall not exceed 0.5 gallons per day per square foot. However, for existing fill sites with 48 inches of Group I soils, conventional nitrification trenches utilizing a maximum long-term acceptance rate of 1.0 gallons per day per square foot may be installed in lieu of low-pressure pipe systems. The minimum separation distance between the trench bottom and any soil wetness condition or any soil horizon UNSUITABLE as to soil structure, clay mineralogy, organic soil, rock, or saprolite shall be 24 inches for low pressure pipe systems and 48 inches for conventional systems. This separation requirement may be met by adding additional Group I soil, but shall not be met with the use of a groundwater lowering system. Where fill is to be added, the requirements of Paragraphs (b)(1)(C), (F), (G), (H), (J), (K), of this Rule and the following requirements shall be met:

(i) The side slope of the fill shall not exceed a side slope ratio of 1:3, and;
(ii) The setback requirements shall be measured from the projected toe of the slope. However, if this setback cannot be met, the setback requirements shall be measured from a point five feet from the nearest edge of the nitrification trench if the following conditions are met:

(I) Slope of the site shall not exceed two percent;
(II) The lot or tract of land was recorded on or before December 31, 1989; and
(III) A condition is placed upon the Improvement Permit to require connection to a public or
community sewage system within 90 days after such system is available for connection
and after it is determined that 300 feet or less of sewer line is required for connection.

(E) The available space requirements of Rule .1945 of this Section shall apply.

(F) The design flow shall not exceed 480 gallons per day.

(3) Other fill systems may be approved by the local health department on a site-specific basis in accordance
with Rule .1948(d) of this Section.

(c) Residential Wastewater Treatment Systems (RWTS) that comply with the National Sanitation Foundation (NSF) Standard
40 for Class I residential wastewater treatment systems shall be designed and constructed and installed in accordance with this
Rule to serve a facility with a design daily flow rate of up to 1500 gallons per day, as determined in Rule .1949(a) or .1949(b)
of this Section. RWTS shall not be used, however, where wastes contain high amounts of fats, grease and oil (30 mg/l or
more), including restaurants and food service facilities, and the strength of the influent wastewater shall be similar to domestic
wastewater with raw influent Biological Oxygen Demand (BOD) and suspended solids not to exceed 350 parts per million.
RWTS performance, siting, sizing, installation, operation, monitoring, maintenance and reporting requirements shall comply
with G.S. 130A-342 and 15A NCAC 18A .1970. NSF Standard 40 for Class I residential wastewater treatment systems is
hereby incorporated by reference including any subsequent amendments and editions. Copies of the standards may be
inspected at the On-Site Wastewater Section Central Office, located at 2728 Capital Blvd., Raleigh, NC in the Parker Lincoln
Building, and copies may be obtained on-line at http://www.techstreet.com/nsfgate.html at a cost of ninety-five dollars
($95.00), or by mail from Techstreet, 777 East Eisenhower Parkway, Ann Arbor, MI 48108 at a cost of ninety-five dollars
($95.00) plus shipping and handling. RWTS shall bear the NSF mark and the NSF listed model number or shall bear the
certification mark and listed model number of a third party certification program accredited by the American National
Standards Institute (ANSI), pursuant to ANSI Policy and Procedures for Accreditation of Certification Programs to certify
residential wastewater treatment systems in accordance with NSF Standard Number 40. The following conditions for
approval, design, construction and installation of RWTS shall be met:

(1) An application shall be submitted in writing to the State for an RWTS, which shall include the following, as
applicable:

(A) manufacturer's name, address, phone number, plant location(s), and contact information for
manufacturer's licensed distributors in North Carolina and their current service areas;

(B) verification of current approval and listing of a NSF Standard 40 Class I system by the National
Sanitation Foundation or other ANSI-accredited third party certification program;

(C) manufacturer's identifying name or logo, listed model number(s) and treatment capacity (in
gallons per day) to be imprinted on unit;

(D) three legible copies of plans and specifications, and information required to evaluate any tanks as
required pursuant to 15A NCAC 18A .1953; and

(E) 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 Wastewater System Account or NC OSWW
System Account, and mailed to the On-Site Wastewater Section, 1642 Mail Service Center,
Raleigh, NC 27699-1642 or hand delivered to Rm. 1A-245, Parker Lincoln Building, 2728
Capital Blvd., Raleigh, NC.

(2) The rated capacity of RWTS listed as complying with NSF Standard 40 shall not be less than the design
daily flow as determined by Rule .1949(a) or .1949(b) of this Section.

(3) The following are minimum standards of design and construction of RWTS:

(A) No blockouts or openings shall be permitted below the liquid level of the RWTS.

(B) RWTS shall be resilient, watertight, corrosion resistant structures, with all components needing to
be routinely maintained easily accessible to the system operator. Access openings shall be
provided in the RWTS top. Access shall be provided for:

(i) cleaning or rodding out the inlet pipe,

(ii) cleaning or clearing the air or gas passage space above the partition,

(iii) pumping of each compartment required to be pumped,

(iv) sampling the effluent, and

(v) repairing any system components or maintaining system component requiring repair or
maintenance.

(C) Tanks used in RWTS designed to hold sewage or effluent shall comply with the same design and
construction requirements as septic tanks and pump tanks pursuant to 15A NCAC 18A .1954, as
applicable.
D) Fiberglass reinforced plastic tanks used in RWTS designed to hold sewage or effluent shall be constructed with materials capable of resisting corrosion from sewage and sewage gases, and the active and passive loads on the unit walls. Except as required by the rules of this Section, fiberglass tanks shall comply with IAPMO PS 1-2004, Standard for Prefabrication Septic Tanks, and CSA International B66-05, Standard for Design, Material, and Manufacturing Requirements for Prefabricated Septic Tanks and Sewage Holding Tanks, as applicable. IAPMO PS 1-2004 and CSA International B66-05 are hereby incorporated by reference including any subsequent amendments and editions. Copies of these standards may be inspected at the On-Site Wastewater Section Central Office, located at 2728 Capital Blvd., Raleigh, NC in the Parker-Lincoln Building, and copies may be obtained from the ANSI On-Line Store at http://webstore.ansi.org/ansidocstore at a cost of forty-nine dollars and ninety-five cents ($49.95), and from the Canadian Standards Association, at 5060 Spectrum Way, Suite 100, Mississauga, Ontario, L4W 5N6 Canada at a cost of one hundred dollars ($100.00) plus shipping and handling, respectively. Documentation shall be provided that at least one of each size tank in each model meets specified physical properties set forth in IAPMO PS 1-2004 and CSA International B66-05, as applicable. At least one of each size of fiberglass reinforced plastic tank used in an RWTS shall be subjected to a vacuum test by an independent testing laboratory. Test unit must withstand negative pressure of 2.5 pounds per square inch (69.3 inches of water) without leakage or failure. Test results shall be included with the specifications that are provided to the state for approval.

E) Prefabricated tanks used in RWTS other than precast reinforced concrete or fiberglass reinforced plastic units shall be approved on an individual basis by the State based on information furnished by the designer which indicates the unit will provide effectiveness equivalent to reinforced concrete or fiberglass reinforced plastic units.

F) RWTS shall bear an imprint identifying the manufacturer, the RWTS serial number assigned to the manufacturer’s model approved by the State, and the liquid or working capacity of the unit. The imprint shall be located to the right of the outlet opening pipe penetration point.

G) The design, construction, and operation of RWTS shall prevent bypass of wastewater.

H) Electrical circuits to the RWTS shall be provided with manual circuit disconnects within a watertight, corrosion-resistant, outside enclosure (NEMA 4X or equivalent) adjacent to the RWTS securely mounted at least 12 inches above the finished grade. Control panels provided by the manufacturer shall be installed in a watertight, corrosion-resistant enclosure (NEMA 4X or equivalent) mounted at least 12 inches above finished grade and located adjacent to the RWTS or in view of the RWTS on the side of the facility. The control panel shall not be located more than 50 feet from the RWTS components controlled by the panel. The control panel shall remain accessible at all times to the system operator (ORC). Conductors shall be conveyed to the disconnect enclosure and control panel through waterproof, gasproof, and corrosion-resistant conduits. Splices and wire junctions, if needed, shall be made outside the RWTS in a watertight, corrosion-resistant enclosure (NEMA 4X or equivalent) securely mounted adjacent to the unit at least 12 inches above the finished grade. Wire grips, duct seal, or other similar materials shall be used to seal around wire and wire conduit openings inside the RWTS and disconnect enclosure that shall prevent the transfer of liquid or gas into the RWTS or into the enclosure. The RWTS shall have an alarm device or devices to warn the user or operator of a unit malfunction or a high water condition. The alarm shall be audible and visible by system users and securely mounted adjacent to the RWTS, at least 12 inches above finished grade or in view of the RWTS on the side of the facility. The alarm shall not be located more than 50 feet from the RWTS component triggering the alarm condition. The alarm shall remain accessible at all times to the system operator (ORC). The alarm shall meet NEMA 4X standards or otherwise be equivalently watertight and corrosion resistant. The alarm circuit or circuits shall be supplied ahead of any RWTS electrical control circuit overload and short circuit protective devices.Blower location shall be shown on plans and plans and specifications shall detail proposed corrosion-resistant blower enclosure, if applicable.

4) 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 at least equal to half of the design daily flow 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, an approved prefabricated septic tank or another tank specially designed for a specific individual system and approved by the State as a part of the plans for the RWTS.

A manufacturer of an RWTS who desires consideration for approval as an Experimental, Controlled Demonstration, Innovative or Accepted system shall apply separately pursuant to Rule .1969 of this Section.

History Note: Authority G.S. 130A-335(e),(f); 130A-342; 
Eff. July 1, 1982; 
Amended Eff. June 1, 2006; April 1, 1993; May 1, 1991; December 1, 1990; January 1, 1990.

15A NCAC 18A .1958 NON-GROUND ABSORPTION SEWAGE TREATMENT SYSTEMS

(a) Where an approved privy, an approved septic tank system, or a connection to an approved public or community sewage system is impossible or impractical, this Section shall not prohibit the state or local health department from permitting approved non-ground absorption treatment systems utilizing heat or other approved means for reducing the toilet contents to an inert or stabilized residue or to an otherwise harmless condition, rendering such contents noninfectious or noncontaminating. Alternative systems shall be designed to comply with the purposes and intent of this Section.

(b) Holding tanks shall not be considered as an acceptable sewage treatment and disposal system. An improvement permit shall not be issued for a sewage holding tank for any new construction. However, an Authorization to Construct may be issued for a holding tank for pumping and hauling of wastewater effluent to a wastewater system approved under this Section when the owner has provided a showing that a malfunctioning system cannot otherwise be repaired by connection to a system approved under this Section or to a system approved under the rules of the Environmental Management Commission. Pumping and hauling wastewater effluent shall be performed by a septage management firm permitted in accordance with G.S. 130A-291.1.

(c) Incinerating, composting, vault privies, and mechanical toilets shall be approved by the state agency or local health department only when all of the wastewater is handled by a system approved under this Section.

(d) Sewage recycling systems which discharge treated waste-water meeting the state drinking water standards may be used only for toilet flushing and recycled sewage shall not be used for body contact or human consumption. Such systems must be approved by the state or local health department.

(e) Chemical or portable toilets for human waste may be approved in accordance with G.S. 130A-335. Chemical or portable toilets shall have a watertight waste receptacle constructed of nonabsorbent, acid resistant, noncorrosive material.

History Note: Authority G.S. 89C; 89E; 89F; 90A; 130A-335; 
Eff. July 1, 1982; 
Amended Eff. August 1, 1991; January 1, 1990; 
Temporary Amendment Eff. January 20, 1997; 

15A NCAC 18A .1959 PRIVY CONSTRUCTION

An "approved privy" shall consist of a pit, floor slab, and seat assembly housed in a building which affords privacy and reasonable protection from the weather.

1. The pit shall consist of an excavation at least 42 inches square and in no case shall the bottom of an excavation be closer than one foot from the seasonally high water table or rock.

2. The pit shall be properly curbed to prevent caving. In sandy or loose soil, the curb should extend the full depth of the pit. In tight soils, partial curbing is acceptable if it prevents caving.

3. The privy floor slab shall be constructed of reinforced concrete. Where it is impractical to secure or construct reinforced concrete floor assemblies, wood construction shall be acceptable provided the floor slab is made of rough sub-flooring and covered with tight tongue-and-groove flooring or other type flooring materials to provide strength and prevent entrance of flies and mosquitoes to the privy pit. Where wood construction is used, floors shall be anchored to at least four-inch by four-inch sills.

4. Wood used for riser, seat assemblies, and the floor slab shall be tongue-and-groove or plywood (exterior or marine) material.

5. Privies shall not be used for the disposal of water-carried sewage.

History Note: Authority G.S. 130A-335(e); 
Eff. July 1, 1982;
15A NCAC 18A .1960 MAINTENANCE OF PRIVIES
(a) Any person owning or controlling the property upon which a privy is located shall be responsible for these requirements:
   (1) The privy building shall afford a reasonable degree of protection from bad weather conditions.
   (2) 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 completely covered with earth.
   (3) If the pit caves in, a new pit shall be provided.
(b) The tenant or person occupying the property shall be responsible for these requirements:
   (1) The walls, floors, and seat of the privy and grounds immediately adjacent to the building shall be kept in a clean and decent condition.
   (2) Fowl and other animals shall not be harbored in the privy building.
   (3) Seat cover shall be hinged and closed at all times when the privy is not in use.
   (4) Flies shall be excluded from the pit at all times.
   (5) Ashes, garbage, and trash shall be kept out of the pit.

History Note: Authority G.S. 130A-335(e) and (f); Eff. July 1, 1982; Amended Eff. January 1, 1990.

15A NCAC 18A .1961 MAINTENANCE OF SEWAGE SYSTEMS
(a) Any person owning or controlling the property upon which a ground absorption sewage treatment and disposal system is installed shall be responsible for the following items regarding the maintenance of the system:
   (1) Ground absorption sewage treatment and disposal systems shall be operated and maintained to prevent the following conditions:
       (A) a discharge of sewage or effluent to the surface of the ground, the surface waters, or directly into groundwater at any time; or
       (B) a back-up of sewage or effluent into the facility, building drains, collection system, or freeboard volume of the tanks; or
       (C) a free liquid surface within three inches of finished grade over the nitrification trench for two or more observations made not less than 24 hours apart. Observations shall be made greater than 24 hours after a rainfall event.
   The system shall be considered to be malfunctioning when it fails to meet one or more of these requirements, either continuously or intermittently, or if it is necessary to remove the contents of the tank(s) at a frequency greater than once per month in order to satisfy the conditions of Parts (A), (B), or (C) of this Paragraph. Legal remedies may be pursued after an authorized agent has observed and documented one or more of the malfunctioning conditions and has issued a notice of violation.
   (2) Ground absorption sewage treatment and disposal systems shall be checked, and the contents of the septic tank removed, periodically from all compartments, to ensure proper operation of the system. The contents shall be pumped whenever the solids level is found to be more than 1/3 of the liquid depth in any compartment.

(b) System management in accordance with Tables V(a) and V(b) of this Rule shall be required for all systems installed or repaired after July 1, 1992. After July 1, 1992, system management in accordance with Tables V(a) and V(b) shall be required for all existing Type V and Type VI systems.
(c) No Improvement Permit or Construction Authorization shall be issued for Type IV, Type V, or Type VI systems, unless a management entity of the type specified in Table V(b) is specifically authorized, funded, and operational to carry out this management program in the service area where the proposed system is to be located.
(d) A local health department may be the public management entity only for systems classified Type IV, V(a) and V(b) and only when specifically authorized by resolution of the local board of health.
(e) A contract shall be executed between the system owner and a management entity prior to the issuance of an Operation Permit for a system required to be maintained by a public or private management entity, unless the system owner and certified operator are the same. The contract shall include the specific requirements for maintenance and operation, responsibilities of the owner and system operator, provisions that the contract shall be in effect for as long as the system is in use, and other requirements for the continued proper performance of the system. It shall also be a condition of the Operation Permit that subsequent owners of the system execute such a contract.
(f) Inspections of the system shall be performed by a management entity at the frequency specified in Table V(b). The management entity shall report the results of their inspections to the local health department at the specified reporting frequency. However, where inspections indicate the need for system repairs, the management entity shall notify the local health department within 48 hours in order to obtain a Construction Authorization for the repairs.

(g) The management entity shall be responsible for assuring routine maintenance procedures and monitoring requirements in accordance with the conditions of the Operation Permit and the contract.

(h) Sewage systems with multiple components shall be classified by their highest or most complex system type in accordance with Table V to determine local health department and management entity responsibilities.

(i) Sewage systems not identified in this Rule shall be classified by the Division of Environmental Health after consultation with the appropriate commission governing operators of pollution control facilities.

(j) The local health department shall routinely review the performance and operation reports submitted in accordance with Table V(b) of this Rule and shall perform an on-site inspection of the systems as required in Table V(a).

(k) The certified operator shall hold a valid and current certificate from the appropriate commission, and nothing in this Section shall preclude any requirements for system operators, in accordance with Article 3 of G.S. 90A.

**TABLE V(a)**

LOCAL HEALTH DEPARTMENT RESPONSIBILITIES

<table>
<thead>
<tr>
<th>System Classification</th>
<th>System Description</th>
<th>Permits Required</th>
<th>Minimum System Review Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type I</td>
<td></td>
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<td></td>
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<tr>
<td>a. Privy</td>
<td></td>
<td>Improvement Permit, Construction Authorization, and Operation Permit</td>
<td>N/A</td>
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<tr>
<td>b. Chemical toilet</td>
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<td>c. Incinerating toilet</td>
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<td>d. Other toilet system</td>
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<td>e. Grease trap</td>
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<tr>
<td>Type II</td>
<td></td>
<td>Improvement Permit, Construction Authorization, and Operation Permit</td>
<td>N/A</td>
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<tr>
<td>a. Conventional septic system (single-family or 480 GPD or less)</td>
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<td>b. Conventional septic system with 750 linear feet of nitrification line or less</td>
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<td>c. Conventional system with shallow placement</td>
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<tr>
<td>Type III</td>
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<td>Improvement Permit, Construction Authorization, and Operation Permit</td>
<td>5 yrs. (IIIb only)</td>
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<tr>
<td>a. Conventional septic system &gt; 480 GPD (excluding single-family residence)</td>
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<td>b. Septic system with single effluent pump or siphon</td>
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<td>c. Gravity fill system</td>
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<tr>
<td>d. Dual gravity field system</td>
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<tr>
<td>e. PPBPS system, gravity dosed</td>
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<tr>
<td>f. Large diameter pipe system</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>g. Other non-conventional trench systems</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Type IV</td>
<td></td>
<td>Improvement Permit, Construction Authorization, and Operation Permit</td>
<td>3 yrs.</td>
</tr>
<tr>
<td>a. Any system with LPP distribution</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. System with more than</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>System Classification</th>
<th>Management Entity</th>
<th>Minimum System Inspection/Maintenance Frequency</th>
<th>Reporting Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type I</td>
<td>Owner</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Type II</td>
<td>Owner</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Type III</td>
<td>Owner</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Type IV</td>
<td>Public Management Entity with a Certified Operator or a private Certified Operator</td>
<td>2/yr.</td>
<td>12 mos.</td>
</tr>
</tbody>
</table>
| Type V                | Public Management Entity With a Certified Operator or a private Certified Operator | a. 2/yr (0-1500 GPD)  
4/yr (1500-3000 GPD)  
12/yr (3000-10000 GPD)  
1/wk (> 10000 GPD)  
b. 12/yr (3000-10000 GPD)  
1/wk (> 10000 GPD)  
c. 4/yr.  
d. 12/yr. | 6 mos. |
| Type VI               | Public Management Entity With a Certified Operator | a. 1/wk(3000-10000 GPD)  
2/wk(10000-25000 GPD)  
3/wk(25000-50000 GPD)  
5/wk(> 75000 GPD)  
b. 12/yr. | 3 mos. |

TABLE V(b)
MANAGEMENT ENTITY RESPONSIBILITIES
(l) A sewage collection, treatment, and disposal system that creates or has created a public health hazard or nuisance by surfacing of effluent or discharge directly into groundwater or surface waters, or that is partially or totally destroyed shall be repaired within 30 days of notification by the state or local health department unless the notification otherwise specifies a repair period in writing. If a system described in the preceding sentence has for any reason been disconnected, the system shall be repaired prior to reuse. The state or local health department shall use its best professional judgement in requiring repairs that will reasonably enable the system to function properly. If, for any reason, a sewage collection, treatment, and disposal system is found to be nonrepairable, or is no longer required, the system shall not be used, and may be required to have any contents removed, collapse any components and backfill, or otherwise secured as directed by the authorized agent to protect the public health and safety.

(m) When necessary to protect the public health, the state or local health department may require the owner or controller of a malfunctioning system to pump and haul sewage to an approved wastewater system during the time needed to repair the system.

History Note:
Filed as a Temporary Amendment Eff. July 3, 1991, for a period of 180 days to expire on December 30, 1991;
Filed as a Temporary Amendment Eff. June 30, 1990, for a period of 180 days to expire on December 27, 1990;
Authority G.S. 130A-335(e),(f);
Eff. July 1, 1982;
Amended Eff. August 1, 1991; October 1, 1990; January 1, 1990; August 1, 1988;
Temporary Amendment Eff. January 20, 1997;

15A NCAC 18A.1962 APPLICABILITY
The provisions of this Section shall not apply to properly functioning sewage collection, treatment, and disposal systems in use or for which a valid permit to install a system has been issued prior to July 1, 1977. This provision is applicable only where the sewage flow and sewage characteristics are unchanged. This provision does not affect the requirements for system operation, maintenance, and management in accordance with Rule .1961 of this Section.

History Note:
Authority G.S. 130A-335(e);
Eff. July 1, 1982;
Amended Eff. August 1, 1991; December 1, 1990.

15A NCAC 18A.1963 DISUSE OF SEWAGE SYSTEM

History Note:
Authority G.S. 130A-335(e);
Eff. July 1, 1982;

15A NCAC 18A.1964 INTERPRETATION AND TECHNICAL ASSISTANCE
(a) The provisions of this Section shall be interpreted, as applicable, in accordance with the recognized principles and practices of soil science, geology, engineering, and public health.
(b) The State will provide technical assistance. Local health departments may obtain technical information and assistance from appropriate personnel as may be needed for interpretation of this Section.

