WORKING COPY OF 15A NCAC 18E INCLUDING CHANGES FROM S.L. 2023-63 (S582), S.L. 2023-77 (H627), S.L. 2023-90 (H628), AND S.L. 2024-49 (S166)

Version 2.1 – September 30, 2024

This working copy of 18E includes modifications to the rules from Session Laws 2023-63, 2023-77, 2023-90, and 2024-49. This working copy has been created to help provide a consistent interpretation of the Session Laws and how they merge into 18E prior to the formal incorporation of the Session Laws into 18E.

The changes in Session Laws 2023-63, Section 16, and 2023-77 become effective with 18E on January 1, 2024.

The changes in Session Law 2023-90 became effective July 10, 2023, and overrides the language in Rule .0207. We have incorporated these changes into Rule .0207 to try and help prevent confusion.

The changes in Session Law 2024-49 became effective September 11, 2024.

The changes made to 18E from Session Laws 2023-63, Section 16, 2023-77, and 2024-49 will be taken through the formal rule making process first. The On-Site Water Protection Branch (Branch) will ask the Commission for Public Health to start the rule making process for these changes. These changes will go out for public comment, but the Session Laws direct the Branch to keep the language substantively identical to the language in the Session Laws, so very few if any changes can be made to the proposed language. After the public comment period, the proposed rules changes will come to the Commission for Public Health for adoption. After being adopted by the Commission for Public Health, the rules will go the Legislature for review before becoming effective in the North Carolina Administrative Code. These rule changes do not have to be approved by the Rule Review Commission. The changes that will be taken through the formal rule making process first are the following:

Changes highlighted are from Session Law 2023-77.

Changes highlighted and in italics are from Session Law 2023-63.

Changes highlighted, italicized, bold, and in a different font are from Session Law 2024-49.

The Branch will at a later meeting ask the Commission for Public Health to start the rule making process for the changes in Rule .0207 from Session Law 2023-90 and other changes in the rules that have come to our attention that need to be corrected immediately. These rules will go through a public comment period, be adopted by the Commission for Public Health, and go to the Rule Review Commission. There is no requirement in Session Law 2023-90 that the language has to be substantively identical, so we can make changes to the language based on public comment. Some of the changes that will be taken through the formal rule making process second are the following:

Changes highlighted and in bold are from Session Law 2023-90.

15A NCAC 18E .0302 LOCAL HEALTH DEPARTMENT AND DEPARTMENT[1]

(a) The permitting of a wastewater system shall be the responsibility of agents authorized by the Department in accordance with G.S. 130A, Article 4 and 15A NCAC 01O .0100, and registered with the North Carolina State Board of Environmental Health Specialist Examiners, as required in G.S. 90A, Article 4, unless the permit is issued in accordance with G.S. 130A-336.1 or G.S. 130A-336.2 and Rule .0207 of this Subchapter.

(b) When the wastewater system crosses county lines or the facility is in one county and the wastewater system is in another county, the LHD in the county that assesses property taxes on the facility shall implement the requirements of this Subchapter.

(c) ***When a LHD issues a NOV to an owner of a wastewater system pursuant to this Rule, the LHD may pursue legal remedies no sooner than 30 days after the date of the NOV, unless the NOV specifies a shorter time frame.*** The LHD shall issue an NOV to the owner in the following situations:

(1) the wastewater system is malfunctioning in accordance with Rule .1303(a)(2) of this Subchapter;

(2) the wastewater system creates or has created a public health hazard or nuisance by effluent surfacing, or effluent discharging into groundwater or surface waters;

(3) the wastewater system is partially or totally destroyed, such as components that are crushed, broken, damaged, or otherwise rendered unusable or ineffective so that the component will not function as designed;

(4) the owner does not meet the ownership and control requirements of Rule .0301(b) of this Section;

(5) the wastewater system was installed without a permit issued in accordance with Section .0200 of this Subchapter; ~~or~~

(6) when an individual advanced pretreatment system at a single site is out of compliance in accordance with Rule .1302(f) of this Subchapter; or

~~(6)~~***(7)*** the facility was expanded without a permit issued in accordance with Section .0200 of this Subchapter.

(d) The authorized agent shall issue a written notice of non-compliance to the owner when the wastewater system is non-compliant with G.S. 130A, Article 11, the Rules of this Subchapter, ~~or the performance standards~~ or conditions in the OP or ATO.

(e) The LHD shall submit a monthly activity report to the Department every month on a form provided by the Department. The monthly activity report collects information on the number and types of permits issued by the LHD.

~~(e)~~***(f)*** The Department shall review and approve the wastewater system, including design, layout, plans, and specifications for all wastewater systems that serve a facility with a cumulative DDF greater than 3,000 gpd, as determined in Section .0400 of this Subchapter. The Department shall also review and approve plans and specifications for the following:

(1) IPWW systems required by this Section to be designed by a PE unless the wastewater has been determined to not be IPWW in accordance with Rule .0303(a)(17) of this Section;

(2) advanced pretreatment or drip dispersal systems not previously approved by the Department; and

(3) any other system so specified by the authorized agent.

~~(f)~~***(g)*** Department review shall not be required when the cumulative DDF for the facility is greater than 3,000 gpd as determined in Section .0400 of this Subchapter and:

(1) the wastewater system is made up of an individual wastewater system that serves an individual dwelling unit or several individual wastewater systems, each serving an individual dwelling unit; or

(2) the wastewater system meets the following criteria:

(A) the individual wastewater system(s) serves individual design units with a DDF less than or equal to 1,500 gpd;

(B) the initial and repair dispersal fields for each individual wastewater system(s) is, at a minimum, 20 feet from any other individual wastewater system;

(C) the total DDF for all dispersal fields is less than or equal to 1,500 gpd per acre based on the portion of the land containing the dispersal fields; and

(D) the wastewater is not HSE as identified in Section .0400 of this Subchapter.