History Note:
Authority G.S. 130A-335(e);
Eff. July 1, 1982;

15A NCAC 18A.1965 APPEALS PROCEDURE
Appeals concerning the interpretation and enforcement of the rules in this Section shall be made in accordance with G.S. 150B and 10 NCAC 1B.

History Note:
Authority G.S. 130A-335(e);
Eff. July 1, 1982;
15A NCAC 18A .1966 SEVERABILITY
If any provision of these Rules or the application thereof to any person or circumstance is held invalid, the remainder of the rules or the application of such provisions to other persons or circumstances shall not be affected thereby.

History Note: Authority G.S. 130A-335(e);

15A NCAC 18A .1967 INJUNCTIONS
A person who violates any rule of this Section is subject to the injunctive relief provisions of G.S. 130A-18.

History Note: Authority G.S. 130A-335(e);
Eff. July 1, 1982;

15A NCAC 18A .1968 PENALTIES
A person who violates any rule of this Section is subject to the penalty provisions contained in G.S. 130A-22(c) (Administrative Penalties), 130A-23 (Suspension and Revocation of Permits), and 130A-25 (Criminal Penalties).

History Note: Authority G.S. 130A-335(e);
Eff. July 1, 1982;

15A NCAC 18A .1969 APPROVAL AND PERMITTING OF ON-SITE SUBSURFACE WASTEWATER SYSTEMS, TECHNOLOGIES, COMPONENTS, OR DEVICES
(a) Experimental, controlled demonstration, and innovative wastewater systems (hereinafter referred to as E & I systems) are any wastewater systems, system components, or devices that are not specifically described in Rules .1955, .1956, .1957, or .1958 of this Section, including any system for which reductions are proposed in the minimum horizontal or vertical separation requirements or increases are proposed to the maximum long-term acceptance rates of this Section; or any E & I systems as defined by G.S. 130A-343(a) and approved pursuant to applicable laws and this Rule. Accepted systems are as defined by G.S. 130A-343(a).
This Rule shall provide for the approval and permitting of E & I and accepted systems.
(b) APPLICATION: An application shall be submitted in writing to the State for an E & I system. The application shall include the information required by G.S. 130A-343(d),(e),(f), and (g), and the following, as applicable:

(1) specification of the type of approval requested as either innovative, controlled demonstration, experimental, or a combination;
(2) description of the system, including materials used in construction, and its proposed use;
(3) summary of pertinent literature, published research, and previous experience and performance with the system;
(4) results of any available testing, research or monitoring of pilot systems or full-scale operational systems and shall identify whether the testing, research or monitoring provided was conducted by a third party research or testing organization;
(5) specification of system evaluation protocol as either an approved and listed protocol by the State or the applicant shall submit an alternative protocol for the evaluation of the performance of the manufacturer's system. National Sanitation Foundation (NSF) Standard 40 has been approved as an evaluation protocol pursuant to G.S. 130A-343(d);
(6) verification that a system being submitted for approval has been tested and certified in accordance with an approved evaluation protocol, if applicable. For systems with no prior approval pursuant to this Rule, the manufacturer shall provide an affidavit certifying that the product submitted for approval is the same as the certified or listed product or identify any modifications made to the submitted product.
(7) identity and qualifications of any proposed research or testing organization and the principal investigators, and an affidavit certifying that the organization and principal investigators have no conflict of interest and do not stand to gain financially from the sale of the E & I system;
(8) objectives, methodology, and duration of any proposed research or testing;
specification of the number of systems proposed to be installed, the criteria for site selection, and system monitoring and reporting procedures;

(10) operation and maintenance procedures, system classification, proposed management entity and system operator;

(11) procedure to address system malfunction and replacement or premature termination of any proposed research or testing;

(12) notification of any proprietary or trade secret information, system, component, or device;

(13) in the case of a request for innovative system approval intended by the applicant to be subsequently reclassified from an innovative to an accepted system, monitoring, reporting and evaluation protocols to be followed by the manufacturer, the results of which shall be submitted in its future petition for accepted status; and

(14) 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 Wastewater System Account or NC OSWW System Account, and mailed to the On-Site Wastewater Section, 1642 Mail Service Center, Raleigh, NC 27699-1642 or hand delivered to Rm. 1A-245, Parker Lincoln Building, 2728 Capital Blvd., Raleigh, NC.

(c) REVIEW: The State shall review all applications submitted as follows:

(1) the completeness of the application shall be determined, and a determination shall be made whether additional information is needed to continue the review. The State shall inform the applicant of the acceptance or rejection of the application, or of any additional information needed to continue the review, within 30 days. When an application is rejected, the State shall inform the applicant in writing of the reasons for rejection and whether additional information is required for the application to be reconsidered. Acceptance of the application does not constitute a qualitative review of the information provided, nor the approval or denial of the proposed system designation. Additional requested information for the application to be considered complete shall be received within 180 days, or the application file shall be closed. Notwithstanding a prior rejection or denial, an applicant may reapply pursuant to Paragraph (b) of this Rule;

(2) the determination shall be made for a complete application whether the system meets the standards of an experimental system under G.S. 130A-343(a)(4), G.S. 130A-343(e) and Paragraph (d) of this Rule; a controlled demonstration system under G.S. 130A-343(a)(2), G.S. 130A-343(f) and Paragraph (e) of this Rule; or whether the system meets the standards of an innovative system under G.S. 130A-343(a)(5), G.S. 130A-343(g), and Paragraph (g) of this Rule, as applicable. This review shall be completed in accordance with the following time frame:

<table>
<thead>
<tr>
<th>Type of Approval Requested</th>
<th>Normal Review</th>
<th>Fast Track Review</th>
<th>Rule Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>90 days</td>
<td>45 days</td>
<td>.1969(d)(2) of this Section</td>
</tr>
<tr>
<td>Controlled Demonstration</td>
<td>120 days</td>
<td>60 days</td>
<td>.1969(e)(4) of this Section</td>
</tr>
<tr>
<td>Innovative</td>
<td>180 days</td>
<td>120 days</td>
<td>.1969(g)(2) of this Section</td>
</tr>
</tbody>
</table>

and:

(3) The State shall notify the applicant and local health department of the approval or denial of an E & I system. Such notice shall include conditions for permitting, siting, installation, use, monitoring, operation and maintenance, and number of systems which can be installed, as applicable.

(d) APPROVAL OF EXPERIMENTAL SYSTEMS: A system may be approved for use as an experimental system as follows:

(1) the system shall be part of a research or testing program which has been approved by the State. The research or testing program shall be conducted by a third party research or testing organization which has knowledge and experience relevant to the proposed research or testing and has no conflict of interest and does not stand to gain financially from the sale of the proposed system. To be approved by the State, the proposed research or testing program shall:
(A) Be designed such that, if the objectives were met, the system would satisfy the standards for approval as a controlled demonstration or an innovative system under Paragraph (e) or Paragraph (g) of this Rule, respectively; and
(B) Be designed and include research and testing methodology that shall have a reasonable likelihood of meeting the objectives, and
(C) Include in the proposal for evaluation all information required pursuant to G.S. 130A-343(e).
(2) Applications for an experimental system shall be "Fast Track" approved or denied within 45 days from the acceptance of a complete application when the proposed research or testing program is a prior approved evaluation protocol.

(e) APPROVAL OF CONTROLLED DEMONSTRATION SYSTEMS: A system may be approved for use as a controlled demonstration system as follows:

(1) Acceptable research is provided from prior evaluation of the system in North Carolina as an experimental system or from any comparable evaluations of the system in other states, including any prior evaluation pursuant to an approved evaluation protocol, which supports the proposed use of the system; and
(2) Documentation is provided of at least 50 installations operational for at least 12-months, unless:
   (A) data have been collected that show all other requirements for controlled demonstration approval have been met from a lesser number of North Carolina installations in conjunction with an approved experimental research or testing program; or
   (B) documentation is provided of the system's design and functional similarity to another approved system and that substantiates performance in a manner equal or superior to the comparable approved system in terms of structural integrity, chemical durability, hydraulic performance and wastewater treatment; or
   (C) the provisions for "Fast-Track" approval of Subparagraph (4) of this Paragraph are met; and
(3) The system shall be part of a research or testing program which has been approved by the State. To be approved by the State, the proposed research or testing program shall:
   (A) Be designed such that, if the objectives were met, the system would satisfy the standards for approval as an innovative system under Paragraph (g) of this Rule, and
   (B) Be designed and include testing methodology that shall have a reasonable likelihood of meeting the objectives, and
   (C) Include in the proposal for evaluation all information required pursuant to G.S. 130A-343(f).
(4) Applications for a controlled demonstration shall be "Fast Track" approved or denied within 60 days from the acceptance of a complete application when the application includes TS-I or TS-II compliant certification data collected under NSF Standard 40 or another prior-approved evaluation protocol, and all other available field verification data provided under Subparagraph (b)(4) of this Rule are consistent with TS-I or TS-II performance standards.

(f) PERMITTING OF EXPERIMENTAL AND CONTROLLED DEMONSTRATION SYSTEM: A local health department shall issue an Improvement Permit and Construction Authorization and an Operation Permit for an experimental or controlled demonstration system when the following conditions are met:

(1) There is an application for an Improvement Permit and Construction Authorization in accordance with 15A NCAC 18A .1937(c), with the proposed use of an experimental or controlled demonstration system specified;
(2) The proposed site is included as part of an approved research or testing program and any conditions specified for use of the system have been met;
(3) When an experimental or controlled demonstration system is proposed to serve a residence, place of business or place of public assembly, there shall be a designated area for a repair system in accordance with the provisions of 15A NCAC 18A .1945(b) or an innovative or accepted system of this Rule, except:
   (A) When an existing and properly functioning wastewater system is available for immediate use, including connection to a public or community wastewater system; or
   (B) When the experimental or controlled demonstration system is used as a repair to an existing malfunctioning system when there are no other approved or accepted repair options; or
   (C) As provided in G.S. 130A-343(f) for Controlled Demonstration Systems;
(4) When an experimental or controlled demonstration system is proposed which shall not serve a residence, place of business, or place of public assembly, a repair area or backup system shall not be required.
(5) The application for an experimental system shall include statements that the property owner is aware of its experimental nature, that the local health department and State do not guarantee or warrant that these
systems will function in a satisfactory manner for any period of time, that use of the system may need to be discontinued if the system research or testing program is prematurely terminated, and that the site and system are to be accessible during reasonable hours for monitoring and evaluation by the research or testing organization. Such statements shall be signed by the owner;

(6) Provisions shall be made for operation and maintenance of the system;

(7) Any special conditions required for the installation of the experimental or controlled demonstration system shall be specified in the Improvement Permit and the Construction Authorization. Use of an experimental or controlled demonstration system and any conditions shall be described on the Improvement Permit, Construction Authorization and any subsequent operation permits, with provisions for a repair area and backup system specified;

(8) The State shall be notified of a proposed Improvement Permit, Construction Authorization and any subsequent operation permits for experimental or controlled demonstration systems prior to issuance by the local health department. The State shall notify the manufacturer and local health department if the proposed use is found to be inconsistent with the approved research or testing program.

(9) Upon completion of the installation and prior to use, an Experimental or Controlled Demonstration System Operation Permit (ESOP or CDSOP) shall be issued by the local health department. The ESOP or CDSOP shall be valid for a specified period of time based upon the projected duration of the research and testing program, not to exceed five years. Maintenance, monitoring and testing requirements shall be specified as permit conditions, in accordance with the approved research or testing program. Failure to carry out these conditions shall be grounds for permit suspension or revocation.

(10) Prior to expiration of the ESOP (CDSOP) and based upon satisfactory system performance as determined during the research or testing program, the local health department shall issue an Operation Permit. Premature termination of the research or testing program shall be grounds for ESOP (CDSOP) suspension or revocation.

(11) Upon completion of monitoring, research and testing, the research or testing organization shall prepare a final report to the State including recommendations on future use of the system. If the State determines that the results indicate that the standards of Paragraph (e) or (g) of this Rule are met, the State shall approve the use as a controlled demonstration or an innovative system, respectively.

(g) INNOVATIVE SYSTEMS: Innovative systems, technologies, components, or devices shall be reviewed and approved by the State, and the local health department shall permit innovative systems in accordance with the following:

(1) The State shall approve the system as an innovative system when there has been successful completion of a prior evaluation of the system in North Carolina as an experimental or controlled demonstration system or when sufficient documentation is provided from any comparable evaluations of the system in other states which support the proposed use of the system, and when the performance requirements for an innovative system of G.S. 130A-343(a) and G.S. 130A-343(g) and the following conditions have been met:

(A) The system, shall have been demonstrated to perform equal or superior to a system, which is described in Rules .1955, .1956, .1957, or .1958, of this Section, based upon controlled pilot-scale research studies or statistically-valid monitoring of full-scale operational systems;

(B) Materials used in construction shall be equal or superior in physical properties and chemical durability, compared to materials used for similar proposed systems, specifically described in Rules .1955, .1956, .1957, or .1958 of this Section; and

(C) Documentation is provided of at least 100 installations operational for at least 12-months unless data have been collected that show all other requirements for innovative approval have been met from a lesser number of North Carolina installations in conjunction with an approved experimental or controlled demonstration research or testing program.

(2) In lieu of the requirements specified in Subparagraph (1) of this Paragraph, applications for innovative approval shall be "Fast Track" approved or denied within 120 days from the acceptance of a complete application when the application includes TS-I or TS-II compliant evaluation data collected under NSF Standard 40 or another prior approved evaluation protocol; and the following:

(A) The system, shall have been demonstrated to perform equal or superior to a system, which is described in Rules .1955, .1956, .1957, or .1958, of this Section, and to comply with TS-I or TS-II standards, based upon statistically valid third-party field verification data which include at least 50 data points from a minimum of 15 sites, with a minimum of two data points per site, collected over at least a 12-month period, and with no data excluded from the field sampling sites; and
(B) Materials used in construction shall be equal or superior in physical properties and chemical durability, compared to materials used for similar proposed systems, specifically described in Rules .1955, .1956, .1957, or .1958 of this Section.

(3) Approved innovative systems shall be assigned a unique code for tracking purposes. Prior to making a request for reclassification of a system from innovative to accepted, the manufacturer shall have a system in place to keep track of the number and location of new system installations, and of any system installations it becomes aware of which were required to be repaired, and to provide this information to the State upon request and in any subsequent petition for accepted status.

(4) A local health department shall issue an Improvement Permit and a Construction Authorization for any innovative system approved by the State upon a finding that the provisions of this Section including any conditions of the approval are met. Use of an innovative system and any conditions shall be described on the Improvement Permit, Construction Authorization, or Operation Permit.

(5) Manufacturers of proprietary innovative systems which include an advanced pretreatment component may choose to comply with the performance audit requirements as stipulated in Subparagraph (h)(8) of this Rule, in lieu of routine effluent sampling for each system on an annual basis as may otherwise be required, and shall comply with those performance audit requirements prior to being granted accepted system status. The approved audit procedure shall be carried out annually until receipt of Accepted System approval by the Commission.

(h) ACCEPTED SYSTEMS: A petition to the Commission for reclassification of a proprietary innovative system to an accepted system, as defined in G.S. 130A-343(a)(1), shall be submitted by the manufacturer for review to the State, accompanied by the fee payment as required by G.S. 130A-343(k) and as stipulated in Paragraph (b) of this Rule. The State shall review all petitions submitted and evaluate the following: the completeness of the petition, and whether additional information is needed to continue the review; and whether the system meets the standards of an accepted system under G.S. 130A-343(a)(1), G.S. 130A-343(h), and this Section. The State shall inform the petitioner if the petition is determined to be complete or of any additional information needed to continue the review, within 30 days. When a petition is determined to be incomplete, the petitioner shall be informed in writing why and whether additional information is required for the petition to be reconsidered. This review of the petition for completeness does not constitute a qualitative review of the information provided, nor the approval or denial of the proposed system designation. Additional requested information for the petition to be considered complete shall be received within 180 days, or the petition file shall be closed. Upon request of the petitioner, the Commission may modify this 180 day time frame if the Commission determines that more time is necessary to obtain the additional information requested by the State and it can be provided within the requested modified time frame. The petitioner may also request Commission review of the State's determination that a petition is incomplete or a request by the State for additional information. The State may also initiate a review of a nonproprietary innovative system pursuant to G.S. 130A-343(i)(2). The State shall submit to the Commission findings and recommendations based upon its review for final Commission action on system designation. The State's findings and recommendations for a proprietary innovative system shall be presented to the Commission within 120 days of receipt of a complete petition. The Commission shall designate a wastewater system technology, component or device as an accepted system when it finds that the standards set forth by G.S. 130A-343(a)(1) and G.S. 130A-343(h) have been met. The following factors shall be considered prior to granting accepted system status:

1. documentation provided that there have been at least 300 systems installed statewide and the system has been in use as an approved innovative system for more than five years;
2. data and findings of all prior evaluations of the system performance as provided by the manufacturer;
3. results of prior performance surveys of innovative 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 local health departments and other information documenting the experiences with performance of the system in North Carolina, including information collected and reported pursuant to Subparagraph (g)(1) and Paragraph (p) of this Rule. Upon request of the manufacturer, the State and manufacturer shall meet to discuss the accuracy and validity of performance data and surveys to be considered for inclusion in the review. Local health departments shall be invited to participate in the discussion;
5. for proprietary nitrification trench systems, a statistically valid survey of system performance shall be performed, as follows:
   A. The manufacturer shall provide a proposed survey plan for State concurrence prior to carrying out the survey. This plan shall specify the number of systems to be evaluated, period of evaluation,
method to randomly select systems to be evaluated, methods of field and data evaluation, and
proposed survey team members, including proposed cooperative arrangements to be made with
State and local health department on-site wastewater program staff. The State shall facilitate local
health department participation with any performance review or survey. The State shall utilize the
Division of Public Health's State Center for Health Statistics for assistance in evaluating the
statistical validity of proposed evaluation protocols.

(B) The survey shall include the field evaluation of at least 250 randomly selected innovative systems
compared with 250 comparably-aged randomly selected conventional systems, with at least 100 of
each type of surveyed system currently in use and in operation for at least five years. Systems
surveyed shall be distributed throughout the three physiographic regions of the state (Mountain,
Piedmont and Coastal Plain) in approximate proportion to the relative usage in the three regions.
The survey shall determine comparative system failure rates, with field evaluations completed
during a typical wet-weather season (February through early April), with matched innovative and
conventional systems sampled during similar time periods in each region. The petitioner shall
provide a statistical analysis of the survey results showing a "one-sided" test where, if the failure
rate in the sample of 250 innovative systems is at least five percentage points higher than the
failure rate in the sample of 250 conventional systems, there is only a five percent chance that a
difference this large would occur by chance (95% confidence level). If a statistically significant
higher failure rate in the innovative system is not detected, the Commission shall find that the
innovative system performs the same as or better than the conventional system.

(6) The Commission shall grant accepted status to an innovative system based upon a showing by the
manufacturer that there have been at least 10,000 operational systems installed in the state, in more than
one county of the state, over at least an eight year period with a total reported failure rate statewide based
on records provided by the manufacturer and local health departments of less than one percent. However,
the granting of accepted status based upon this criteria shall be conditioned on the manufacturer
successfully completing an approved field survey pursuant to Parts (h)(5)(A) or (h)(5)(B) of this Rule
within no more than 24 months of being granted accepted status;

(7) The manufacturer of a proprietary innovative system, which includes an advanced pretreatment component
designed to achieve NSF-40, TS-I or TS-II effluent quality standards requesting accepted status shall
document that the system has received certification under NSF Standard 40 or another prior approved
evaluation protocol. A certified system which has been modified pursuant to Paragraph (i) of this Rule or as
otherwise necessary to be approved for use in North Carolina shall still be considered in compliance with
this certification requirement. For approved innovative systems in general use in North Carolina for more
than five years prior to January 1, 2006, which only lack certification under NSF Standard 40 or another
approved evaluation protocol but meet all other requirements for Accepted System status, the Commission
shall grant conditional accepted status provided such certification is obtained within 24 months from the
date this conditional status is granted;

(8) Performance Audit: Prior to Accepted System approval by the Commission of a proprietary innovation
system which includes an advanced pretreatment component, a performance audit shall be run for a
minimum of three consecutive years or until data have been collected from at least 30 separate operational
North Carolina systems. The performance audit shall consist of third-party random sampling of a minimum
of 10 separate operational North Carolina sites by an approved field evaluation protocol. The manufacturer
shall propose the third-party, and the third-party shall submit a plan for system evaluation to include their
third-party credentials and the number of systems to be sampled, the method for randomly selecting the
sites to be sampled, and details of the procedure for sample collection and analysis, which shall be prior-
approved by the State. Samples shall be collected by 24-hour composite sampling (grab sampling for fecal
coliform) and analyzed by a wastewater laboratory certified by the Division of Water Quality for all
applicable performance parameters. All systems to be included in the performance audit shall be found by
the third-party to be in compliance with the design requirements of the Innovative Approval. In order to be
granted accepted status, the following conditions shall be met:

(A) the mean values of sample data from all sites statewide in each sampling year shall meet NSF-40,
   TS-I or TS-II effluent quality standards for each parameter, as applicable;

(B) no more than 20 percent of these randomly sampled sites during each sampling year shall exceed
   the designated NSF-40, TS-I or TS-II effluent quality standards for any parameter, as applicable;
(C) the sampled systems for the purposes of evaluation for Accepted System status shall be operational for at least three years, with at least 10 systems in operation for at least five years, and results from no more than 20 percent of these sampled systems over five years old shall exceed the designated NSF-40, TS-I or TS-II effluent quality standards for any parameter, as applicable;

(D) no data collected and analyzed pursuant to Parts (A) through (C) of this Subparagraph shall be considered as part of the audit that is collected before April 1, 2006;

(E) operation, maintenance or sampling activities that have taken place or are proposed by the third-party at the audited sites, including Operator reports, maintenance logs and projected sample collection days and laboratory reports for samples analyzed, shall be provided to the local health department and the State;

(F) if the performance criteria in Parts (A) and (B) of this Subparagraph are not met in any sampling year, the sites from which substandard samples are obtained shall be resampled for any non-compliant parameter. If the performance criteria in Parts (A) and (B) of this Subparagraph are still not met using the results from the resampled data, at least 20 new sites or twice as many as were initially sampled, not to exceed 30, shall be sampled for all applicable performance parameters. If this second set of sample results does not meet performance criteria stipulated in Parts (A) and (B) of this Subparagraph, the accepted system status shall be denied.

(9) Provisions shall be in place for the manufacturer of a proprietary accepted system which include an advanced pretreatment component to remain certified and listed under NSF Standard 40 or another prior State approved evaluation, certification and listing protocol that includes routine audits of the system manufacturing facilities and of the performance of operational systems that verifies ongoing conformity with the approved protocol.

(10) Other criteria for determining whether the proposed system has been in general use, and other surveys, including evaluations of different numbers of innovative and conventional systems, designed to verify equal or superior performance of the innovative system compared to the conventional system under actual field conditions in North Carolina shall be approved by the state when they are demonstrated to have comparable statistical validity as described in Subparagraphs (5) or (8) of this Paragraph, as applicable. The State's review and approval of proposed alternate criteria for determining whether the system has been in general use, or of other proposed surveys are subject to review and concurrence by the Commission.

(i) APPROVAL AND PERMITTING OF ACCEPTED SYSTEMS: The following conditions apply to the approval and permitting of accepted systems:

(1) When a petition or recommendation for an accepted wastewater system designation is approved by the Commission, the State shall notify local health departments and publish a listing of accepted systems. The Commission shall impose any use, design, installation, operation, maintenance, monitoring, and management conditions pursuant to G.S. 130A-343.

(2) The local health department shall permit systems designated as accepted nitrification trench systems that meet the requirements of this Section, laws, and conditions of its accepted system approval in an equivalent manner as a conventional system. The Owner may choose to substitute an accepted system for a conventional system or another accepted system without prior approval of the health department as long as no changes are necessary in the location of each nitrification line, trench depth, or effluent distribution method.

(3) The owner may choose to substitute an accepted advanced pretreatment system for another accepted advanced pretreatment system provided the owner applies to the local health department and receives a revised Construction Authorization prior to its installation.

(4) The type of accepted system installed shall be indicated on the Operation Permit, including designation of the manufacturer and model or unique code.

(j) MODIFICATION OF APPROVED SYSTEMS: Where a manufacturer of an approved E & I or accepted system seeks to modify such system or its conditions of approval (including siting or sizing criteria) and retain its approved status, the manufacturer shall submit to the State a request for approval of the proposed modification. 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 state shall approve the modified system with the same status as the previously approved system. Approvals of proposed modifications to E & I systems pursuant to this Paragraph shall be made by the State. Approvals of proposed modifications to accepted systems pursuant to this Paragraph shall be made by the Commission when the manufacturer's demonstration provides clear, convincing and cogent supporting evidence. In order to confirm the satisfactory performance of an approved modified accepted system, the manufacturer shall
conduct a survey or audit of installed modified systems in accordance with Subparagraphs (h)(5) or (h)(8) of this Rule, as applicable, within one year of the fifth anniversary of the approval of the modified system and shall submit the results of the survey to the State. The State may modify, suspend, or revoke its approval of the modified system based on the survey results or any other information that supports a finding that the modified system does not perform in a manner equal or superior to the previously approved E & I system. The Commission may similarly modify, suspend, or revoke its approval of a modified accepted system.

(k) The State may modify, suspend or revoke the approval of a system as provided for in G.S. 130A-343(c), and as follows:

(1) The system approval shall be modified as necessary to comply with subsequent changes in laws or rules which affect their approval.

(2) The approval of a system may be modified, suspended or revoked upon a finding that:

(A) subsequent experience with the system results in altered conclusions about system performance, reliability, or design;

(B) the system or component fails to perform in compliance with performance standards established for the system; or

(C) the system or component or the system applicant fails to comply with wastewater system laws, rules or conditions of the approval.

(3) The State shall notify the Commission of any action required for Commission approval of any modifications to the status of an accepted system. The Commission may require the manufacturer or the State to complete a follow-up survey of a proprietary nitrification trench system or a performance audit of an advanced pretreatment system such as described in this Rule if the Commission determines further information is necessary prior to rendering a final decision on modification of the status of an accepted system.

(l) Modification, suspension or revocation of a system approval shall not affect systems previously installed pursuant to the approval.

(m) Reductions in total nitrification trench length allowed for systems, as compared to the system sizing requirements delineated in Rule .1955 of this Section for conventional systems based upon excavated trench width, apply only to drainfields receiving septic tank effluent of domestic strength or better quality. The system may be used for facilities producing non-domestic strength wastewater with nitrification trench length and trench bottom area determined based upon excavated trench width equal to what is required by Rule .1955 of this Section for a conventional gravel trench system, with no reduction or application of an equivalency factor. However, reductions up to 25 percent when allowed for approved innovative or accepted system models may be applied for facilities producing higher strength wastewater following a specifically approved pretreatment system designed to assure effluent strength equal to or better than domestic septic tank effluent, with a five-day Biochemical Oxygen Demand (BOD) less than 150 milligrams per liter (mg/l), total suspended solids (TSS) less than 100 mg/l and fats, oil and grease (FOG) less than 30 mg/l.

(n) A Performance Warranty shall be provided by the manufacturer of any approved innovative or accepted wastewater system handling untreated septic tank effluent which allows for a reduction in the total nitrification trench length of more than 25 percent as compared to the total nitrification trench length required for a 36-inch wide conventional wastewater system, pursuant to G.S. 130A-343(j). The Department shall approve the warranty when found in compliance with the applicable laws and this Paragraph. When a wastewater system warranted according to G.S. 130A-343(j) (warranty system) is proposed to serve a residence, place of business, or place of public assembly, the site shall include a repair or replacement area in accordance with Rule .1945(b) of this Section or an innovative or accepted system approved under this Rule with no more than a 25 percent reduction in excavated trench bottom area. The following conditions are applicable for the performance warranty and a system approved pursuant to this Paragraph:

(1) The Manufacturer shall provide the approved Performance Warranty in effect on the date of the Operation Permit issuance to the owner or purchaser of the system. The warranty shall be valid for a minimum of five-years from the date the warranty system is placed into operation.

(2) The Manufacturer shall issue the Performance Warranty to the property owner through its authorized installer who shall sign the Performance Warranty indicating the system has been installed in accordance with the manufacturer's specifications, any conditions of the system approval granted by the Department, and all conditions of the Authorization to Construct a Wastewater System by the local health department. The installer or contractor shall return a copy of the signed Performance Warranty to the Manufacturer within 10 days indicating the physical address or location of the facility served by the warranty system, date the system was installed or placed into use, and type and model of system installed.

(3) The Performance Warranty shall provide that the manufacturer shall furnish all materials and labor necessary to repair or replace a malfunctioning warranty system as defined in Rule .1961(a) of this Section.
or a warranty system that failed to meet any performance conditions of the approval. The system shall be repaired or replaced with a fully functional wastewater system at no cost to the Owner, in accordance with this Section and applicable laws.

(4) Performance Warranty repairs such as full replacement of the nitrification system, extension of the nitrification system or other repairs shall be completed pursuant to a repair Authorization to Construct that is issued by the local health department in accordance with this Section.

(5) The Performance Warranty shall be attached to the Operation Permit issued by the Health Department for the wastewater system. The Performance Warranty shall remain in effect, notwithstanding change in ownership, to the end of the five-year warranty period.

(o) Manufacturers of proprietary systems approved under this Rule shall provide a list of manufacturer's authorized installers to the Department and applicable local health departments, and update this list whenever there are additions or deletions. No Operation Permit shall be issued for a proprietary system installed by a person not authorized by the Manufacturer, unless the Manufacturer of the proprietary system specifically approves the installation in writing.

(p) The local health department shall include in its monthly activity report submitted to the State the number of new system Operation Permits issued for E & I and accepted systems. Additionally, the number of Operation Permits issued for repairs of E & I and accepted systems, and repair system type shall be reported to the State as part of the monthly activity report. The State shall accumulate and store this installation data for future reference and surveys, including site locations.

(q) The State shall provide assistance and training to its authorized agents to assure approved E & I and accepted systems are permitted, installed, operated and evaluated in accordance with the system approval.

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.

15A NCAC 18A .1970 ADVANCED WASTEWATER PRETREATMENT SYSTEM

(a) ADVANCED PRE-TREATMENT SYSTEM PERFORMANCE STANDARDS: A wastewater system with a design flow of up to 3000 gallons per day approved pursuant to 15A NCAC 18A .1957(c) or .1969 that includes an advanced pretreatment component shall be designed to meet one of the effluent quality standards specified in Table VII prior to dispersal of the effluent to the soil and shall comply with the requirements of this Rule.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>NSF-40</th>
<th>TS-I</th>
<th>TS-II</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbonaceous Biochemical Oxygen Demand (CBOD)</td>
<td>&lt;25 (mg/l)*</td>
<td>&lt;15 (mg/l)</td>
<td>&lt;10 (mg/l)</td>
</tr>
<tr>
<td>Total Suspended Solids (TSS)</td>
<td>&lt;30 (mg/l)</td>
<td>&lt;15 (mg/l)</td>
<td>&lt;10 (mg/l)</td>
</tr>
<tr>
<td>Total Ammonia Nitrogen (NH3)</td>
<td>&lt;10 (mg/l), or at least 80% removal of NH3 if influent TKN exceeds 50 mg/l</td>
<td></td>
<td>&lt;10 (mg/l)</td>
</tr>
<tr>
<td>Total Nitrogen (TN) (TN is Total Kjeldahl Nitrogen plus Nitrate+Nitrite Nitrogen)</td>
<td></td>
<td></td>
<td>&lt;20 mg/l or &gt;60% removal</td>
</tr>
<tr>
<td>Fecal Coliform</td>
<td>&lt;10,000 (colonies/100 ml)</td>
<td>&lt;1,000 (colonies/100 ml)</td>
<td></td>
</tr>
</tbody>
</table>

*mg/l is milligrams per liter

System performance monitoring, site and system compliance criteria pursuant to these standards are delineated in Paragraphs (n) and (o) of this Rule. These standards or modifications to these standards may be proposed to be complied with by the designer of systems with a design flow of over 3000 gallons per day or Industrial Process Wastewater Systems and approved by the State pursuant to Rules .1938(e) or .1938(f) of this Section, respectively, when documentation is provided that the performance criteria of Rule .1946 of this Section and 15A NCAC 02L will be met.

(b) Design influent quality shall not exceed the criteria specified in Table VIII, unless the system is designed and approved by the State to handle higher strength wastewater on a product or project-specific basis.
Table VIII (Influent Quality Standards for Advanced Pretreatment Systems)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Influent Not to Exceed (mg/l)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biochemical Oxygen Demand (BOD)</td>
<td>350</td>
</tr>
<tr>
<td>Total Suspended Solids (TSS)</td>
<td>200</td>
</tr>
<tr>
<td>Total Kjeldahl Nitrogen (TKN)</td>
<td>100</td>
</tr>
<tr>
<td>Fats, Grease and Oil (FOG)</td>
<td>30</td>
</tr>
</tbody>
</table>

*mg/l is milligrams per liter

Maximum influent characteristics in Table VIII are based upon septic tank pretreatment. The product's RWTS, Experimental, Controlled Demonstration, Innovative or Accepted System approval, as applicable, may include alternate or additional influent limitations, such as for systems designed to handle untreated wastewater and special limitations for TS-I and TS-II systems to achieve the proper amount of nitrification.

(c) The site shall be initially evaluated and classified in accordance with the rules of this Section or as otherwise specified in a system-specific approval issued pursuant to 15A NCAC 18A.1969. A ground absorption system receiving effluent from an advanced wastewater pretreatment system may be used on sites classified as SUITABLE or PROVISIONALLY SUITABLE for conventional, modified, alternative, or E & I or accepted systems in accordance with this Section. Modifications to siting and system design criteria pursuant to Paragraphs (d), (e), (f), (g), (h), (i), and (j) of this Rule shall be acceptable, as applicable.

(d) NSF-40 SYSTEMS SITING AND SIZING REQUIREMENTS: For systems approved to achieve at least NSF-40 standards and designed for no more than 1500 gallons per day, the following siting and sizing factors apply when designing the soil absorption system:

1. Trench or bed bottom separation distances are as specified in this Subparagraph. In Table IX, "SWC" means "Soil Wetness Condition," and "USC" means an "UNSUITABLE Soil/Fill Condition," other than a SWC.

Table IX: Vertical Separation Requirements for NSF-40 Systems ≤1500 gallons per day

<table>
<thead>
<tr>
<th>Soil/System Criteria</th>
<th>Rule* Reference</th>
<th>Depth from Surface** to UNSUITABLE Soil/Fill Condition</th>
<th>Minimum Vertical Trench/Bed Bottom Separation Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Gravity Distribution</td>
<td>Pressure Dispersal</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Gravity Distribution)</td>
<td>(Pressure Dispersal)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Depth to USC)</td>
<td>(Depth to SWC)</td>
</tr>
<tr>
<td>Soil Group I</td>
<td>Rules .1955, .1956, and .1957(a)</td>
<td>24-inches</td>
<td>24-inches</td>
</tr>
<tr>
<td>Soil Groups II-IV</td>
<td>Rules .1955, .1956, and .1957(a)</td>
<td>24-inches</td>
<td>24-inches</td>
</tr>
<tr>
<td>New Fill</td>
<td>Rule .1957(b)(1)</td>
<td>18-inches to USC, and 12-inches to SWC</td>
<td>18-inches to USC, and 12-inches to SWC</td>
</tr>
<tr>
<td>Existing Fill (≤480 gpd only)</td>
<td>Rule .1957(b)(2)</td>
<td>36-inches of Group I Fill/Soils</td>
<td>24-inches of Group I Fill/Soils</td>
</tr>
</tbody>
</table>

*Except as allowed in this Rule, all other requirements of the Rules referenced remain applicable

**Minimum depth of soil/fill required at site to permit system. Depth shall be measured from the naturally occurring soil surface or Existing Fill surface, as applicable

(2) The total drainfield trench length or bed system bottom area, as required for a ground absorption system receiving septic tank effluent, is reduced by 25 percent in soils which are Groups I or II with SUITABLE structure and clay mineralogy. No other reductions in linear footage of nitrification trench, square footage of trench bottom area or system area shall be applied when a PPBPS or innovative trenches or accepted...
systems are used for the absorption field, except where based on an adjusted design daily flow rate granted in accordance with 15A NCAC 18A .1949(c). Bed systems remain restricted to a design flow of 600 gallons per day or less; and

(3) The minimum horizontal setback requirements of 15A NCAC 18A .1950, .1951 and .1956(6)(g), as applicable, shall be met, except as follows:

Table X

<table>
<thead>
<tr>
<th>Land Feature or Component</th>
<th>Minimum Horizontal Setbacks for Ground Absorption Systems Where NSF-40 Pretreatment System are used for ≤ 1500 gallons per day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Streams classified as WS-1, except for saprolite</td>
<td>70</td>
</tr>
<tr>
<td>Waters classified as S.A., from mean high water mark</td>
<td>70</td>
</tr>
<tr>
<td>Other coastal waters from mean high water mark</td>
<td>35</td>
</tr>
<tr>
<td>Any other stream, canal, marsh or other surface waters, from normal pool elevation</td>
<td>35</td>
</tr>
<tr>
<td>Any Class I or Class II reservoir from normal pool elevation</td>
<td>70</td>
</tr>
<tr>
<td>Any permanent storm water retention pond from flood pool elevation</td>
<td>35</td>
</tr>
<tr>
<td>Any other lake or pond from normal pool or mean high water elevation</td>
<td>35</td>
</tr>
</tbody>
</table>

The Provisions of Subparagraphs (1), (2) and (3) of this Paragraph are also applicable to systems approved as meeting TS-I or TS-II standards pursuant to 15A NCAC 18A .1969, unless otherwise restricted elsewhere in this Rule.

(e) TS-I SYSTEMS SITING AND SIZING REQUIREMENTS: Except as allowed in Parts (3)(A) and (3)(B) of this Paragraph, when trenches are used for the drainfield in conjunction with an advanced pretreatment system meeting TS-I standards, one and only one of the following siting, sizing or system factors pursuant to Subparagraphs (1), (2) or (3) of this Paragraph apply when designing the ground absorption component of the system. When a system is permitted pursuant to this Paragraph, the provisions of Paragraph (d) of this Rule do not apply.

(1) Trench bottom separation distances for a system with a design flow no greater than 1000 gallons per day are as specified in this Subparagraph. In Table XI, "SWC" means "Soil Wetness Condition," and "USC" means an "UNSUITABLE Soil/Fill Condition," other than a SWC.

Table XI: Vertical Separation Requirements for TS-I Systems ≤ 1000 gallons per day

<table>
<thead>
<tr>
<th>Soil/System Criteria</th>
<th>Rule* Reference</th>
<th>Depth from Surface** to UNSUITABLE Soil/Fill Condition</th>
<th>Minimum Vertical Trench Bottom Separation Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Gravity Distribution</td>
<td>Pressure Dispersal</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Fill</td>
<td>Rule .1957(b)(1)</td>
<td>14-inches to USC, and 12-inches to SWC</td>
<td>12-inches</td>
</tr>
<tr>
<td>Existing Fill (≤480 gpd only)</td>
<td>Rule .1957(b)(2)</td>
<td>36-inches of Group I Fill/Soil</td>
<td>24-inches of Group I Fill/Soil</td>
</tr>
</tbody>
</table>

*Except as allowed in this Rule, all other requirements of the Rules referenced remain applicable
Minimum depth of soil/fill required at site to permit system. Depth shall be measured from the naturally occurring soil surface or Existing Fill surface, as applicable

(A) The trench bottom vertical separation distance shall not be reduced to less than 12 inches to rock or tidal water;

(B) With the exception of the reduced setbacks to drainage devices pursuant to Table XII of this Rule, the minimum horizontal setback requirements of 15A NCAC 18A .1950, .1951 and .1956(6)(g), as applicable, shall be met; and

(C) A special site evaluation shall be provided to the local health department on behalf of the owner, pursuant to Paragraph (p) of this Rule;

(2) The long term acceptance rate (LTAR) that would be assigned by the local health department for a ground absorption system using septic tank effluent may be increased by up to a factor of two when all of the following conditions are met:

(A) A special site evaluation is provided to the local health department on behalf of the owner, pursuant to Paragraph (p) of this Rule, when Group III or IV soils or saprolite occur within three feet of the trench bottom or the site requires drainage of Group II or III soils or whenever the design flow exceeds 1000 gallons per day;

(B) No further reductions in linear footage of nitrification trench or system area is applied when a PPBPS or innovative trenches or accepted systems are used for the absorption field;

(C) For systems to be installed in fill, pressure dispersal (LPP or Drip distribution) is utilized; and

(D) With the exception of the reduced setbacks to drainage devices pursuant to Table XII of this Rule or as allowed pursuant to Part (3)(B) of this Paragraph, the minimum horizontal setback requirements of 15A NCAC 18A .1950, .1951, and .1956(6)(g), as applicable, are met. For systems with a design flow in excess of 1000 gallons per day, a 25-foot horizontal separation shall be maintained to the property line, unless a site-specific nitrogen migration analysis indicates that a nitrate concentration at the property line will not exceed 10 milligrams per liter (mg/l); or

(3) The minimum horizontal setback requirements of 15A NCAC 18A .1950, .1951 and .1956(6)(g), as applicable, shall be met, except as follows for a system with a design flow not to exceed 1000 gallons per day:

<table>
<thead>
<tr>
<th>Land Feature or Component</th>
<th>TS-I (feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any public water supply</td>
<td>100</td>
</tr>
<tr>
<td>Streams classified as WS-I, except for saprolite</td>
<td>70</td>
</tr>
<tr>
<td>Waters classified as S-A, from mean high water mark</td>
<td>70</td>
</tr>
<tr>
<td>Other coastal waters, from mean high water mark</td>
<td>35</td>
</tr>
<tr>
<td>Any other stream, canal, marsh or other surface waters, from normal pool elevation</td>
<td>35</td>
</tr>
<tr>
<td>Any Class I or Class II reservoir, from normal pool elevation</td>
<td>70</td>
</tr>
<tr>
<td>Any permanent storm water retention pond, from flood pool elevation</td>
<td>35</td>
</tr>
<tr>
<td>Any other lake or pond, from normal pool or mean high water elevation</td>
<td>35</td>
</tr>
<tr>
<td>Any building foundation</td>
<td>5</td>
</tr>
<tr>
<td>Any basement</td>
<td>15</td>
</tr>
<tr>
<td>Any property line</td>
<td>10</td>
</tr>
<tr>
<td>Top of slope of embankments or cuts of 2 feet or more vertical height</td>
<td>15</td>
</tr>
<tr>
<td>Any water line</td>
<td>10</td>
</tr>
<tr>
<td>Upslope interceptor/foundation drains/diversions</td>
<td>7</td>
</tr>
<tr>
<td>Sideslope interceptor/foundation drains/diversions</td>
<td>10</td>
</tr>
<tr>
<td>Downslope interceptor/foundation drains/diversions</td>
<td>20</td>
</tr>
<tr>
<td>Groundwater lowering ditches or devices</td>
<td>20</td>
</tr>
<tr>
<td>Any swimming pool</td>
<td>15</td>
</tr>
<tr>
<td>Any other nitrification field (except the system repair area)</td>
<td>10</td>
</tr>
</tbody>
</table>
With the exception of the reduced setbacks to drainage devices or as allowed pursuant to Part (B) of this Subparagraph, when any horizontal setbacks are proposed to be reduced pursuant to Table XII, the vertical separation modifications or LTAR increases shall not be concurrently applied pursuant to Subparagraphs (1) and (2) of this Paragraph, respectively.

When an accepted system is used which allows for a 25 percent reduction in drainfield trench length, compared with a conventional trench system, for a system designed for 1000 gallons per day or less, the horizontal setback modifications in Table XII and a 25 percent trench length reduction may be concurrently applied when the site has space for an equivalently sized repair system. A special site evaluation shall be provided to the local health department on behalf of the owner, pursuant to Paragraph (p) of this Rule, when Group III or IV soils or saprolite occur within three feet of the trench bottom.

(f) TS-II SYSTEMS SITING AND SIZING REQUIREMENTS: Except as allowed in Parts (3)(A) and (3)(B) of this Paragraph, when trenches are used for the drainfield in conjunction with an advanced pretreatment system meeting TS-II standards, one and only one of the following siting, sizing or system factors pursuant to Subparagraphs (1), (2) or (3) of this Paragraph apply when designing the ground absorption component of the system. When a system is permitted pursuant to this Paragraph, the provisions of Paragraph (d) of this Rule do not apply.

(1) Trench bottom separation distances for systems with a design flow no greater than 1000 gallons per day are as specified in this Subparagraph. In Table XIII, "SWC" means "Soil Wetness Condition," and "USC" means an "UNSUITABLE Soil/Fill Condition," other than a SWC.

<table>
<thead>
<tr>
<th>Soil/System Criteria</th>
<th>Rule* Reference</th>
<th>Depth from Surface** to UNSUITABLE Soil/Fill Condition</th>
<th>Minimum Vertical Trench Bottom Separation Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Gravity Distribution</td>
<td>Pressure Dispersal</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soil Group I</td>
<td>Rules .1955, .1956, and .1957(a)</td>
<td>24- inches</td>
<td>15-inches</td>
</tr>
<tr>
<td>New Fill</td>
<td>Rule .1957(b)(1)</td>
<td>14-inches to USC, and 12-inches to SWC</td>
<td>12-inches</td>
</tr>
<tr>
<td>Existing Fill</td>
<td>Rule .1957(b)(2)</td>
<td>36-inches of Group I Fill/Soil</td>
<td>24-inches of Group I Fill/Soils</td>
</tr>
</tbody>
</table>

*Except as allowed in this Rule, all other requirements of the Rules referenced remain applicable

**Minimum depth of soil/fill required at site to permit system. Depth shall be measured from the naturally occurring soil surface or Existing Fill surface, as applicable

(A) The trench bottom vertical separation distance shall not be reduced to less than 12 inches to rock or tidal water;

(B) With the exception of the reduced setbacks to drainage devices pursuant to Table XIV of this Rule, the minimum horizontal setback requirements of 15A NCAC 18A .1950, .1951 and .1956 (6)(g), as applicable, shall be met; and
A special site evaluation shall be provided to the local health department on behalf of the owner, pursuant to Paragraph (p) of this Rule;

The long term acceptance rate (LTAR) that would be assigned by the local health department for a ground absorption system using septic tank effluent may be increased by up to a factor of 2.0 in Group II, III and IV Soils and by up to a factor of 2.5 in Group I Soils when all of the following conditions are met:

(A) A special site evaluation is provided to the local health department on behalf of the owner, pursuant to Paragraph (p) of this Rule, when Group III or IV Soils or saprolite occur within three feet of the trench bottom or the site requires drainage of Group II or III soils, or whenever the design flow exceeds 1000 gallons per day;

(B) No further reductions in linear footage of nitrification trench or system area are applied when a PPBPS or innovative trenches or accepted systems are used for the absorption field;

(C) For systems to be installed in fill, a pressure dispersal system (LPP or Drip distribution) is utilized;

(D) With the exception of the reduced setbacks to drainage devices pursuant to Table XIV of this Rule or as allowed pursuant to Part (3)(B) of this Paragraph, the minimum horizontal setback requirements of 15A NCAC 18A .1950, .1951 and .1956 (6)(g), as applicable, are met;

(E) For the LTAR to be increased by a factor above 2.0 (up to 2.5) for a system designed for 1000 gallons per day, or less, there is at least 36 inches of Group I Soils from the naturally occurring soil surface, the depth to a soil wetness condition below the naturally occurring soil surface is at least 24 inches, a pressure dispersal system (LPP or Drip) is utilized, and there is a 100-percent repair area; and

(F) For the LTAR to be increased by a factor above 2.0 (up to 2.5) for a system designed for greater than 1000 gallons per day, there is at least 48 inches of Group I Soils from the naturally occurring soil surface, the depth to a soil wetness condition below the naturally occurring soil surface is at least 30 inches, a pressure dispersal system (LPP or Drip) is utilized, and there is a 100-percent repair area; or

The minimum horizontal setback requirements of 15A NCAC 18A .1950, .1951 and .1956(6)(g), as applicable, shall be met, except as follows for a system with a design flow not to exceed 1000 gallons per day:

<table>
<thead>
<tr>
<th>Land Feature or Component</th>
<th>TS-II (feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any public water supply</td>
<td>100</td>
</tr>
<tr>
<td>Streams classified as WS-I, except for saprolite</td>
<td>50</td>
</tr>
<tr>
<td>Waters classified as S-A, from mean high water mark</td>
<td>50</td>
</tr>
<tr>
<td>Other coastal waters, from mean high water mark</td>
<td>25</td>
</tr>
<tr>
<td>Any other stream, canal, marsh or other surface waters, from normal pool elevation</td>
<td>25</td>
</tr>
<tr>
<td>Any Class I or Class II reservoir, from normal pool elevation</td>
<td>50</td>
</tr>
<tr>
<td>Any permanent storm water retention pond, from flood pool elevation</td>
<td>25</td>
</tr>
<tr>
<td>Any other lake or pond, from normal pool or mean high water elevation</td>
<td>25</td>
</tr>
<tr>
<td>Any building foundation</td>
<td>5</td>
</tr>
<tr>
<td>Any basement</td>
<td>15</td>
</tr>
<tr>
<td>Any property line</td>
<td>10</td>
</tr>
<tr>
<td>Top of slope of embankments or cuts of 2 feet or more vertical height</td>
<td>15</td>
</tr>
<tr>
<td>Any water line</td>
<td>10</td>
</tr>
<tr>
<td>Upslope interceptor/foundation drains/diversions</td>
<td>7</td>
</tr>
<tr>
<td>Sideslope interceptor/foundation drains/diversions</td>
<td>10</td>
</tr>
<tr>
<td>Downslope interceptor/foundation drains/diversions</td>
<td>15</td>
</tr>
<tr>
<td>Groundwater lowering ditches and devices</td>
<td>15</td>
</tr>
<tr>
<td>Any swimming pool</td>
<td>15</td>
</tr>
<tr>
<td>Any other nitrification field (except the system repair area)</td>
<td>10</td>
</tr>
</tbody>
</table>
(A) With the exception of the reduced setbacks to drainage devices or as allowed pursuant to Part (B) of this Subparagraph, when any horizontal setbacks are proposed to be reduced pursuant to Table XIV, the vertical separation modifications or LTAR increases shall not be concurrently applied pursuant to Subparagraphs (1) and (2) of this Paragraph, respectively.

(B) If the horizontal setbacks for a TS-II system are only proposed to be reduced to the extent allowed for a TS-I system (Table XII), for a system designed for 1000 gallons per day or less, a 25 percent trench length reduction may be concurrently applied, compared to the length required for any type of trench system receiving septic tank effluent, when the site has space for an equivalently sized repair system. A special site evaluation shall be provided to the local health department on behalf of the owner, pursuant to Paragraph (p) of this Rule when Group III or IV soils or saprolite occur within three feet of the trench bottom. No further reductions in linear footage of nitrification trench or system area shall be applied when a PPBPS or innovative trenches or accepted systems are used for the absorption field.

(g) ARTIFICIAL DRAINAGE SYSTEMS which include a TS-I or TS-II pretreatment system may be used when soils are Group I, II or III with SUITABLE clay mineralogy, and all other soil and site factors are SUITABLE or PROVISIONALLY SUITABLE or when a groundwater lowering system is proposed to meet the requirements for a fill system, provided all other soil and site factors are met pursuant to 15A NCAC 18A .1957(b)(i). The following conditions shall be met:

1. The drainage system shall meet the requirements of Rule .1956(2)(c), (d) and (e) of this Section;
2. The provisions for LTAR or Horizontal Setbacks pursuant to Paragraphs (f) or (g) of this Rule for TS-I or TS-II systems, respectively, shall also apply to Artificial Drainage Systems. However, there shall be no vertical separation modifications pursuant to Subparagraph (e)(1) or (f)(1) of this Rule from as specified elsewhere in the rules of this Section;
3. A special site evaluation shall be provided to the local health department on behalf of the owner, pursuant to Paragraph (p) of this Rule, when there are Group III soils at any depth above the proposed drainage system invert elevation, when a groundwater lowering system is proposed for a fill system, or whenever the system is designed for greater than 1000 gallons per day; and
4. Plans and specifications are provided to the local health department pursuant to 15A NCAC 18A .1938(c).

(h) SAPROLITE SYSTEMS which include a TS-I or TS-II pretreatment system may be used for systems with a design flow not to exceed 1000 gallons per day when the following conditions are met:

1. The requirements of Rule .1956(6) of this Section shall be met, except where modifications are allowed in this Paragraph.
2. Allowable saprolite textures include sandy clay loam in addition to sand, loamy sand, sandy loam, loam, or silt loam.
3. Maximum trench depth is five feet.
4. The provisions for LTAR or Horizontal Setback modifications as allowed in Paragraphs (e) or (f) of this Rule for TS-I or TS-II systems, respectively, shall also apply to Saprolite Systems. However, there shall be no vertical separation modifications from as specified elsewhere in the Rules of this Section;
5. For systems installed in saprolite with sandy clay loam texture, the maximum LTAR for gravity trenches shall be 0.2 gallons per day per square foot and 0.1 gallons per day per square foot for pressure dispersal (LPP or Drip) systems and
6. A special site evaluation shall be provided to the local health department on behalf of the owner, pursuant to Paragraph (p) of this Rule.

(i) BED GROUND ABSORPTION SYSTEMS may be used in conjunction with a TS-I or TS-II system as specified in the system approval on sites with a design flow not to exceed 1000 gallons per day under the following circumstances:

1. Bed Systems designed for 1000 gallons per day or less shall be subject to the siting and system criteria of this Subparagraph. In Table XV, "SWC" means "Soil Wetness Condition," and "USC" means an "UNSUITABLE Soil/Fill Condition," other than a SWC.

<table>
<thead>
<tr>
<th>Soils/System Criteria to Permit System</th>
<th>Allowable Adjustments to Soil Criteria to Permit System</th>
<th>Depth from Surface* to Soil Wetness</th>
<th>Minimum Vertical Bed Bottom Separation Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table XV: Vertical Separation Requirements for TS-I and TS-II Bed Systems Designed for ≤1000 Gallons Per Day</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Condition</td>
<td>Depth to USC</td>
<td>Depth to SWC</td>
<td></td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
<td>--------------</td>
<td>--------------</td>
<td></td>
</tr>
<tr>
<td>SUITABLE or PROVISIONALLY SUITABLE Soils, 30-inches Group I or II Soils from naturally occurring soil surface, and slope ≤2%</td>
<td>36-inches</td>
<td>24-inches</td>
<td>12-inches</td>
</tr>
<tr>
<td>can increase allowable slope from ≤2% to ≤10% based on hydraulic assessment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>36-inches of Group I Soils from naturally occurring soil surface, and slope ≤2%</td>
<td>12-inches</td>
<td>12-inches</td>
<td>12-inches</td>
</tr>
<tr>
<td>can reduce from 36 to 18-inches of Group I Soils based on hydraulic assessment, and/or b. can increase allowable slope from ≤2% to ≤10% based on hydraulic assessment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24-inches of Group I Existing Fill meeting Rule .1957(b)(2)(A),(B), and (C), and only when design flow ≤480 gallons per day</td>
<td>No Adjustments Applicable</td>
<td>18-inches</td>
<td>18-inches</td>
</tr>
</tbody>
</table>

*Minimum depth of soil/fill required at site to permit system. Depth shall be measured from the naturally occurring soil surface or Existing Fill surface, as applicable

(A) Vertical separation requirements may be met by adding additional SUITABLE Group I fill material, but shall not be met with the use of a groundwater lowering system.

(B) The hydraulic assessment in Table XV shall be completed pursuant to Paragraph (p) of this Rule, and shall demonstrate that effluent will not discharge to the ground surface and the required separation distance to soil wetness can be maintained.

(C) When effluent is distributed to the bed by a pump or siphon and the bed is not located directly beneath the pretreatment component, effluent shall be uniformly distributed by a pressure dispersal system (LPP or Drip).

(2) Horizontal separation distances specified in Subparagraphs (e)(3) and (f)(3) of this Rule are applicable for systems receiving TS-I or TS-II effluent, respectively. The setbacks shall be measured from the nearest edge of the gravel bed, except for fill systems. For fill systems, the setbacks shall be measured from a point five feet from the nearest edge of the gravel bed sidewall, or from the projected toe of the side slope of the fill that is required to meet soil and site limitations, whichever is greater. The system shall be considered to be a fill system only if the gravel bed bottom is installed less than six inches below the naturally occurring soil surface. For fill systems, the requirements of Rule .1957(b) of this Section, for the side slope of the fill shall be met, as determined beginning at a point six-inches above the top edge of the gravel bed.

(3) The minimum number of square feet of bottom area shall be determined by dividing the design daily sewage flow by the LTAR, determined in accordance with Rule .1955 of this Section. When the bed is installed in fill material, the LTAR shall not exceed 1.0 gallons per day per square foot. The minimum bed size may be reduced as follows:

(A) The minimum bed size may be reduced by 25 percent, unless the bed is installed in existing fill, in which case the bed area shall not be reduced; or

(B) For sites that have Group I Soil in the first 36 inches of naturally occurring soil and no soil wetness condition exists within the first 30 inches below the naturally occurring soil surface, the minimum bed size may be reduced by 40 percent when a pressure dispersal system is utilized to distribute flow uniformly throughout the bed area; a timer controller is used to distribute flow evenly over a 24-hour period; and the system is designed and approved to meet TS-II performance standards. Furthermore, the repair area exemption in 15A NCAC 18A .1945(c) does not apply when the bed size is reduced by more than 25 percent pursuant to this Part.
With the exception of reduced setbacks to drainage devices (Tables XII or XIV), whenever the minimum bed size is reduced pursuant to Parts (A) or (B) of this Subparagraph, the minimum horizontal setbacks as specified in Rules. 1950, .1951 and .1956(6)(g) of this Section, as applicable, shall apply and with no reductions applied.

(j) BED GROUND ABSORPTION SYSTEMS may be used in conjunction with a TS-I or TS-II system as specified in the system approval on sites with a design flow greater than 1000 gallons per day not to exceed 3000 gallons per day under the following circumstances:

1. Bed Systems designed for greater than 1000 gallons per day but not exceeding 3000 gallons per day shall be subject to the siting and system criteria of this Subparagraph.

<p>| Table XVI: Vertical Separation Requirements for TS-I and TS-II Bed Systems Designed for &gt;1000 to ( \leq 3000 ) Gallons Per Day |</p>
<table>
<thead>
<tr>
<th>Soils/System Criteria</th>
<th>Depth from Surface* to Soil Wetness Condition</th>
<th>Minimum Vertical Bed Bottom Separation Requirement</th>
<th>Allowable Adjustment in Depth to Soil Wetness Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>54-inches of Group I Soils from naturally occurring soil surface</td>
<td>48-inches</td>
<td>24-inches</td>
<td>Can reduce from 24-inches to 12-inches in naturally occurring soil, or to 18-inches for fill systems based on groundwater mounding analysis</td>
</tr>
</tbody>
</table>

*Minimum depth required at site to permit system shall be measured from the naturally occurring soil surface.

(A) Vertical separation requirements may be met by adding additional SUITABLE Group I fill material, but shall not be met with the use of a groundwater lowering system.

(B) A special site evaluation shall be provided to the local health department on behalf of the owner, pursuant to Paragraph (p) of this Rule. The groundwater mounding analysis in Table XVI must demonstrate that required vertical separations between bed bottom and a soil wetness condition shall be maintained after accounting for projected groundwater mounding.

(C) Two or more equally sized beds shall be utilized for any TS-I system designed for over 1000 gallons per day, or for any TS-II system designed for over 1500 gallons per day. When two beds are used, the minimum separation between beds shall be 20 feet, and when three or more beds are used, the minimum separation between beds shall be 10 feet. Effluent shall be distributed to the beds by a pump and timer control system to distribute flow evenly over a 24-hour period.

(D) When the system is designed for greater than 1500 gallons per day, the beds shall be located in an area separate from the pretreatment components.

(E) Whenever the beds are not located directly beneath the pretreatment components, effluent shall be uniformly distributed by a pressure dispersal system (LPP or Drip).

(2) Horizontal separation distances specified in Rules .1950(a), .1951, or .1956(6)(g) of this Section shall apply without reduction for bed systems designed for greater than 1000 gallons per day. Furthermore, a 25-foot horizontal separation distance shall be maintained from the bed to the property line and the bed, unless a site-specific nitrogen migration analysis indicates that the nitrate concentration at the property line will not exceed 10 milligrams per liter (mg/l), or TS-II effluent is produced by the approved system.

(3) The minimum number of square feet of bed bottom area shall be determined by dividing the design daily sewage flow by the LTAR, determined in accordance with Rule .1955 of this Section. When the bed is installed in fill material, the LTAR shall not exceed 1.0 gallons per day per square foot. The minimum bed size may be reduced as follows:

(A) The minimum bed size may be reduced by 25 percent, unless the bed is installed in existing fill, in which case the bed area shall not be reduced; or

(B) For sites that have Group I Soil in the first 54 inches below the naturally occurring soil surface and no soil wetness condition exists within the first 36 inches below the naturally occurring soil surface, the minimum bed size may be reduced by 40 percent when a pressure dispersal system (LPP or Drip) is utilized to distribute flow uniformly throughout the bed area; a timer controller is used to distribute flow evenly over a 24-hour period; the system is designed and approved to meet TS-II performance standards; and there shall be a 100-percent repair area.
(k) DESIGN:
(1) Special system design requirements shall be as prescribed in the product's RWTS, Experimental, Controlled Demonstration, Innovative or Accepted System approval, as applicable;
(2) Provisions shall be made to allow for the influent to and effluent from the system to be sampled while the system is operational; and
(3) The system design shall include a means to measure and record daily wastewater flows. The recording device shall provide a means for determining at least the last 30 days of wastewater flows to the system.

(l) INSTALLATION: Pre-treatment systems shall be installed according to the manufacturer's installation specifications and system-specific installation conditions prescribed in the product's RWTS, Experimental, Controlled Demonstration, Innovative or Accepted System approval, as applicable, by a manufacturer-authorized installer. Installation and construction specifications for the ground absorption system shall be in accordance with this Section and site-specific conditions as specified in the Authorization to Construct.

(m) OPERATION AND MAINTENANCE: Maintenance, as specified in the product's RWTS, Experimental, Controlled Demonstration, Innovative or Accepted System approval, as applicable, shall be performed by the certified operator pursuant to 15A NCAC 18A .1961 and as specified in the product approval. The following provisions apply to the Operation and Maintenance of Advanced Pretreatment Systems:
(1) For systems installed after July 1, 2006, the manufacturer of a proprietary advanced pretreatment system shall provide for the ongoing operation and maintenance of its systems. The manufacturer shall make available to the owner an operation and maintenance contract that meets the management entity requirements for the system pursuant to 15A NCAC 18A .1961. The contract shall be renewable and the contract term shall be for a minimum of one year.
(2) For systems installed prior to July 1, 2006, the manufacturer shall provide an optional renewable yearly operation and maintenance contract with the owner that fulfills the management entity requirements for the system pursuant to 15A NCAC 18A .1961.
(3) Prior to the issuance or re-issuance of an Operation Permit for a proprietary advanced pretreatment system after July 1, 2006, the owner shall provide to the health department documentation that a contract for operation and maintenance of the system is in place with either the manufacturer, manufacturer's representative, or with a certified operator authorized in writing by the manufacturer or manufacturer's representative to operate the system.
(4) The manufacturer shall notify the local health department and the State when the owner chooses to not renew an operation and maintenance contract executed pursuant to Subparagraphs (1) or (2) of this Paragraph.

(n) SYSTEM PERFORMANCE: The performance of each system shall be monitored by the certified wastewater treatment facility operator (ORC). A performance report shall be submitted annually to the local health department by the ORC. Type of monitoring and monitoring frequency shall vary by type of approval, the designated performance standard, system design flow, and history of system performance as follows:
(1) Each system shall be visually inspected by the ORC at least annually using a procedure proposed by the manufacturer and approved by the state as part of the product's RWTS, Experimental, Controlled Demonstration, Innovative or Accepted System approval, as applicable.
(2) The 7-day and 30-day influent wastewater flow from the facility to the system prior to a monitoring visit shall be measured by the ORC using the recording device delineated in Subparagraph (k)(3) of this Rule, or by an alternate approved means. 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 be coincident with any required water quality sampling. For existing systems where it is not feasible to directly obtain the past 7-day and 30-day influent wastewater flow data, wastewater usage during the 7 to 30 day period prior to the monitoring visit shall be estimated by using either elapsed time clock readings when an effluent pump is present, water meter readings, or as otherwise specified in the product or site-specific system approval.
(3) Effluent from an approved Controlled Demonstration, RWTS and Innovative System shall be sampled prior to disposal in the absorption field as follows:
   (A) A Controlled Demonstration system shall be sampled quarterly for all applicable performance parameters until the system receives Innovative approval, unless the product specific approval includes an alternate monitoring schedule proposed by the manufacturer and approved by the State;
(B) Sites with an approved RWTS or Innovative system shall be grab or composite sampled annually for all applicable performance parameters (semi-annually when the design flow is 1500 to 3000 gallons per day). After two years of data have been collected from at least 50 separate sites that indicate compliant system performance, the number of parameters sampled for TS-I and TS-II Systems may be reduced by 50 percent. An alternative monitoring schedule may be proposed by the manufacturer and approved by the State when determined to provide an equal or more reliable indication of system performance compliance; or

(C) Sites with a design flow up to 1500 gallons per day, which are being managed under an on-going maintenance and operation contract between the owner and the system manufacturer or ORC authorized by the manufacturer, may alternatively be sampled randomly if the manufacturer chooses to comply with the performance audit requirements as stipulated in 15A NCAC 18A .1969(h)(8), when there are at least 10 operational systems covered under such contracts. The manufacturer may also choose to include other existing sites in the performance audit required prior to obtaining accepted system status. Notwithstanding this provision for random sampling, sampling at any other site not being sampled during the audit may be determined to be necessary by the ORC during the visual inspection of the system pursuant to Subparagraph (1) of this Paragraph.

An influent sample to the pre-treatment system (e.g., septic tank effluent) shall be taken concurrently whenever the system effluent is sampled and analyzed for at least BOD and TKN. Effluent shall be re-sampled within 15 days when laboratory results indicate non-compliance with Part (o)(1)(C) of this Rule and analyzed at least for the non-compliant parameter(s), unless an alternate re-sampling schedule is required for a site included in a performance audit. When re-sampling, an influent sample shall be collected concurrently and analyzed for the corresponding parameter.

(4) An Accepted System with a design flow up to 1500 gallons per day shall comply with Subparagraphs (n)(1) and (n)(2) of this Rule and 15A NCAC 18A .1969(h)(9). Routine sampling of individual sites shall no longer be carried out, unless determined to be necessary during the visual inspection of the system pursuant to Subparagraph (n)(1) of this Rule or if required as part of an enforcement action by the local health department or the State. If sampling is determined to be necessary, an alternative monitoring schedule may be proposed by the manufacturer or the State and approved by the Commission when the system is granted accepted Status.

(5) All samples shall be collected, preserved, transported and analyzed in compliance with 40 CFR 136. The manufacturer shall demonstrate that the system can be sampled in compliance with 40 CFR 136 and that the method for system sampling accurately monitors system performance. Samples shall be analyzed by a state certified laboratory. Samples shall be analyzed for the applicable parameters. The sample collector shall maintain a complete chain of custody from sample collection to analysis for each sample collected. The results of all analyses for each sample shall be reported by the certified wastewater laboratory directly to the ORC and simultaneously to the health department and the state. Repeat sampling at any site shall be performed as required in the system approval, approved performance audit, this Rule, or as otherwise directed by the health department or state as part of an enforcement action. The owner or manufacturer or manufacturer's representative may also re-sample a system to verify or refute sample results, as long as the results of all samples collected are similarly reported.

(o) SITE AND SYSTEM COMPLIANCE: Compliance with the performance standards shall be determined as follows:

(1) An individual advanced pretreatment system at a single site shall be considered to be in compliance when:

(A) The annual visual inspection indicates compliant conditions as specified in the visual inspection procedure approved pursuant to Subparagraph (n)(1) of this Rule;

(B) The 7-day inflow does not exceed 1.3 times the design daily flow and the 30-day inflow does not exceed the design daily flow;

(C) Influent wastewater to the system does not exceed the requirements in Table VIII, at sites where influent sampling is required; and

(D) When annual effluent sampling is required, sample value is no more than two times (2.5 times for fecal coliform) the designated standard for one or more parameters in Table VII, even after re-sampling; or if four or more effluent samples are collected on different operating days over a one year period, the arithmetic mean (geometric mean for fecal coliform) of the data does not exceed the designated standard for one or more parameters in Table VII, even excluding from the
mean a statistical outlier or an instance of non-compliance that has been remedied by corrective maintenance.

(2) An approved system shall be considered in compliance when:

(A) The arithmetic mean (geometric mean for fecal coliform) of all data collected from all sites during a given one-year period, or from a representative sampling of sites in the state (excluding statistical outliers) does not exceed the designated standard;

(B) No more than 20 percent of the sites from which the data were collected in Part (o)(2)(A) of this Rule shall exceed the designated standard for one or more parameters (an individual non-compliant site shall be reclassified "compliant" if found to meet the designated standard upon re-sampling within 30 days); and

(C) No more than 10 percent of samples collected from all sites during a given one-year period or from a representative sampling of sites in the state shall exceed two times the designated standard for one or more parameters (with the exception of fecal coliform, for which a 2.5 multiplication factor shall be used).

When determining compliance with system performance standards set forth in Parts (A), (B) and (C) of this Subparagraph, data shall be excluded from individual advanced pretreatment systems at single sites found to be out of compliance pursuant to Parts (1)(B) and (1)(C) of this Paragraph and from individual sites that have otherwise been documented to have been subjected to significant abuse, as specified by the manufacturer in its operation and maintenance manual which has been provided to the system owner.

(3) When a site or system is found to be out of compliance the following actions shall occur:

(A) The Operator (ORC) shall inform the owner and the local health department of an individual system at a single site found to be out of compliance, including when wastewater flow is greater than the system design flow rate; influent wastewater quality exceeds the standards set forth in Table VII; or maintenance/repairs are found to be needed as identified during system inspection. This notice shall identify non-compliant condition(s), explain potential impacts, and suggest methods to bring the system or use back into compliance.

(B) The local health department shall issue a notice of violation to the owner of an individual system at a single site found to be out of compliance when, the system is found to be malfunctioning as determined during the visual inspection specified in Part (1)(A) of Paragraph (o) of this Rule; wastewater flow exceeds wastewater flow standards in Part (1)(B) of this Paragraph; or the effluent sample results are out of compliance as specified in Parts (1)(D) or (1)(E) of this Paragraph, even upon re-sampling. The notice shall identify the violations and steps necessary to remedy the problems, including modification of the system, establish time frame to achieve compliance, and other follow-up requirements and set forth further enforcement possibilities if compliance is not achieved.

(C) The state shall issue a notice of violation to the manufacturer of a system found to be out of compliance as specified in Subparagraph (2) of this Paragraph. The notice shall identify the violations and steps necessary to remedy the problems, including modification of the system, establish time frame to achieve compliance, and other follow-up requirements and set forth further enforcement possibilities if compliance is not achieved which may include action on the system's approval status pursuant to applicable Laws and Rules.

(D) The local health department shall issue the manufacturer or manufacturer's representative an intent to suspend issuance of new construction authorizations for new systems of a particular manufacturer that has installed and has in operation at least 10 systems in the county if more than 10 percent of the manufacturer's systems installed in the county are found to be malfunctioning during the visual inspection specified in Subparagraph (n)(1) of this Rule or in violation of effluent performance standards as specified in Parts (1)(D) or (1)(E) of this Paragraph in any single year excluding single sites found to be out of compliance pursuant to Parts (1)(B) or (1)(C) of this Paragraph, sites where the owner has not maintained a contract for operation and maintenance of the system pursuant to Rule .1961 of this Section, and individual sites that have otherwise been documented to have been subjected to significant abuse, as specified by the manufacturer in its operation and maintenance manual which has been provided to the system owner.

(E) The local health department shall issue the manufacturer or manufacturer's representative an intent to suspend issuance of new construction authorizations for new systems of a particular
manufacturer that has installed and has in operation at least 10 systems in the county if more than five percent of the manufacturer's systems installed in the county that are being managed under an ongoing maintenance and operation contract between the owner and the system manufacturer or ORC authorized by the manufacturer have required operation and maintenance activities under the control of the manufacturer that have not been completed for the last reported year.

(F) The Operator (ORC) shall submit all individual system compliance data and all operations and maintenance records to the local health department. The local health department shall convey information on individual system compliance to the State on at least an annual basis. Action by a local health department on approval of a system in a county does not preclude action by the State on the system's approval status, pursuant to applicable Laws and Rules.

(G) Notwithstanding the activities delineated for dealing with non-compliance elsewhere in Subparagraph (3) of this Paragraph, nothing shall preclude the local health department or State from using any available remedy when an imminent health hazard is determined to exist, in accordance with applicable Laws and Rules.

(p) RESPONSIBILITIES AND PERMITTING PROCEDURES: Special responsibilities and permitting procedures for pretreatment systems shall be as prescribed in the system approval and applicable rules of this Section. The following summarize the conditions requiring a special evaluation of a site where the ground absorption system is to be preceded by an advanced pretreatment system, and what such an evaluation shall include:

(1) Prior to the issuance of the Improvement Permit at a site where the drainfield is to be preceded by an advanced pre-treatment system, an evaluation shall be provided to the local health department on behalf of the owner when any of the following conditions are applicable:
   (A) the initial vertical separation sitting criteria or vertical separation distances for trench bottoms are proposed to be reduced in accordance with Subparagraphs (e)(1) or (f)(1) of this Rule,
   (B) drainage is proposed for Group III soils or a groundwater lowering system is proposed to be used in conjunction with a fill system in accordance with Paragraph (g) of this Rule,
   (C) sandy clay loam texture saprolite is proposed to be used in accordance with Paragraph (h) of this Rule,
   (D) the LTAR is proposed to be increased on a site with Group III or IV soils within three feet of the proposed trench bottom or on a site where drainage of Group II or III soils is proposed, or on any site when the design flow exceeds 1000 gallons per day, in accordance with Subparagraphs (e)(2) or (f)(2) of this Rule, or
   (E) for a bed system with flow exceeding 1000 gallons per day in accordance with Paragraph (j) of this Rule, or if required for other bed systems in accordance with Subparagraph (i)(1) of this Rule.

(2) When a special site evaluation is required pursuant to Subparagraph (1) of this Paragraph, it shall contain the following information, as applicable. This evaluation shall be prepared by a person or persons who are licensed or registered to consult, investigate, or evaluate soil and rock characteristics, hydraulic conductivity, lateral flow, groundwater hydrology and nutrient transport, if required pursuant to G.S. 89F or 89E. This evaluation shall be provided to the local health department in a written report sealed, signed and dated by any licensed or registered professionals who contributed to the report.
   (A) descriptions of soil profiles and soil morphological conditions to a depth of at least three feet below the proposed trench or bed bottom and description of landscape setting in the initial system area and repair area. Descriptions shall be in accordance with the methodology and standards in the Field Book for Describing and Sampling Soils, NRCS, USDA, which is hereby incorporated by reference, including any subsequent amendments and editions. Copies of the Field Book may be inspected at the Environmental Health Section Raleigh Office, 2728 Capital Boulevard, Raleigh, 27609, and copies may be downloaded at no cost from the internet at: http://soils.usda.gov/technical/fieldbook/;
   (B) field measurements of the depth and thickness of each of the soil horizons;
   (C) recommended location and depth for placement of the trenches or beds and the recommended LTAR;
   (D) hydraulic assessment, based on site-specific information, substantiating the projected effectiveness of system performance. This shall include supporting documentation that indicates the treated effluent applied at the proposed LTAR will not result in the discharge of effluent to the surface of the ground after the system is installed and operated within design parameters; that all required vertical separation distances shall be maintained; and justification for any proposed
drainage systems or other site modifications. This hydraulic assessment shall require in-situ tests of saturated hydraulic conductivity, groundwater mounding analysis, lateral flow analysis, and monitoring or modeling of existing or projected depth to a soil wetness condition based upon procedures of Rule .1942 of this Section, as needed;

(E) site-specific nitrogen migration analysis, if needed pursuant to Subparagraphs (e)(2) or (j)(2) of this Rule; and

(F) proposed site-specific requirements for system design, installation, site preparation, modifications, final landscaping and vegetative cover.

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.

15A NCAC 18A .1971 ENGINEERED OPTION PERMIT

(a) An owner choosing to use an Engineered Option Permit (EOP) for on-site wastewater systems pursuant to G.S. 130A-336.1 shall employ the services of a professional engineer licensed pursuant to G.S. 89C to prepare signed and sealed drawings, specifications, plans, and reports for the design, construction, operation, and maintenance of the wastewater system.

(b) SITE EVALUATION: Prior to the submittal of a Notice of Intent to Construct (NOI) for an EOP system, a soil scientist licensed pursuant to G.S. 89F or a geologist licensed pursuant to G.S. 89E shall conduct an evaluation of soil conditions and site features of the proposed site. This evaluation shall be in accordance with the rules of this Section.

(c) NOTICE OF INTENT TO CONSTRUCT: The NOI for an EOP System shall be submitted by the owner or a professional engineer authorized as the legal representative of the owner to the local health department in the county where the design unit is located. The NOI shall be submitted on the common form provided by the Department. The common form is available by accessing the Department’s website at http://ehs.ncpublichealth.com/oswp/docs/rules/EOPCommonFormNovember-1-2016.pdf. It shall include all of the information specified in G.S. 130A-336.1(b) and the following:

1. The soil scientist’s, geologist’s, and on-site wastewater system contractor's name, license number, address, e-mail address, and telephone number;

2. Information required in Rules .1937(d) and .1937(e) of this Section for Improvement Permit and Construction Authorization 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 professional engineer shall reference any existing permit issued for a private drinking water supply, public water supply, or a wastewater system on both the subject and adjoining properties to provide documentation of compliance with setback requirements in Rule .1950 of this Section; and

4. Proof of insurance for the professional engineer, soil scientist, geologist, and on-site wastewater system contractor.

(d) DESIGN PLANS AND SPECIFICATIONS: The professional engineer design shall incorporate findings and recommendations on soil and site conditions, limitations, and any site modifications specified by the soil scientist or geologist, as applicable, and in accordance with G.S. 130A-336.1(k)(1). When the professional engineer chooses to employ pretreatment technologies not yet approved in this State, the engineering report shall specify the proposed technology, and the associated siting, installation, operation, maintenance, and monitoring requirements, including manufacturers endorsements associated with its proposed use.

(e) CONSTRUCTION OF WASTEWATER SYSTEM: No building permit for construction, location, or relocation shall be issued until after a decision of completeness of the NOI is made by the local health department, or the local health department fails to act within 15 business days. Construction of the wastewater system shall not commence until the system design plans and specifications have been provided to the on-site wastewater system contractor and the signed and dated statement by the contractor is provided to the owner. The owner shall be responsible for assuring no modifications or alterations to the site for the wastewater system or the system repair area are made as a result of any construction activities for the design unit before or after construction of the wastewater system, unless approved by the professional engineer, soil scientist, or geologist, as applicable.

(f) AUTHORIZATION TO OPERATE: Prior to providing written confirmation for Authorization to Operate, the local health department shall receive the following:

1. Documentation that all reporting requirements identified in G.S. 130A-336.1(l) have been met;

2. Information set forth in Rule .1938(h) of this Section;

3. System start-up documentation, including applicable baseline operating parameters for all components;
Documentation by the owner or their legal representative that all necessary legal agreements, including easements, encroachments, multi-party agreements, and other documents have been properly prepared, executed and recorded in accordance with Rules .1937(h) and .1938(j) of this Section; and

Record drawings.

The local health department shall use the common form for written confirmation.

(g) OPERATION: The owner of the wastewater system approved pursuant to the EOP 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) and Rule .1961 of this Section.

(h) SYSTEM MALFUNCTION: For repair of a malfunctioning EOP system, this Rule shall be followed in conjunction with Rule .1961 of this Section. The operator shall notify the local health department within 48 hours of the system malfunction.

(i) DESIGN UNIT CHANGE OF USE: The owner of an EOP system who wishes to change the use of the design unit shall contact the professional engineer, soil scientist, geologist, and on-site wastewater system contractor, to determine whether the current system would continue to meet the requirements of the rules of this Section for the proposed change of use. The professional engineer, soil scientist, geologist, or on-site wastewater system contractor shall determine what, if any, modifications shall be necessary for the wastewater system to continue to meet the requirements of the Rules of this Section following the proposed change of use. A NOI reflecting the change of use and any required modifications to the system shall be submitted to the local health department and follow the EOP permitting process.

(j) LOCAL HEALTH DEPARTMENT RESPONSIBILITIES: The local health department is responsible for the following activities related to the EOP system:

(1) File all EOP documentation consistent with current permit filing procedures at the local health department;
(2) Submit a copy to the Department of the NOI common form and written confirmation of Authorization to Operate;
(3) Review the performance and operation reports submitted in accordance with Table V(b) of Rule .1961 of this Section;
(4) Perform on-site compliance inspections of the wastewater system in accordance with Table V(a) of Rule .1961 of this Section;
(5) Investigate complaints regarding EOP systems;
(6) Issue a notice of violation for systems determined to be malfunctioning in accordance with Rule .1961(a) of this Section. The local health department shall direct the owner to contact the professional engineer, soil scientist, geologist, and on-site wastewater system contractor, as appropriate, for determination of the reason of the malfunction and development of a NOI for repairs; and
(7) Require an owner receiving a notice of violation to pump and haul sewage in accordance with Rule .1961(m) of this Section.

(k) CHANGE IN LICENSED PROFESSIONALS: The Owner may contract with another licensed professional to complete an EOP project. An updated NOI shall be submitted to the local health department.

(l) 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 as provided for pursuant to G.S. 130A-336.1 and the applicable statues for their respective professions.

History Note: Authority G.S. 130A-335; 130A-336.1; Temporary Adoption Eff. July 1, 2016; Eff. April 4, 2017.

SECTION .2000 - ADMINISTRATIVE PENALTIES

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


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;

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.


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;

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;
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.


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;
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;

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;

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;

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;
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.


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.


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.


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.


15A NCAC 18A .2410 FLOORS: WALLS: AND CEILINGS
Floors, walls, and ceilings of all areas shall be kept clean and in good repair.


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.


**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.


**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.


**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;

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;

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;

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.

(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) "Unblockable drain" means a drain of any size and shape that a human body cannot sufficiently block to create a suction entrapment hazard.

(10) "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; S.L. 2019-88;
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;

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:
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;

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;
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.


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.


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 radius. 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;

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

<table>
<thead>
<tr>
<th>Maximum Board Length</th>
<th>Maximum Board Height Above Water</th>
<th>Board Overhang (Pt. A)</th>
<th>Minimum Water Depths</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Max</td>
<td>Min</td>
</tr>
<tr>
<td></td>
<td></td>
<td>D1</td>
<td>D2</td>
</tr>
</tbody>
</table>
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>
<thead>
<tr>
<th>Maximum Board Length</th>
<th>Horizontal Distances</th>
<th>Minimum Pool Width</th>
<th>Minimum Separation Distances</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>L1</td>
<td>L2</td>
<td>L3</td>
</tr>
<tr>
<td>12 feet</td>
<td>3’</td>
<td>7’</td>
<td>10’3”</td>
</tr>
<tr>
<td>16 feet</td>
<td>5’</td>
<td>5’</td>
<td>11’6”</td>
</tr>
<tr>
<td>16 feet</td>
<td>5’</td>
<td>5’</td>
<td>7’6”</td>
</tr>
</tbody>
</table>

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.
(a) Pools shall be equipped with a circulation system.
(b) The capacity of the circulation system shall be sufficient to clarify and disinfect the entire volume of swimming pool water four times in 24 hours. The system shall be operated 24 hours per day during the operating season.
(c) The circulation piping shall be designed and installed with the necessary valves and pipes so that the flow from the swimming pool can be from main drains or the surface overflow system. The circulation piping shall be designed such the flow of water from the swimming pool can be simultaneous from the surface overflow system and the main drains. Skimmer piping constructed after May 1, 2010 shall be sized to handle the maximum flow rate for the required number of skimmers, but in no case less than 100 percent of the design flow rate. Perimeter overflow system piping constructed after May 1, 2010 shall be sized to handle 100 percent of the design flow rate. The main drain piping constructed after May 1, 2010 shall be sized to handle 100 percent of the design flow rate.
(d) Piping shall be designed to reduce friction losses to a minimum and to carry the required quantity of 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. Piping shall be of non-toxic material, resistant to corrosion, and able to withstand operating pressures. If plastic pipe is used, a minimum of Schedule 40 PVC is required. Flexible pipe shall not be used except that flexible PVC hoses that meet NSF Standard 50 may be affixed to spa shells where rigid pipes do not provide the necessary angles to connect circulation components. Exposed pipes and valves shall be identified by a color code or labels.
(e) The circulation system shall include a strainer to prevent hair, lint, and other debris from reaching the pump. A spare basket shall be provided. Strainers shall be corrosion-resistant 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 pump suction line and are accessible for daily cleaning.
(f) A vacuum cleaning system shall be provided to remove debris and foreign material that settles to the bottom of the swimming pool. Where provided, 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 in pools with two or fewer skimmers provided the skimmer basket remains in place while the vacuum is in operation. Integral vacuum cleaning systems shall be provided with valves and protective caps. Integral vacuum ports constructed after May 1, 2010 shall have self-closing caps designed to be opened with a tool.
(g) A rate-of-flow indicator, reading in liters or gallons per minute, shall be installed on the filtered water line and located so that the rate of circulation is indicated. The indicator shall be capable of measuring flows that are at least 1½ times the design flow rate, shall be accurate within 10 per cent of true flow, and shall be easy to read. The indicator shall be installed in accordance with manufacturers' specifications.
(h) A pump or pumps shall be provided with capacity to recirculate the swimming pool water four times in 24 hours, and shall be so located as to eliminate the need for priming. If the pump or pumps, or suction piping is located above the overflow level of the pool, the pump or pumps shall be self-priming. The pump or pumps shall be capable of providing a flow adequate for the backwashing of filters. Unless headloss calculations are provided by the designing engineer, pump design shall be based on an assumed total dynamic head of 65 feet of water. Pumps three horsepower or smaller shall be NSF International (NSF) listed or verified by an independent third-party testing laboratory to meet all applicable provisions of NSF/ANSI Standard 50 which is incorporated by reference including any subsequent amendments or editions. Copies may be obtained from NSF International, P.O. Box 130140, Ann Arbor, MI 48113-0140 at a cost of one hundred fifty-five dollars ($155.00). Verification shall include testing and in-plant quality control inspections. Larger pumps for which NSF listing is not available shall be approved by the Department on a case-by-case basis.
(i) Inlets.
   (1) Inlets shall be provided and arranged to produce a uniform circulation of water and maintain a uniform disinfectant residual throughout the pool.
   (2) The number of inlets for any swimming pool shall be determined based on return water flow. There shall be at least one inlet per 20 gallons per minute of return water flow. There shall be a minimum of four inlets for any swimming pool.
   (3) Inlets shall be located so that no part of the swimming pool is more than 25 feet of horizontal distance from the nearest return inlet.
   (4) Provision shall be made to permit adjustment of the flow through each inlet, either with an adjustable orifice or provided with replaceable orifices to permit adjustments of the flows.
(j) Drains.
   (1) Public Swimming pools with suction drains shall be provided with at least two main drain outlets which are located at the deepest section of the pool and connected by “T” piping. Connecting piping shall be sized
and configured such that blocking any one drain will not result in flow through the remaining drain cover/grates exceeding the cover/grate manufacturer's safe flow rating while handling 100 percent of the pump system flow. The drains shall be capable of permitting the pool to be emptied completely. Drains shall be spaced not more than 30 feet apart, and not more than 15 feet away from the side walls. Drains shall be separated by at least three feet measured from centers of the cover/grates. This shall not preclude construction of a public swimming pool without main drains where water is introduced at the bottom of the pool and removed through a surface overflow system designed to handle 100 percent of the design flow rate. Provision shall be made to completely drain pools constructed without drains. 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 or a secondary method of preventing bather entrapment in accordance with Rule .2539 of this Section.

(2) Drain outlets shall comply with the American National Standard ASME/ANSI A112.19.8-2007 Suction Fittings for Use in Swimming Pools, Wading Pools, Spas, and Hot Tubs which is hereby incorporated by reference including any subsequent amendments, editions, and successor standards under the Virginia Graeme Baker Pool and Spa Safety Act (15 U.S.C. 8001 et seq.). Copies may be obtained from ASME, P.O. Box 2300, Fairfield, NJ 07007-2300 at a cost of fifty-three dollars ($53.00).

(3) Public swimming pools constructed after May 1, 2010 shall comply with ANSI/APSP -7 2006 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 and editions. Copies may be obtained from APSP, 2111 Eisenhower Avenue, Alexandria, VA 22314 at a cost of three hundred fifty dollars ($350.00).

(k) Surface Overflow Systems.

(1) Swimming pools shall be provided with a surface overflow system that is an integral part of the circulation system and that consists of a built-in-place perimeter overflow system, a pre-fabricated perimeter overflow system, or recessed automatic surface skimmers.

(2) Whenever a built-in-place perimeter overflow system or a pre-fabricated perimeter overflow system is provided, it shall be designed and installed as follows:

(A) The system shall be capable of handling 100 percent of the circulation flow without the overflow troughs being flooded;

(B) A surge capacity shall be provided either in the system or by use of a surge tank; and the total surge capacity shall be at least equal to one gallon per square foot (41L per square meter) of swimming pool water surface area;

(C) The water level of the swimming pool shall be maintained above the level of the overflow rim of the perimeter overflows, except for the time needed to transfer all of the water that may be in the surge capacity back into the swimming pool after a period of use; provided that this transfer time shall not be greater than 20 minutes;

(D) When installed the 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) During quiescence, the overflow system shall be capable of providing continuously and automatically a skimming action to the water at the surface of the swimming pool;

(F) The overflow troughs shall be installed completely around the perimeter of the swimming pool, except at steps, recessed ladders and stairs;

(G) The exposed surfaces of the overflow trough shall be capable of providing a firm and safe handhold; and

(H) The overflow trough shall be cleanable and shall be of such configuration as to minimize accidental injury.

(3) Whenever a recessed automatic surface skimmer or skimmers are installed, they shall be designed and constructed in accordance with Section 8 of NSF Standard #50 for circulation system components for swimming pools, spas, or hot tubs. Recessed automatic surface skimmers shall be installed as follows:

(A) The flow-through rate through any one recessed automatic surface skimmer shall be between 20 gallons per minute and the maximum flow the skimmer is certified for under NSF Standard Number 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 so located as to minimize interference with each other and as to insure proper and complete skimming of the entire swimming pools water surface; and

(D) Skimmers shall not protrude into the swimming pool. Automatic surface skimmer or skimmers without a perimeter overflow system shall be installed so that the operating level of the pool is no more than nine inches below the finished deck level so that the deck can be used as a handhold.

(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. The inlet to the equalizer line shall be provided with a grate.

(m) Nothing in this Section shall preclude the use of a roll-out or deck-level type of swimming pool. Such designs shall conform to the general provisions relating to surface overflow systems.

(n) 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.

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.

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;  

15A NCAC 18A .2520 CHEMICAL FEEDERS  

History Note: Authority G.S. 130A-282;  
Eff. May 1, 1991;  

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;
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 ¾ 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.


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; 

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; 

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.
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; 

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.
A minimum height between the top of the spa/hot tub rim and the ceiling shall be seven and a half feet.

Depth markers are not required at spas.

Steps, step-seats, ladders or recessed treads shall be provided where spa and hot tub depths are greater than 24 inches (61 centimeters).

Contrasting color bands or lines shall be used to indicate the leading edge of step treads, seats, and benches.

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.

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.

Spas shall meet the emergency telephone and signage requirements for swimming pools in Rule .2530(f).

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.

Spas are not required to provide the lifesaving equipment described in Rule .2530(a) of this Section.

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; 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.

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.


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 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:**

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;

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;

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.
(b) All submerged suction outlets other than vacuum ports shall be protected by anti-entrapment cover/grates in compliance with ASME/ANSI A112.19.8-2007 Suction Fittings for Use in Swimming Pools, Wading Pools, Spas, and Hot Tubs. All submerged suction fittings shall be installed in accordance with the manufacturer's instructions. Pumping systems that have a single main drain or single submerged suction outlet other than an unblockable drain, or which have multiple outlets separated by less than three feet measured at the centers of the cover grates shall have one or more secondary methods of preventing bather entrapment. Secondary methods of preventing bather entrapment include:
(1) Safety vacuum release system which ceases operation of the pump, reverses the circulation flow, or otherwise provides a vacuum release at the suction outlet when a blockage has been detected, that has been tested by a third party and found to conform to ASME/ANSI standard A112.19.17 which is incorporated by reference including any subsequent amendments or editions. Copies may be obtained from ASME, P.O. Box 2300, Fairfield, NJ 07007-2300 at a cost of forty-five dollars ($45.00);

(2) A suction-limiting vent system with a tamper-resistant atmospheric opening;

(3) A gravity drainage system that utilizes a collector tank;

(4) An automatic pump shut-off system;

(5) Drain disablement; or

(6) Any other system determined by the U.S. Consumer Product Safety Commission to be equally effective as, or better than the systems in Subparagraphs (1) through (5) of this Paragraph.

(c) Prior to issuance of operation permits, owners of all public swimming pools shall provide documentation to the Department to verify suction outlet safety compliance. This documentation shall include:

(1) Documentation of the maximum possible flow rate for each pump suction system. This shall be the maximum pump flow shown on the manufacturer’s pump performance curve except where flow reductions are justified with total dynamic head measurements or calculations; and

(2) Documentation that cover/grates meeting ASME/ANSI A112.19.8-2007 are installed in compliance with the standard and manufacturer’s instructions. This includes documentation that each cover/grate on a single or double-drain pump suction system is rated to meet or exceed the maximum pump system flow and that cover/grates on a pump suction system with three or more suction outlets are together rated to always meet or exceed the maximum pump system flow with one drain completely blocked; and

(3) Documentation that drain sumps meet the dimensional requirements specified in the cover/grate manufacturer's installation instructions.

(d) Operators of all public swimming pools shall inspect pools daily to ensure the drain covers are in good condition and securely attached. Missing, broken, or cracked suction fittings shall be replaced and loose suction fittings shall be reattached before using the pool.

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.

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.


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;
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;

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 (10 cm) 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.


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:
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.

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.

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.

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.

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.

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.


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
15A NCAC 18A .2605  INSPECTION FORMS

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;

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, 1986;
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;

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;

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;

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;

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;

15A NCAC 18A .2636 REQUIREMENTS FOR TEMPORARY RESTAURANTS

History Note: Authority G.S. 130A-248;
Eff. May 5, 1980;

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;

15A NCAC 18A .2644 REQUIREMENTS FOR CATERED ELDERLY NUTRITION SITES


15A NCAC 18A .2645 REQUIREMENTS FOR LIMITED FOOD SERVICE ESTABLISHMENTS


15A NCAC 18A .2650 GENERAL – ADOPTION BY REFERENCE


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 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"
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:**

**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:**

**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:**

**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."


**History Note:**
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;

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;

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."
In Paragraph 8-302.14(G), delete (1) and (2).

In Section 8-303.20, delete "Permit Renewal" from the heading.

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)."

Delete Section 8-304.10.

Delete Paragraph 8-304.11(A).

Delete Section 8-304.20.

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."

Delete Section 8-401.10, delete (B) and (C).

Delete Section 8-401.20.

Delete Section 8-402.10.

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."

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."

In Section 8-402.40, amend heading to read: "Administrative Warrant to Gain Access."

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."

Delete Section 8-403.20, delete the reference to Section 8-406.11.

Delete Section 8-406.11.

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.
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;

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;

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.
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.

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.

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.

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.

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.

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.

Violation 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 1 point.

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 3 points.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.
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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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;  

**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;

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 hall 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;

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;

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;

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:
The water supply used shall be in accordance with 15A NCAC 18A .1700, 15A NCAC 18C, or 02 NCAC 09C .0703;

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;

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

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.


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.

(a) Only hot dogs shall be prepared, handled, or served from a pushcart; however, food which has been prepared, pre-
portioned, and individually pre-wraped 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-wraped 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-
wraped 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-wraped 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;

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;

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;

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; 

**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; 

**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 issue 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; 

**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;

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;

SECTION .2800 - SANITATION OF CHILD CARE CENTERS

15A NCAC 18A .2801 DEFINITIONS

The following definitions shall apply in regards to child care centers 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) "Approved" means determined by the Department to be in compliance with this Section.

(3) "Communicable Condition" means the state of being infected with a communicable agent but without symptoms.
"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.

"Department" or "DENR" means the North Carolina Department of Environment and Natural Resources. The term also means the authorized representative of the Department.

"Designated Emergency Medication" means any medication used or needed for the immediate recovery from a potentially life-threatening event.

"Disinfecting Solution" means a solution containing 50 to 800 parts per million (ppm) of chlorine. A disinfecting solution can be made by mixing a solution of one-quarter cup (2 fluid ounces) household liquid chlorine bleach with one gallon of tap water (or one tablespoon of liquid household bleach in one quart of water) and prepared fresh daily. In addition, products registered with the U.S. Environmental Protection Agency as hospital grade germicides or disinfectants or as disinfectants for safe use in schools, child care centers, institutions or restaurants are also approved disinfectants, provided the manufacturer's Material Safety Data Sheets are kept on file at the child care center and the instructions for use are followed.

"Division of Child Development" means the child care licensing agency in the N.C. Department of Health and Human Services.

"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.

"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 intended for the assembly of ingredients for human consumption.

"Food Service" means the distribution of prepared foods for consumption, including those food items prepared at the child care center; received by the center from approved food establishments; milk placed in a pitcher or other serving container; ice transported, stored and dispensed; bagged lunches sent from home; and the use of utensils to minimize direct food contact.

"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.

"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.

"Household bleach" means bleach sold in concentrations that are intended for household use, and not industrial applications. Household bleach is sold in retail stores at strengths of 5.25 percent hypochlorite (regular strength bleach) solution and 6.00 percent hypochlorite (ultra strength bleach) solution.

"Lavatory" means a sink that is equipped with hot and cold water under pressure for the primary purpose of handwashing.

"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.

"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.

"Potable Water" means water from an approved source which is suitable for drinking.

"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.

"Putrescible Materials" means materials likely to rot or putrefy, such as fruit, vegetables, meats and dairy products.

"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, or mechanical or biological treatment systems.

"Sanitizing Solution" means a solution containing 50 to 200 parts per million (ppm) of chlorine. A sanitizing solution can be made by mixing a tablespoon of liquid household chlorine bleach with one gallon of water and prepared fresh daily.
(23) "School Age" means any child who is at least five years old on or before October 16 of the current school year and who is attending, or has attended, a public or private grade school or kindergarten; or any child who is not five years old and will not be five years old on or before October 16 of that school year, but has been attending school during that school year in another state in accordance with the laws or rules of that state before moving to and becoming a resident of North Carolina; or any child who is at least five years old on or before April 16 of the current school year, is determined by the principal of a school to be gifted and mature enough to justify admission to the school and is enrolled no later than the end of the first month of the school year.

(24) "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.

(25) "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.

(26) "Tempered Water" means water that is between 80°F and 110°F.

(27) "Utensils" means any kitchenware, tableware, glassware, cutlery, containers or other equipment that food or drink comes in contact with during storage, preparation or serving.

(28) "Work Surfaces" means the following locations in the kitchen: food service areas; stove top surfaces; food preparation surfaces; utensil and dishwashing areas; surfaces used for air drying; drain boards; and counter top surfaces. In child care rooms, work surfaces include food preparation areas, diaper changing surfaces, counter top surfaces, children work tables, desks and easels.


15A NCAC 18A .2802 APPROVAL OF CONSTRUCTION AND RENOVATION PLANS
(a) Plans drawn to scale and specifications for new child care centers 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 child care centers shall also be submitted to the local health department for review and approval prior to construction. Plans drawn to scale and specifications for prototype "franchise" or "chain" child care centers shall be submitted to DENR, Division of Environmental Health, Environmental Health Services Section, Children's Environmental Health Branch. When requested by an operator of a center or by the Secretary of the Department of Health and Human Services, 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) 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.


15A NCAC 18A .2803 HANDWASHING
(a) Child Care operators shall instruct employees 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 bottle feeding or serving to other children; 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 diaper changing; after handling soiled items such as garbage, mops, clothes and clothing; after being outdoors; after handling animals or animal cages; and after removing disposable gloves. The use of hand sanitizing products does not replace the requirement for handwashing. However, except for diapering, food preparation, and food service, hand sanitizing
products may be used in lieu of handwashing while an employee is supervising children outdoors if hands are washed upon returning indoors.

(b) Children shall wash hands upon arrival at the child care center; after each diaper change or visit to the toilet; before eating meals or snacks; before and after water play; after outdoor activity; and after handling animals or animal cages. Except for diapering and before eating meals or snacks, hand sanitizing products may be used in lieu of handwashing while children are outdoors if hands are washed upon returning indoors.

(c) Handwashing procedures shall include:

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 well for ten seconds;
5. drying 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.

Note: Refer to Rule .2828 of this Section for history.

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.

15A NCAC 18A .2804 FOOD SUPPLIES

(a) In child care centers, food shall be 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 regulatory agency. The use of food packaged in hermetically sealed containers that was not prepared in a commercial food processing establishment is prohibited. Food prepared and sent from home to be shared with other children shall be limited to non-potentially hazardous baked goods.

(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 Environmental Health Services Section, Division of Environmental Health. Unless prescribed by a physician, 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. A pasteurized egg product may be used as a substitute for raw eggs.

(d) Breast milk, formula, and other bottled beverages, including beverages in sippy cups, sent from home shall be fully prepared, dated, and identified for the appropriate child at the child’s home. All breast milk, formula, and other bottled beverages shall be returned to the child’s home or discarded at the end of each day. Frozen breast milk shall be stored frozen for up to seven days. Frozen breast milk shall be labeled with the date received and date thawed for use. Previously frozen breast milk shall be refrigerated and may be stored for no more than 24 hours. Microwaves shall not be used to thaw or warm breast milk, baby food, formula or other bottled beverages. Bottle warming equipment shall be inaccessible to children when in use and shall be emptied, cleaned and sanitized daily. Previously frozen breast milk shall not be refrozen for storage. Formula provided by the child care center shall be commercially pre-packaged, ready-to-feed, fully prepared, and packaged in single-use containers. However, breast milk or formula that does not meet these requirements may be provided by the child care center as prescribed by the child’s physician or instructed by parent or guardian in writing. Bottles and other drinking utensils provided by the child care center shall be sanitized in accordance with this Section. Formula and other beverages which require refrigeration, baby food after opening, and breast milk shall be identified for the appropriate child and shall be refrigerated at 45°F (7°C) or below. Upon opening, jars of baby food shall be covered, dated, refrigerated, and used within two days. 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. After the completion of each feeding, leftover formula, breast milk, and other bottled beverages shall be discarded or returned to the child’s home at the end of each day.
(e) Child care centers receiving prepared meals or snacks from outside sources shall use meals and snacks obtained from food handling establishments 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 prepared meals from organizations not licensed as child care centers only when these organizations are providing prepared meals to licensed child care centers. These organizations shall be inspected as child care centers by the local health department in the county where the meal is prepared. 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. During transportation, food shall meet the requirements of the Rules of this Section relating to food protection and storage.

(f) Lunches and other meals brought from home shall be dated and identified for the appropriate child at the child’s home and shall be returned to the child’s home or discarded at the end of each day. Meals containing potentially hazardous foods shall be refrigerated at 45°F (7°C) or below.

(g) Nothing in the Rules of this Section shall prohibit the use of fresh garden fruits and vegetables, including those grown at the child care center, so long as they 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.

15A NCAC 18A .2805 FOOD PROTECTION

History Note:
Authority G.S. 110-91;
Eff. July 1, 1991;

15A NCAC 18A .2806 FOOD STORAGE AND PROTECTION

(a) In child care centers, food shall be stored in approved, clean, tightly covered, storage containers once the original package is opened. Approved containers include resealable bags and other containers made of plastic or glass. Reusable containers that come in direct contact with food must be easy to clean, in good repair and intended for food storage.

(b) Food items, that are stored in classrooms or other rooms intended for child care use, shall be limited to those food items which are individually packaged unless the classroom is equipped with a food preparation area. Provisions shall be made to store and protect these food items from all potential sources of contamination and other nonfood items stored in the classroom.

(c) Dry foods that are not readily identifiable and are stored in containers shall be labeled.

(d) 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.

(e) Food and containers of food shall not be stored under exposed sewer lines. Food shall not be stored in toilet or laundry rooms. Child care centers licensed for fewer than 13 children and located in a residence may store food in laundry rooms if protected as required in Paragraph (f) of this Rule.

(f) All food shall be stored in a manner to protect it from dust, rodents, insects, drip, splash and other contamination. Raw meats, poultry, fish, shellfish and eggs shall be stored on shelving beneath and separate from other foods. The temperature of potentially hazardous food provided by the center shall be 45°F (7°C) or below, or 140°F (60°C) or above at all times, including field trips, catering events, outdoor service, except during necessary periods of preparation and service, and as otherwise provided in the Rules of this Section.

(g) 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 and other foods shall not be stored in direct contact with ice.

(h) 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 ±3°F (± 1.5°C) located to measure the air...
temperature in the warmest part of the refrigerator and located to be easily readable. Recording thermometers, accurate to ±3°F (±1.5°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 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 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.

(i) Hot storage:

(1) Hot food storage equipment shall be provided in sufficient number and 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 ±3°F (±1.5°C), located to measure the air temperature in the coolest part of the unit and located to be easily readable. Recording thermometers, accurate to ±3°F (±1.5°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°F (60°C) or above.

(j) In the event of a fire, flood, water supply interruption, 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 either discard the food in question or contact the local health department.

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.

15A NCAC 18A .2807 FOOD PREPARATION
(a) In child care centers, the preparation of food shall take place only in the approved facilities or space equipped as required in Rule .2810 of this Section.
(b) 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.
(c) Food contact surfaces and utensils shall be cleaned and sanitized after preparing raw foods, prior to preparing ready-to-eat foods and after any interruption of operations in which contamination may have occurred.
(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 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 150°F (66°C) 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; and
(4) roast beef shall be cooked to an internal temperature of at least 130°F (54°C) with no interruption in the cooking process.
(f) Potentially hazardous foods requiring cooking and cooked in a microwave oven shall be rotated during cooking to compensate for uneven heat distribution and shall be heated an additional 25°F (13.9°C) to compensate for shorter cooking times.
(g) Potentially hazardous foods that have been cooked and then refrigerated, if served above 45°F (7°C), shall be reheated 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 packages may initially be reheated to 140°F (60°C). Steam tables, warmers, and similar hot food holding units are prohibited for reheating of potentially hazardous foods. Potentially hazardous foods reheated in a microwave oven shall be heated an additional 25°F (13.9°C).

(h) Metal stem-type numerically scaled indicating product thermometers, accurate to 2°F (1°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.

(i) Potentially hazardous foods shall be thawed:

1. in refrigerated units at a temperature not to exceed 45°F (7°C);
2. under potable 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. 110-91; Eff. July 1, 1991; Amended Eff. January 1, 2006; February 1, 1995; October 1, 1993.

15A NCAC 18A .2808 FOOD SERVICE

(a) In child care centers, milk and milk products for drinking purposes shall be stored in the original commercially filled container. Serving containers may be used for food service provided the unused milk is discarded.

(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 the procedures in Rule .2803(c) of this Section. Employees 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. Employees engaged in food preparation in the kitchen shall wear effective hair restraints, keep their fingernails trimmed, clean and shall not wear fingernail polish or artificial fingernails unless wearing intact gloves. Hair spray is not an effective hair restraint.

(d) Once served, portions of left over food shall not be served again unless the package is intact and the food is not potentially hazardous. Foods, including milk, placed on the table for family style food service are considered served.

(e) Between uses during service, dispensing utensils shall be stored in the food with the dispensing utensil handle extended out of the food, in a container of water if the water is maintained at a temperature of at least 140°F (60°C), or stored clean and dry.

(f) Children attending child care centers shall not be in the kitchen except when participating in a supervised activity.

(g) Nothing in this Section shall be construed as prohibiting family style food service at child care centers so long as supervision of the children is maintained throughout each meal except that family style food service shall be prohibited during the outbreak and investigation of communicable diseases.

History Note: Authority G.S. 110-91; Eff. July 1, 1991; Amended Eff January 1, 2006; April 1, 1999; February 1, 1995.

15A NCAC 18A .2809 FOOD SERVICE EQUIPMENT AND UTENSILS

In child care centers, material and construction of food service equipment and utensils shall meet the following requirements:

1. Materials used in the construction of utensils and equipment shall be durable; corrosion-resistant; nonabsorbent; non-toxic; finished to have a smooth, easily cleanable surface; and resistant to pitting, chipping, cracking, scratching, distortion, and decomposition.

2. Food-contact surfaces shall be smooth; free of breaks, open seams, cracks, chips, pits and other imperfections; free of sharp internal angles, corners and crevices; and accessible for cleaning and inspection without being disassembled or by easy disassembly.
Nonfood contact surfaces shall be nonabsorbent with no obstructions to cleaning.

Solder shall be comprised of approved, non-toxic; corrosion-resistant materials.

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.

Galvanized metal shall not be used for utensils or food-contact equipment.

Linen shall not be used as food-contact surfaces, except that clean linen may be used in contact with bread and rolls.

Single-use and single-service articles shall be clean.

Reuse of single-service articles is prohibited.

Single-use articles such as formed buckets, bread wrappers, aluminum pie plates and cans shall be used only once except that containers made of plastic, glass or other material intended for food storage, with smooth sides and constructed to be easily cleaned may be reused.

Equipment and utensils that impart odors, color or taste, or contribute to the contamination of food shall not be used.

Product thermometers and thermometer probes shall be of metal stem-type construction.

Water filters or any other water conditioning devices shall be cleaned and maintained in accordance with the manufacturer's instructions.

Filters and other grease extracting equipment shall be cleaned and maintained in accordance with the manufacturer's specifications.

History Note:  
Authority G.S. 110-91;  
Eff. July 1, 1991;  

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 for child care centers located in a school that receives all food supplies 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 child care operation. Domestic or commercial kitchen equipment may be used. Child care centers using multi-service articles shall also provide a dishwasher. In lieu of a dishwasher and two-compartment sink, a three-compartment sink of sufficient size and depth to wash, rinse and sanitize utensils may be used.

(b) 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.

(c) A separate food preparation sink with drainboards or countertop space of adequate size shall be required when a plan review indicates that separate facilities are needed based on volume and preparation frequency.

(d) When domestic refrigeration equipment is used, except in child care centers licensed for fewer than 13 children and located in a residence, the following provisions shall apply:

(1) except for thawing under refrigerated conditions, 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 when frying is used for food preparation on site. The hood shall be installed in accordance with the North Carolina Building Code and approved by the local building code enforcement agent.

(f) If food is prepared in a classroom, a food preparation area shall be provided. Water from a handwash lavatory shall not be used to prepare formula, mix dry cereals, or other foods. Toy cleaning and sanitizing may also be conducted in this food preparation area. This food preparation area shall contain an easily cleanable countertop and a lavatory and, when needed, adequate refrigeration. The food preparation counters, bottle warming equipment if used, food and food contact surfaces shall be out of reach of children and the following shall apply:

(1) all equipment shall be cleaned at least daily. Warming equipment shall be cleaned and sanitized as required in Rule .2812 of this Section;
(2) after each use, all multi-service articles provided by the center shall be cleaned and sanitized in the child care center kitchen;

(3) single-service articles shall be handled as required in Rule .2814 of this Section; and

(4) counter, shelf or cabinet space shall be provided for food storage. Food supplies shall be stored in accordance with Rule .2806 of this Section.


15A NCAC 18A .2811 CLEANING AND SANITIZING OF EQUIPMENT AND UTENSILS


15A NCAC 18A .2812 CLEANING AND SANITIZING EQUIPMENT AND UTENSILS

(a) In child care centers, drainboards or countertop space of adequate size shall be provided for handling of soiled utensils prior to washing and cleaned utensils following sanitizing. 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 and other designated areas not contiguous with the sink may be utilized to meet drainboard or countertop space requirements. 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 soiled equipment and utensils unless these areas are otherwise separated and protected from cross contamination. Upon change of ownership, or the closing of the operation and the issuance of a new license, or the remodeling of an existing kitchen, a child care center shall also comply with this Paragraph.

(b) 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) when necessary, equipment and utensils shall be scraped, flushed, or soaked to remove food particles;

(2) sinks shall be cleaned and sanitized prior to use;

(3) equipment and utensils shall be washed in the first compartment with a hot detergent solution that is changed once visibly soiled;

(4) equipment and utensils shall be rinsed free of detergent and abrasives with clean water in the second compartment; and

(5) the food-contact surfaces of equipment and utensils shall be sanitized in the third compartment in the following manner:

   (A) immersion for at least one minute in clean, hot water at a temperature of at least 170°F (77°C) in dish baskets of such size and design to permit complete immersion of the tableware, kitchenware and equipment in the hot water;

   (B) immersion for at least two minutes in a clean solution containing 50 to 200 parts per million (ppm) of 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 iodine and having a pH not higher than 5.0 and at a temperature of at least 75°F (24°C);

   (D) immersion for at least two minutes in a clean solution containing 200 to 400 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; or

   (E) other sanitizing products, procedures, or equipment as effective as those above may be used if these products are nontoxic to children, used according to the manufacturer's instructions and approved by the Department.
(c) For mechanical cleaning and sanitizing, food-contact surfaces of equipment and utensils shall be sanitized according to the 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, a temperature indicating device, accurate to 2°F (1°C), shall be provided.

(d) 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 of sufficient chemical strength as indicated in Paragraph (b) of this Rule shall be used. Spray-on or wipe-on sanitizers shall be prepared daily and kept on hand for bactericidal treatment.

(e) Multi-service articles, including highchair feeding trays, shall be washed, rinsed and sanitized after each use.

(f) Nonfood-contact surfaces shall be cleaned to keep equipment free of accumulation of dust, dirt, food particles and other debris.

(g) A testing method or equipment, used in accordance with the product manufacturer's instructions, shall be made available, convenient, and regularly used to test the strengths of these chemical sanitizing solutions to ensure the prescribed concentrations are met.

(h) After sanitizing, all equipment and utensils shall be air dried.

History Note: Authority G.S. 110-91; Eff. July 1, 1991; Amended Eff. February 1, 1995; July 1, 1993; Temporary Amendment Eff. December 1, 1999; April 15, 1998; Amended Eff. July 1, 2006; January 1, 2006; April 1, 2001.

15A NCAC 18A .2813 MECHANICAL CLEANING AND SANITIZING


15A NCAC 18A .2814 FOOD SERVICE EQUIPMENT AND UTENSIL STORAGE

(a) In child care centers, cleaned and sanitized equipment and utensils, including single-service articles, shall be handled in a way that protects the food-contact surfaces from contamination. Spoons, knives, and forks shall be handled with the least amount of contact necessary. 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.


15A NCAC 18A .2815 WATER SUPPLY

(a) In child care centers, the water supply shall meet the requirements of 15A NCAC 18A .1700 Protection of Water Supplies. In addition, any center using a groundwater supply that serves 25 or more people shall provide documentation from the Public Water Supply Section that the well meets the requirements of 15A NCAC 18C. A water sample shall be collected by the Department and submitted to a state certified laboratory for bacteriological analysis annually if the child care center is not served by a community water supply. Other tests of water quality, as indicated by possible sources of contamination, may be collected by the Department.

(b) Water under pressure shall be provided to meet the needs of cooking, cleaning, drinking, toilets, and outside uses in accordance with the North Carolina Plumbing Code.

(c) No cross-connections with an unapproved water supply shall exist. If the potential for backspionage or backflow conditions exist, an approved atmospheric vacuum breaker or backflow prevention device shall be installed in accordance with the North Carolina Plumbing Code.
(d) Water heating equipment shall be provided to meet the maximum hot water requirements of the child care center. 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 may use an existing water heater, or the equivalent replacement, if all required temperatures are maintained. 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 food utensils and laundry shall be provided at a minimum temperature of 120°F (49°C) at the point of use. Water in areas accessible to children shall be tempered between 80°F (27°C) and 110°F (43°C). For handwash lavatories used exclusively by school-age children, the 80°F (27°C) minimum temperature requirement shall not apply. Hot water in an area accessible to any child, which is in excess of 120°F (49°C), shall be considered a burn hazard. Child care centers serving only school-age children are not required to provide hot water in areas accessible to children. In the event of the loss of hot water, the person in charge shall immediately contact the local health department.

(f) Drinking fountains, if provided, shall comply with the North Carolina Plumbing Code, be separate from handwash lavatories, and kept clean. The pressure 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 approved dispensing devices may be used and shall be kept clean.

(g) Outdoor drinking fountains shall be constructed to protect the spout from contamination 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.

**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. 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. Notwithstanding Rule .2801(5) of this Section, “Department” means North Carolina Department of Health and Human Services for purposes of this Rule.

2. For 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/dwreginfo/3ts-reducing-lead-drinking-water-schools-and-child-care-facilities. 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.
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.

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.

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.

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.

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 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.

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 operator shall make the test results available to the public, free of charge. The child care 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.

15A NCAC 18A .2817 TOILETS

(a) In child care centers, toilet tissue 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 easily cleanable, and in good repair. Toilet fixtures shall be child-sized, adapted adult toilets or potty chairs.

(b) Toilet fixtures shall be cleaned and disinfected at least daily and when visibly soiled. A disinfecting solution as set out in 15A NCAC 18A .2801(7) shall be used for this purpose. A testing method shall be made available to ensure compliance with the prescribed bleach solution concentration. To achieve the maximum germ reduction with bleach, the cleaned surfaces shall be left glistening wet with the bleach solution and allowed to air dry or be dried only after a minimum contact time of at least two minutes. Products registered with the U.S. Environmental Protection Agency as hospital grade germicides or disinfectants or as disinfectants for safe use in schools, child care centers, institutions or restaurants are also approved disinfectants, provided the manufacturer's Material Safety Data Sheets are kept on file at the child care center and the instructions for use are followed.

(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 with a disinfecting solution as described in Paragraph (b) of this Rule.

(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.

15A NCAC 18A .2818 LAVATORIES
(a) In child care centers, lavatories shall be easily cleanable, in good repair, and kept free of storage. Lavatories shall be mounted at an appropriate height to accommodate the children, or otherwise made accessible. Any lavatory may be used for handwashing as specified in 15A NCAC 18A .2803, except for flush-rimmed sinks and those with an attached operable drinking fountain.

(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, as needed and at least daily. A disinfecting solution as set out in 15A NCAC 18A .2801(7) shall be used for this purpose. A testing method shall be made available to ensure compliance with the prescribed bleach solution concentration. To achieve the maximum germ reduction with bleach, the cleaned surfaces shall be left glistening wet with the bleach solution and allowed to air dry or be dried only after a minimum contact time of at least two minutes. Products registered with the U.S. Environmental Protection Agency as hospital grade germicides or disinfectants or as disinfectants for safe use in schools, child care centers, institutions and restaurants are also approved disinfectants, provided the manufacturer's Material Safety Data Sheets are kept on file at the child care center and the instructions for use are followed.

(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.

History Note:  
Authority G.S. 110-91;  
Eff. July 1, 1991;  
Amended Eff. July 1, 2006; January 1, 2006; February 1, 1995.

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 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 a diaper changing area.

(b) Diapering surfaces shall be smooth, intact, nonabsorbent, easily cleanable and shall be approved by the Department. Nothing shall be placed on the diapering surface except for those items required for diapering.

(c) A disinfecting solution as set out in 15A NCAC 18A .2801(7) shall be used to disinfect diapering surfaces. A testing method shall be made available to ensure compliance with the prescribed bleach solution concentration. To achieve the maximum germ reduction with bleach, the cleaned surfaces shall be left glistening wet with the bleach solution and allowed to air dry or be dried only after a minimum contact time of at least two minutes. Products registered with the U.S. Environmental Protection Agency as hospital grade germicides or disinfectants or as disinfectants for safe use in schools, child care centers, institutions or restaurants are also approved disinfectants, provided the manufacturer's Material Safety Data Sheets are kept on file at the child care center and the instructions for use are followed. Cleaning and disinfecting solutions shall be kept in separate and labeled bottles at each diaper changing station. Bleach disinfecting solutions shall be stored in hand pump spray bottles. No cloths or sponges shall be used on diapering surfaces.

(d) Diaper changing procedures shall include:

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 hands with disposable towelette or moistened paper towel;
6. sliding a clean diaper under the child, applying diapering products (if needed) using facial or toilet tissue, 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 her or his 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 approved disinfecting solution 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 caregiver.
(e) Vinyl or latex disposable gloves shall be used by caregivers during the diaper changing process if she or he has cuts or sores on her or his hands or has chapped hands.
(f) Caregivers may dispose of feces in diapers in the toilet, but shall not rinse soiled cloth diapers, or training pants or clothes. Soiled cloth diapers, training pants or clothes shall be sent to a diaper service or placed in a tightly closed plastic bag or other equivalent container approved by the Department, stored out of reach of children, and sent daily to the child's home to be laundered.
(g) Receptacles containing soiled disposable diapers shall be emptied in an exterior garbage area at least daily.
(h) Instructions for caregivers on proper methods of diaper changing and handwashing 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.

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 and shall be kept clean. Shelving or other storage areas shall be provided and constructed in a manner to facilitate cleaning. Soiled laundry shall be handled and stored separately from clean laundry using separate cleanable containers.
(b) All 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 its 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, electronic or magnetic device, key, or equivalent locking device. These 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 product not listed above, which is labeled "keep out of reach of children" without any other warnings, shall be kept inaccessible to children when not in use, but is not required to be kept in locked storage. The 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, disinfecting, and detergent solutions, hand sanitizers, and hand lotions shall be kept out of reach of children when not in use, but are not required to be in locked storage. These solutions shall be labeled as sanitizing, disinfecting, or detergent (soapy water) solutions. Hand soap other than that which is in bulk containers is not required to be kept out of reach of children or in locked storage.
(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 stored out of reach of children, but are not required to be in locked storage. Non-prescription diaper creams and sunscreen shall be kept out of reach of children when not in use, but are not required to be in locked storage.
(e) Individual cubicles, lockers, or coat hooks shall be provided for storage of coats, hats, or similar items. Coat hooks not in individual cubicles or lockers, shall be spaced at least 12 horizontal inches apart. Combs shall be labeled and stored individually. Toothbrushes shall be individually identified, allowed to air dry and protected from contamination. When a container of toothpaste is used for multiple children, the toothpaste shall be dispensed onto an intermediate surface such as waxed paper.
(f) Employee purses and other personal effects shall be kept out of reach of children.

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.

15A NCAC 18A .2821 BEDS, COTS, MATS, AND LINENS
(a) In child care centers, all beds, cribs, cots, and mats shall be in good repair, stored to prevent contamination, cleaned and sanitized between users.
(b) Cribs and play pens used for sleeping shall be easily cleanable, and equipped with a firm, tight-fitting mattress made of waterproof, washable material at least two inches thick.
(c) All beds, cots or mats shall be assigned and labeled for each 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 floor side does not touch the sleeping side or by an equivalent method approved by the Department.
(e) When in use, cribs, cots, mats and playpens shall be placed at least 18 inches apart or separated by partitions which prevent physical contact.
(f) Linen shall be kept clean, in good repair, and stored with the individual mat or cot or stored individually for each child in a designated area. Linen shall be laundered between users, when soiled, and at least once per week. Linen used in rooms where children in care are less than 12 months old shall be changed and laundered when soiled and at least daily. Linens shall be large enough to cover the sleeping surface.
(g) Wash cloths, bibs, and burping cloths shall not be used more than once until laundered and shall be laundered when soiled and at least daily.

History Note: Authority G.S. 110-91; Eff. July 1, 1991; Amended Eff. July 1, 2006; January 1, 2006; February 1, 1995.

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 shall be cleaned and then sanitized at least daily when used and more frequently if visibly dirty, by the following methods:
   (1) scrubbed in warm, soapy water using a brush to reach into crevices;
   (2) rinsed in clean water;
   (3) submerged in a sanitizing solution as set out in 15A NCAC 18A .2801(22) for at least two minutes or sanitized with another approved sanitizing solution; and
   (4) air dried.
A testing method or kit shall be available to ensure compliance with the prescribed concentration. To achieve the maximum germ reduction with bleach, the cleaned surfaces shall be left glistening wet with the bleach solution and allowed to air dry or be dried only after a minimum contact time of at least two minutes. Other sanitizing solutions that have been determined to be at least as effective as the chlorine bleach solution are acceptable as long as these products are nontoxic to children, used according to the manufacturer's instructions and approved by the Department. Toys, items and surfaces not designed to be submerged 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.
(b) Toys, furniture, cribs, or other items accessible to children, shall be free of peeling, flaking, or chalking paint.
(c) Water play centers shall be filled just prior to each water play session. Water shall be emptied after each session or more often if visibly soiled. The water play centers including toys, shall be cleaned and sanitized at least daily or more often if visibly soiled. Water play is prohibited during the outbreak and investigation of communicable diseases at the site. Wading pools are not considered water play centers and are regulated under 15A NCAC 18A .2500.


15A NCAC 18A .2823 PERSONNEL
(a) In child care centers, employees and their clothing shall be clean. Employees shall keep their fingernails clean.
(b) Tobacco use in any form is prohibited in any part of a child care center except in a designated area either outdoors, separate from the outdoor learning environment, or indoors in a room with a separate ventilation system approved by the building inspector.
(c) Volunteer personnel shall adhere to the same requirements as 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;
15A NCAC 18A .2824  FLOORS
(a) In child care centers, floors and floor coverings of all food preparation, food storage, utensil-washing areas, toilet rooms, and laundry areas shall be constructed of nonabsorbent, easily cleanable material.
(b) Floors and floor coverings of all sleeping and play areas shall be constructed of easily cleanable materials.
(c) Carpeting used as a floor covering shall be of closely woven construction, properly installed, and easily cleanable. 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 shall be removed from the carpet before the space is reoccupied. When hot water extraction is used, carpet shall be completely dry within 12 hours of cleaning.
(d) Floors in areas accessible to children, shall be free of peeling, flaking or otherwise deteriorating paint.
(e) All floors and floor coverings shall be kept clean and maintained in good repair.

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.

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 easily cleanable and 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 ceiling material may be used where ventilation precludes the possibility of grease and moisture absorption. 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.


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 means. Lighting shall be capable of illumination to at least 50 foot-candles at work surfaces in kitchens and diaper changing areas and at children's work tables, desks and easels. 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 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 air supply diffusers (heating and cooling vents) and return grilles, fans, and all other ventilation equipment shall be kept clean and in good repair.
(c) Nothing in the rules of this Section requires that outdoor storage buildings be wired with electricity or provided with heating and air conditioning.

15A NCAC 18A .2827 COMMUNICABLE DISEASES AND CONDITIONS
(a) In child care centers, children who become ill to the extent that they can no longer participate in routine group activities shall be separated from the other children until the child leaves the center.
(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. Thermometers and all materials used in the designated area including mouthable toys shall be cleaned and 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 children by a partition, screen or other means. 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) Employees with a communicable disease or a communicable condition shall be excluded from situations in which transmission can be expected to occur, in accordance with Communicable Disease Control Measures under 10A NCAC 41A .0200. Any employee with boils, sores, burns, infected wounds or other potentially draining lesions on exposed skin shall bandage the affected area to eliminate exposure to drainage. If such bandaging obstructs handwashing or if the exposure to drainage cannot be eliminated, then the employee shall be excluded from food preparation and caregiving while the 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.

15A NCAC 18A .2828 HANDWASHING

History Note: Authority G.S. 110-91;
Eff. July 1, 1991;
Amended Eff. April 1, 1999; February 1, 1995;

15A NCAC 18A .2829 WASTEWATER
In child care centers, all wastewater shall be disposed of in a publicly-owned wastewater treatment system or by an approved properly operating on-site wastewater system under 15A NCAC 18A .1900. Septic systems shall be sized to accommodate anticipated 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.

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 at least daily. Scrap paper, cardboard boxes and similar items shall be stored in containers or designated areas.
(b) Garbage containers, mops and other cleaning equipment shall be kept clean. Facilities shall be provided for the washing and storage of garbage containers and mops for child care centers, except for centers licensed for fewer than 13 children and located in a residence. Cleaning facilities shall include a faucet with a threaded nozzle and water of at least 80°F (27°C) in either a designated utility sink or above a curbed impervious pad sloped to drain into a publicly-owned wastewater treatment system or by an approved properly operating on-site wastewater system in accordance with 15A NCAC 18A .1900. Can cleaning facilities approved prior to July 1, 1991 shall be approved if in good repair.
(c) Dumpsters and other containerized systems shall be kept clean and covered. Facilities shall be provided for cleaning either on-site, or off-site through a contractual agreement.
(d) Solid wastes shall be disposed of to prevent insect breeding and public health nuisances.

History Note: Authority G.S. 110-91;
15A NCAC 18A .2831  ANIMAL AND VERMIN CONTROL
(a) Unrestrained animals, 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 premises, copies of vaccination records required by North Carolina law and local ordinances shall be available for review. Any animals kept as pets shall be examined by a veterinarian to determine that they are free from vermin, such as mites, lice, fleas, and ticks, and pathogens that could adversely affect human health. Turtles, iguanas, frogs, salamanders, and other reptiles or amphibians are not allowed to be kept as pets on the premises. Animals shall not be allowed in or kept at the entrances to food preparation areas. Animal cages shall be kept clean and waste materials shall be bagged, sealed, and immediately disposed of in the exterior garbage area in a covered container. Animals belonging to child care owners, employees, volunteers, visitors, and children shall not be allowed in child care centers or on the premises unless the above requirements are met.
(b) Effective measures shall be taken to keep uncontained insects, rodents, and other vermin out of the child care centers and to prevent their breeding or presence on the premises. Traps shall only be placed in areas inaccessible to children.
(c) All openings to the outer air shall be protected against the entrance of flying insects. In food preparation areas, only fly traps, pyrethrin-based insecticides or a fly swatter shall be used for extermination of flying insects. 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 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 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 and allowed under the US EPA Supplemental Guidance on Interpretation of Revised Chromated Copper Arsenate (CCA) Wood Preservative Label, as amended.
(f) In areas accessible to children, CCA-treated wood decks, playground and recreational equipment, and structures installed or constructed:
   (1) prior to January 1, 2005; or
   (2) where EPA allows the use of CCA-treated wood,
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 such 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.
(h) Any composting areas shall be covered and maintained to prevent attracting rodents or vermin. Worm bins shall be kept covered.
(i) Grass, fruit and vegetable gardens, vines on fences, and other vegetation shall be maintained in a manner which does not encourage the harborage of vermin.
(j) Pets kept outdoors 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. January 1, 2006; April 1, 1999.

15A NCAC 18A .2832  OUTDOOR LEARNING ENVIRONMENT AND PREMISES
(a) At child care centers, the premises, including the outdoor learning environment, shall be kept clean, drained to minimize standing water, free of litter and hazardous materials, and maintained in a manner which does not encourage the harborage of
vermin. All debris, glass, dilapidated structures and broken play equipment shall be removed. Wells, grease traps, cisterns and utility equipment shall be made inaccessible to children.

(b) Sand toys, water tables and other items that can collect standing water in the outdoor learning environment shall be emptied and stored to prevent standing water.

(c) For outdoor play equipment, including all structures accessible to children, the following shall apply:

1. Equipment shall be kept in good repair, free of peeling, flaking, or chalking paint and free of rust and corrosion;
2. The sandbox used in outdoor play shall be constructed to allow for drainage and shall be covered when not in use and kept clean.

(d) If a daily air quality forecast is made by the Division of Air Quality or the regional air quality agency for the county where a center is located, outdoor activity for children shall be restricted as follows. 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.

(e) When food service is provided in the outdoor learning environment, food shall be protected, stored, prepared and served in accordance with 15A NCAC 18A .2806, .2807 and .2808. Employees and children shall wash hands in accordance with 15A NCAC 18A .2803 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 15A NCAC 18A .2817 and .2819 and employees and children shall wash hands in accordance with 15A NCAC 18A .2803.

(g) Storage provided outdoors for children's toys shall be kept clean. Storage areas that are accessible to children shall be kept free of hazardous equipment and substances in accordance with 15A NCAC 18A .2820. Storage areas shall meet requirements for lighting in accordance with 15A NCAC 18A .2826 by means of opening doors, windows, sky lights, battery operated light, flashlight or electric lighting. Spare batteries shall be available for battery operated light fixtures and flashlights.

(h) Outdoor water activity centers shall be maintained in accordance with 15A NCAC 18A .2822. Flow through water play systems shall be designed to minimize standing water. Employees and children shall wash hands in accordance with 15A NCAC 18A .2803 before and after water play.

(i) Central vacuums that exhaust to the outdoors away from children may be used in lieu of HEPA vacuum cleaners to meet the daily vacuuming requirements in Rule .2824(c).

**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.

**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 Governing Public Swimming Pools, 15A NCAC 18A .2500. Copies of these Rules may be obtained from DENR, Division of Environmental Health, Environmental Health Services Section.

(b) Portable wading pools, natural bodies of water, and other unfiltered, nondisinfected containments of water shall not be utilized for 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.

**15A NCAC 18A .2834 COMPLIANCE, INSPECTIONS AND REPORTS**

(a) When requested by a child care operator or the Division of Child Development, a sanitation inspection shall be conducted by the local health department within 30 days.
(b) Unannounced inspections of child care centers shall be made by the Department at least once each six-month period. The evaluation shall be completed on the Sanitation Standards Evaluation Form for Child Care Centers provided by the Department. Other versions of the form, including electronic, are allowed but shall be duplicates of the Sanitation Standards Evaluation Form for Child Care Centers. An original and two copies of the form shall be completed by the Department. The original shall be submitted to the Division of Child Development. 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 Division of Child Development. Demerits shall be assigned for each occurrence of violations within these requirements:

1. violation of Rules .2803 or .2836 of this Section related to handwashing when required shall be assessed five demerits;
2. violation of Rule .2803 of this Section related to proper handwashing procedures shall be assessed five demerits;
3. violation of Rule .2804 of this Section related to food from approved sources, no spoilage, or adulteration shall be assessed six demerits;
4. violation of Rules .2804, .2806, or .2807 of this Section related to potentially hazardous food meeting storage and holding temperatures; and refrigeration of bottles and lunches at 45° F or below shall be assessed six demerits;
5. violation of Rules .2806, .2807, .2808, or .2836 of this Section related to food properly stored, thawed, prepared, cooked, cooled, handled, served, transported, packaged, and identified, and only supervised children in the kitchen shall be assessed five demerits;
6. violation of Rule .2808 of this Section related to food not re-served shall be assessed three demerits;
7. violation of Rule .2807 of this Section related to food thermometers provided and accurate shall be assessed two demerits;
8. violation of Rules .2809 or .2810 of this Section related to food service equipment and utensils meeting specifications for refrigeration, sinks, lavatories and dishwashing equipment shall be assessed six demerits;
9. violation of Rules .2809 or .2810 of this Section related to food service equipment and utensils meeting specifications for other equipment and utensils, approved material and construction shall be assessed four demerits;
10. violation of Rules .2809 or .2812 of this Section related to food contact surfaces properly washed, rinsed, sanitized and air dried; and single-service articles not re-used shall be assessed five demerits;
11. violation of Rule .2812 of this Section related to sanitizer provided and test kit available shall be assessed two demerits;
12. violation of Rule .2812 of this Section related to 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 meets 15A NCAC 18A .1700 or 15A NCAC 18C, whichever is applicable, and documentation provided 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 of this Section related to hot water in excess of 120° F not allowed in areas accessible to children shall be assessed six demerits;
18. violation of Rule .2815 of this Section related to backflow prevention provided, no cross connections shall be assessed three demerits;
19. violation of Rules .2815 or .2836 of this Section related to drinking fountains of approved type, pressure regulated, clean shall be assessed two demerits;
20. violation of Rule .2816 of this Section related to identified lead poisoning hazards as defined under G.S. 130A-131.7(7) shall be assessed six demerits;
21. violation of Rules .2817, .2818 or .2836 of this Section related to toilet and lavatory facilities properly sized, located and accessible, and in good repair; sinks, toilets and potty chairs cleaned and disinfected shall be assessed four demerits;
violation of Rules .2817 or .2818 of this Section related to soap, approved hand drying devices, and toilet tissue available shall be assessed three demerits;

violation of Rules .2817 or .2818 of this Section related to approved storage in toilet rooms, lavatories free of storage; and handwash signs posted shall be assessed two demerits;

violation of Rules .2817, .2819 or .2836 of this Section related to approved diaper changing facilities shall be assessed six demerits;

violation of Rule .2819 of this Section related to diapering surfaces cleaned and disinfected after each use shall be assessed six demerits;

violation of Rule .2819 of this Section related to cleaning and disinfecting solutions provided and test kit available when required shall be assessed two demerits;

violation of Rules .2818, .2819 or .2820 of this Section related to diaper changing facilities free of storage and in good repair; cleaning and disinfecing solutions labeled; approved diapering methods used; and diaper changing and handwash signs posted shall be assessed four demerits;

violation of Rule .2820 of this Section related to medications properly stored shall be assessed six demerits;

violation of Rule .2820 of this Section related to non-hazardous products properly stored shall be assessed three demerits;

violation of Rule .2820 of this Section related to facilities provided for proper storage, used and kept clean shall be assessed two demerits;

violation of Rules .2821 or .2836 of this Section related to individual linen provided; adequate beds, cots, or mats provided, in good repair, properly stored, labeled, and spaced during use shall be assessed three demerits;

violation of Rule .2821 of this Section related to linen, bedding, wash cloths, bibs and burping cloths laundered and in good repair shall be assessed three demerits;

violation of Rules .2822 or .2836 of this Section related to toys, equipment and furniture clean and in good repair; water play centers cleaned, sanitized and maintained shall be assessed four demerits;

violation of Rules .2822 or .2836 of this Section related to mouth-contact surfaces cleaned and sanitized in rooms where children who are not toilet trained are cared for shall be assessed four demerits;

violation of Rules .2808 or .2823 of this Section related to personnel using approved hygienic practices, clean clothes and hair restraints where required, and evidence of tobacco use in the outdoor learning environment or in any part of a child care center without a separate ventilation system shall be assessed two demerits;

violation of Rules .2824, .2825 or .2836 of this Section related to floors, walls and ceilings easily cleanable, in good repair, clean, carpets vacuumed and extraction cleaned as required shall be assessed four demerits;

violation of Rule .2826 of this Section related to the lighting and thermal environment and room temperature between 65°F and 85°F shall be assessed three demerits;

violation of Rule .2826 of this Section related to equipment clean and in good repair and maintained as required shall be assessed two demerits;

violation of Rule .2827 of this Section related to persons with a communicable disease or a condition excluded in accordance with 15A NCAC 19A .0200 shall be assessed six demerits;

violation of Rules .2827 or .2836 of this Section related to persons caring for sick or mildly ill children excluded from situations in which transmission of communicable disease can be expected to occur shall be assessed four demerits;

violation of Rule .2827 of this Section related to the designated area for sick children maintained as required shall be assessed two demerits;

violation of Rule .2829 of this Section related to wastewater disposed of by approved methods in accordance with 15A NCAC 18A .1900 shall be assessed six demerits;

violation of Rules .2830 or .2836 of this Section related to solid waste properly handled; containers and cleaning equipment kept clean, and can cleaning facilities adequate shall be assessed two demerits;

violation of Rule .2831 of this Section related to approved pesticides properly used and new Chromated Copper Arsenate (CCA) pressure-treated wood shall be assessed six demerits;

violation of Rule .2831 of this Section related to Chromated Copper Arsenate pressure-treated wood sealed and soil covered or inaccessible as required shall be assessed two demerits;
violation of Rule .2831 of this Section related to animals in food preparation areas and no unrestrained or prohibited animals except as noted shall be assessed three demerits;

violation of Rules .2831 or .2832 of this Section related to effective control of rodents, insects and other vermin; premises free of vermin harborage and breeding areas shall be assessed three demerits;

violation of Rule .2832 of this Section related to premises clean and drained, equipment in good repair, sandboxes properly constructed and clean, and adherence to air quality forecast outdoor activity restrictions shall be assessed two demerits; and

violation of Rule .2833 of this Section related to swimming and wading pools designed, constructed, operated and maintained in accordance with 15A NCAC 18A .2500 shall be assessed six demerits.

The Department shall indicate on the Child Care Inspection Sanitation Form whether the center is superior, approved, provisional, or disapproved. A Sanitation Classification placard shall be posted in the center in a conspicuous place designated by the Department. The classification of a child care center is based on the center's compliance with the Rules of this Section. A summary classification of disapproved shall be issued and forwarded to the Division of Child Development when the right-of-entry to inspect is denied or when an inspection is discontinued at the request of the operator or administrator unless the decision to discontinue the inspection is mutual. A summary classification of disapproved shall also be issued and forwarded to the Division of Child Development when a water sample is confirmed positive for fecal coliform, total coliform or other chemical constituents in accordance with 15A NCAC 18A .1725.

The child care center's compliance is indicated by the number of demerits on the Child Care Sanitation Inspection Form.

(1) When an inspection is requested and conducted for the purpose of issuing a license to a new operator, a Child Care Sanitation Inspection Form shall be forwarded to the Division of Child Development only when the child care center can be granted a superior classification. If the center is not yet open and children are not in attendance when the initial inspection is conducted, a Child Care Sanitation Inspection Form shall be completed and forwarded to the Division of Child Development, but the Sanitation Classification placard shall not be posted. Another sanitation inspection shall be conducted when children are in attendance within 30 days of opening and the Sanitation Classification placard shall then be posted. When a temporary license is issued as a result of a change of ownership in a child care center that continues to operate, the operator shall request an inspection from the Department within fourteen days. A sanitation classification placard shall be posted after each inspection of a center operating under a temporary license.

(2) 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.

(3) 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.

(4) 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.

(5) A child care center shall be classified as disapproved if the demerit score is more than 45, or if conditions which resulted in a provisional classification have not been corrected in the time period specified by the Department.

(6) If the child care center receives a disapproved classification, the Department shall immediately notify the Division of Child Development by faxing a copy of the inspection form.

(7) The Sanitation Classification placard shall not be removed except by or upon the instruction of the Department.

If the Department determines that conditions found at the child care center at the time of any inspection or visit are dangerous to the health of the children, the Department shall immediately notify the Division of Child Development by verbal contact. The original inspection report or other documentation of the dangerous conditions shall be sent to the Division of Child Development within two working days following the inspection.

The Department may conduct an inspection of any child care center as frequently as necessary in order to ensure compliance with the Rules in this Section.

The Department shall use the Child Care Sanitation Inspection Form to document demerits for violations of the rules. A written explanation and corrective action for each violation shall be documented on a comment addendum form.

In filling out the inspection form, 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.
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 Section 110-94 and Chapter 150B of the North Carolina General Statutes.

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.

15A NCAC 18A .2836  MILDLY ILL CHILDREN
Child care centers that are licensed to offer care to children pursuant to 10A NCAC 09 .2400, shall comply with all rules in this Section except as follows:

(1) Prior to starting a program for mildly ill children, the child care operator shall request an inspection from the local health department.
(2) Drinking fountains shall not be used.
(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 for use by an individual child. If soft toys are provided by the center, they shall be sanitized between uses by different children.
(12) Caregivers for mildly ill children shall not prepare food in the kitchen or serve food to well children.
(13) Family style 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 ill children.
(16) All waste shall be disposed of in a plastic-lined, covered receptacle.

History Note:  Authority G.S. 110-91;
Eff. July 1, 1991;

SECTION .2900 - RESTAURANT AND LODGING FEE COLLECTION AND INVENTORY PROGRAM

15A NCAC 18A .2901  DISBURSEMENT OF FUNDS
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;
(2) the remaining balance of funds shall be distributed in accordance with the following formula:
   (a) [the remaining balance of funds after distribution in Paragraph (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 percentage of compliance with mandatory inspection requirements for food and lodging establishments in G.S. 130A-249 and 15A NCAC 25.0213 for the previous fiscal year, not to exceed 100 percent) equals the allocation to the county; and
distribution of remaining funds to counties with 100 percent compliance with mandatory inspection requirements for food and lodging establishments in G.S. 130A-249 and 15A NCAC 25.0213 during the previous fiscal year shall be made in accordance with the following:

[total amount of remaining funds after distribution in Paragraph (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 in G.S. 130A-249 and 15A NCAC 25.0213 during the previous fiscal year) equals the additional allocation to the county.

History Note: Authority G.S. 130A-9; 130A-248; 130A-249; Eff. May 1, 1991.

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.
"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;  

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: 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.


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.


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;

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;
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.

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:
"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.

"Department" means the Department of Environment and Natural Resources. The term also means the authorized agent of the department.

"Sharps" means any objects that can penetrate the skin including, but not limited to, needles, razor blades, scalpels, and broken capillary tubes.

"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.

"Tattooing" means tattooing as defined in G.S. 130A-283.

"Tattoo Artist" means any person who engages in tattooing.

"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.

"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;

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;

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;

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;

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 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; 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 .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.
"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. "Single-Use Articles" means bulk food containers and utensils intended by the 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.


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.


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.


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-203;
Eff. August 1, 2002;

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;

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 ±3°F, (± 1.5°C) located to measure the air temperature in the warmest part of the refrigerator and located to be easily readable. Recording thermometers, accurate to ±3°F (± 1.5°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 ± 3°F (± 1.5°C), located to measure the air temperature in the coolest part of the unit and located to be easily readable. Recording thermometers, accurate to ±3°F (± 1.5°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;

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 ±2°F (±1°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;

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;

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.


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
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.

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.

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.

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:

- Each time there is a change from raw to ready-to-eat foods;
- Each time there is a change in processing between types of raw animal products such as beef, fish, lamb, pork, and poultry;
- After any contamination may have occurred;
- Whenever necessitated by food temperature, room temperature, type of food, and food particle accumulation; and
- 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:

- Sinks shall be cleaned and sanitized prior to use;
- Equipment and utensils shall be thoroughly washed in the first compartment with a hot detergent solution that is changed when visibly soiled;
Equipment and utensils shall be rinsed free of detergent and abrasives with clean water in the second compartment; and

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.

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.

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 ±3°F (± 1.5°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.

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.

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 ±3°F (± 1.5°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.


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.


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.


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, purulent 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.


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;
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;
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;

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;

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;

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),(b)(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.
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.

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.

Violation of Rule .3317(c) of this Section regarding location, cleaning and disinfection of potty chairs, bedpans and urinals shall be assessed four demerits.

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.

Violations of Rules .3319(a),(b), or (d) of this Section regarding clothing changing facilities shall be assessed four demerits.

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.

Violation of Rules .3319(e),(f),(g),(h),(i), or (j) of this Section regarding clothing changing methods shall be assessed five demerits.

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.

Violation of Rule .3317(a) of this Section regarding storage of medications and other hazardous products shall be assessed six demerits.

Violation of Rule .3320 of this Section regarding provision and cleaning of storage facilities shall be assessed three demerits.

Violation of Rule .3321(a) of this Section regarding cleaning, repair and storage of beds, chairs, cots and mats shall be assessed five demerits.

Violation of Rule .3321(b) of this Section regarding provision of mattress covers and linen shall be assessed five demerits.

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.

Violation of Rule .3322 of this Section regarding furniture, equipment and activity supplies shall be assessed four demerits.

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.

Violation of Rule .3323(c) of this Section regarding tobacco use shall be assessed five demerits.

Violation of Rule .3323(d) of this Section regarding exclusion of persons with communicable diseases or conditions shall be assessed six demerits.

Violations of Rule .3323(d) of this Section regarding bandaging wounds or lesions shall be assessed six demerits.

Violation of Rules .3324 or .3325 of this Section regarding floors, walls and ceilings shall be assessed six demerits.

Violation of Rule .3326 of this Section regarding maintenance of lighting and thermal environment shall be assessed four demerits.

Violation of Rule .3326 of this Section regarding cleaning and repair of lighting, heating, ventilation and cooling equipment shall be assessed two demerits.

Violation of Rule .3327 of this Section related to providing a designated area for sick participants shall be assessed five demerits.

Violation of Rule .3327 of this Section related to treatment rooms for adult day health facilities shall be assessed five demerits.

Violation of Rules .3308(c); .3319(i), or (j); or .3328 of this Section related to handwashing shall be assessed five demerits.

Violation of Rule .3329 of this Section regarding wastewater disposal shall be assessed six demerits.

Violation of Rule .3330 of this Section regarding solid waste handling, storage and disposal shall be assessed two demerits.
Violation of Rule .3330(c) of this Section regarding facilities for cleaning solid waste containers shall be assessed two demerits.

Violation of Rules .3331(c), or (d) of this Section regarding use of pesticides shall be assessed six demerits.

Violation of Rule .3331(b), or (c) of this Section regarding control of rodents, insects and other vermin shall be assessed four demerits.

Violation of Rule .3331(a) of this Section regarding presence of animals shall be assessed four demerits.

Violation of Rules .3331(b), or .3332 of this Section regarding keeping premises clean, drained, and free of hazards, vermin harborage or breeding areas shall be assessed four demerits.

Violation of Rule .3333 of this Section regarding swimming pools, wading pools and spas shall be assessed six demerits.

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 coccioid-shaped bacteria that is found in the intestinal tracts of warm-blooded animals that include Enterococcus faecalis, Enterococcus faecium, Enterococcus avium, and Enterococcus gallinarium.
(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;
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.
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.

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.


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;

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;

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;

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.
"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.

"Equipment" shall mean refrigerators, insulated coolers, buckets, cooking appliances, serving utensils, or any other devices used to serve, hold or prepare food or drink.

"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.

"Good Repair" means capable of being cleaned, sanitized, and used for the intended purpose.

"Local Health Director" means the administrative head of a local health department or his authorized representative.

"Off-site" includes packouts, cookouts, or any activity where food is prepared outside the base camp.

"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.

"Permit to Operate" means a permit issued by the Department upon review and approval of the operating primitive experience camp plan of operation.

"Person" means an individual, firm, association, organization, partnership, business trust, corporation, or company.

"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.

"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.

"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.

"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.

"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.

"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.

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.

"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.

"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 harborage.
      (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.
The categories of food served.

Modification or maintenance of water supplies, water use fixtures and sanitary sewage systems.

Use of facilities for more than one purpose.

Continuation of contractual arrangements upon which basis the permit was issued.

Submission and approval of plans for renovation.

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;
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.
   - 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.
   - 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.
   - 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.
   - Liquid eggs, uncooked frozen dry eggs and egg products shall be cooked before consumption. This Paragraph does not apply to pasteurized products.
   - A food thermometer accurate to +/− 2 degrees F (+/− 1 degree C) shall be available to check food temperatures.

(2) Off-Site Drinking Water
   - 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.
   - 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
Boiling: Water shall be brought to a rolling boil for a minimum of 5 minutes.

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.

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.

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 corrodirable, 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 corrodirable, 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:**


**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.
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;  

**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;  

**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;  

**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;  

**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;  
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.

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.

(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.

**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.

**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.

**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.
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).
"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.

"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.

"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.

"Sanitize" means the approved bactericidal treatment by a process which meets the temperature and chemical concentration levels in Rule .3629 of this Section.

"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.

"Shellstock" means any shellfish which remains in their shells. Shellfish which are shucked or on the half-shell shall not be considered shellstock.

"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.

"Utensils" means any kitchenware, tableware, glassware, cutlery, containers and similar items with which food or drink comes in contact during storage, preparation or serving.


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.


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:
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.

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.

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.

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.

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;
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;

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.
Violation of Rule .3610 of this Section regarding wastewater disposal shall be assessed a value of four points.

Violation of Rule .3611 of this Section regarding solid waste storage and cleaning facilities shall be assessed a value of two points.

Violation of Rule .3612 of this Section regarding swimming pools shall be assessed a value of one point.

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.

Violation of Rule .3613(3) of this Section regarding lighting and ventilation adequacy and repair shall be assessed a value of one point.

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.

Violation of Rule .3614(b) of this Section regarding effective vermin exclusion shall be assessed a value of two points.

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.

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.

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.

Violation of Rule .3616 of this Section regarding approval and cleanliness of drinking water facilities shall be assessed a value of two points.

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.

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.

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.

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.

Violation of Rule .3618(b) of this Section regarding catering of camp food service shall be assessed a value of two points.

Violation of Rule .3619 of this Section regarding field sanitation standards and procedures shall be assessed a value of three points.

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.

Violation of Rule .3620(b) or (e) of this Section regarding employee handwashing shall be assessed a value of four points.

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.

Violation of Rule .3621 of this Section regarding food source, wholesomeness, handling, service, and transportation shall be assessed a value of four points.

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.

Violation of Rule .3622(g) of this Section regarding storage of dry foods shall be assessed a value of one point.

Violation of Rule .3623 of this Section regarding milk and milk products shall be assessed a value of two points.

Violation of Rule .3624 of this Section regarding the source, storage, and handling of ice shall be assessed a value of two points.

Violation of Rule .3625 of this Section regarding shellfish and crustacea meat shall be assessed a value of two points.

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.
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.

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.

Violation of Rule 3626(n) of this Section regarding food thermometers shall be assessed a value of two points.

Violation of Rule .3627 of this Section regarding re-service of foods shall be assessed a value of two points.

Violation of Rule .3628 of this Section regarding equipment and utensil construction, repair and cleanliness shall be assessed a value of three points.

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.

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.

Violation of Rule 3629(m) regarding the hot water heating facilities for food service needs shall be assessed a value of three points.

Violation of Rule .3630 in this Section regarding storage and handling of utensils and equipment shall be assessed a value of two points.

Violation of Rule .3631 of this Section regarding food service area storage spaces shall be assessed a value of one point.

Violation of Rule .3632 of this Section regarding food service area lighting shall be assessed a value of one point.

Violation of Rule .3633 of this Section regarding food service area ventilation shall be assessed a value of one point.

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.

Violation of Rule .3635 of this Section regarding the food service area toilet facilities shall be assessed a value of one point.

Violation of Rule .3636 of this Section regarding food service area floor construction, cleanliness and repair shall be assessed a value of one point.

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.

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.

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.

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).

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;

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;

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;

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;

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.


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.


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.


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;
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;  

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;  

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;  

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;  

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:
   - 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.

   - Potentially hazardous foods shall be thawed as follows:
     - in cold holding units at a temperature not to exceed 45 degrees F (7 degrees C);
     - 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
     - as a part of the cooking process.

   - 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:
     - poultry shall be cooked to at least 165 degrees F (74 degrees C) with no interruption of the cooking process;
     - 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);
     - ground meat food products shall be cooked to an internal temperature of at least 155 degrees F (68 degrees C);
     - roast beef shall be cooked to an internal temperature of at least 130 degrees F (54 degrees C); and
     - beef steak shall be cooked to a temperature of 130 degrees F (54 degrees C) unless otherwise ordered by the immediate consumer.

   - Liquid eggs, uncooked frozen dry eggs and egg products shall be cooked before consumption. This Sub-item does not apply to pasteurized products.

   - 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:
   - 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.

   - 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:
   - Water shall be brought to a rolling boil for a minimum of one minute; or
   - 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:
     - 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 corroding, 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 corroding, 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.


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.
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.


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.
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.

Foods shall not be stored under exposed sewer lines.

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;

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;

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;

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;

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.


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.


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 corrodiible, 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 corrodiible, 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.


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.


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.


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.


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.


15A NCAC 18A .3633 FOOD SERVICE AREA VENTILATION
In Resident Camps, ventilation equipment shall be kept clean and in good repair.


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.


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.

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.

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.

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) Any 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 harborage. 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.


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;

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-sporing, 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;

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.

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.

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.

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;