~~(g)~~***(h)*** Department review shall not be required when a PE calculates the proposed DDF to be less than or equal to 3,000 gpd based on engineering design utilizing low-flow fixtures and low-flow technologies in accordance with Rule .0403(e) of this Subchapter. Pursuant to S.L. 2013-413, s.34, as revised by S.L. 2014-120, s.53, neither the Department nor any LHD shall be liable for a system approved or permitted in accordance with this Paragraph.

~~(h)~~***(i)*** For systems that require Department review and approval, an IP shall not be issued by the LHD until the site plan or plat and system layout, including details for any proposed site modifications, are approved by the Department. A CA shall not be issued by the LHD until plans and specifications, submitted in accordance with Rule .0304 of this Section, are approved by the Department in accordance with these Rules and engineering practices.

~~(i)~~***(j)*** The Department shall provide technical assistance to the LHD as needed for interpretation of this Subchapter, in accordance with the recognized principles and practices of soil science, geology, engineering, and public health.

(k) The LHD shall adhere to G.S. 130A, Article 11, the Rules of this Subchapter, and all written guidance and interpretations from the Department.

History Note: *Authority G.S.* ~~*130A-335.*~~***130A-335; S.L. 2024-49, s.4.18.***

[1] Changed by S.L. 2024-49, Section 4.18.

15A NCAC 18E .0303 LICENSED OR CERTIFIED PROFESSIONALS[2]

(a) Any wastewater system that meets one or more of the following conditions shall be designed by a PE if required in G.S. 89C:

(1) the system has a DDF greater than 3,000 gpd, as determined in Section .0400 of this Subchapter, except where the system is limited to an individual wastewater system serving an individual dwelling unit or multiple individual wastewater systems, each serving an individual dwelling unit;

(2) the system requires advanced pretreatment or drip dispersal and is not a system approved under Sections .1500, .1600, or .1700 of this Subchapter;

(3) pressure dispersal systems that require pumping more than 500 feet horizontally or more than 50 feet of net elevation head;

(4) pressure dosed gravity distribution systems that require pumping more than 1,000 feet horizontally or more than 100 feet of net elevation head;

(5) dosing systems or force mains that have one or more intermediate high points greater than five feet;

(6) the system requires pumping downhill to a pressure dosed gravity or pressure dispersal field where the volume of the supply line that could drain to the dispersal field between doses exceeds 25 percent of the required dose volume;

~~*(7) pressure dispersal systems and pressure dosed gravity systems with a DDF greater than 600 gpd serving a single design unit;*~~

~~*(8)*~~*(7)* pressure dispersal systems where there is more than 15 percent variation in line length. The 15 percent variation shall be measured by comparing the longest line length to the shortest line length in any dispersal field;

~~*(9) two or more septic tanks or advanced pretreatment units, each serving a separate design unit, and served by a common dosing tank;*~~

~~*(10)*~~*(8)* a STEP system with a pressure sewer or other pressure sewer system receiving effluent from two or more pump tanks;

~~(11) an adjusted DDF is proposed based on the use of low flow fixtures or low flow technologies in accordance with Rule .0403(e) of this Subchapter;~~

~~*(12)*~~*(9)* the system requires use of sewage pumps prior to the septic tank or other pretreatment system, except for systems governed by the North Carolina Plumbing Code or which consist of grinder pumps and associated pump basins that are approved and listed in accordance with standards adopted by NSF International;

~~*(13)*~~*(10)* an individual system is required to use more than one pump or siphon in a single pump tank. Examples include dual pumps as set forth in Rule .1101(b) of this Subchapter;

~~*(14)*~~*(11)* the system includes a collection sewer prior to the septic tank or other pretreatment system serving two or more design units, except for systems governed by the North Carolina Plumbing Code;

~~*(15)*~~*(12)* the wastewater system includes structures that have not been pre-engineered;

~~*(16)*~~*(13)* the proposed pump model is not listed by a third-party electrical testing and listing agency;

~~*(17)*~~*(14)* the system is designed for the collection, treatment, and dispersal of IPWW, except under the following circumstances:

(A) the Department has determined that the wastewater generated by the proposed facility has a pollutant strength that is lower than or equal to DSE and does not require specialized treatment or management. This determination shall be made based on a review of the wastewater generating process, wastewater characteristic data, and material safety data sheets, as compared to DSE; or

(B) the Department has approved a treatment system or process and management method proposed by the facility owner that generates effluent with a pollutant strength which is lower than or equal to DSE. This approval shall be based on a review of documentation provided in conjunction with prior project specific reviews or a PIA approval. This approval shall be based on data from other facilities, management practices, and other information provided by the owner;

~~*(18)*~~*(15)* the wastewater system is designed for RCW;

~~*(19)*~~*(16)* any wastewater system designed by a licensed professional that has been determined to be within the practice of engineering in accordance with G.S. 89C-3(6) by the North Carolina Board of Examiners for Engineers and Surveyors;

~~*(20)*~~*(17)* any wastewater system approved in accordance with Sections .1500, .1600, and .1700 of this Subchapter that requires in the RWTS or PIA Approval that the system be designed by a PE; and

~~*(21)*~~*(18)* any system or system component where the Rules of this Subchapter provide for an engineer to propose alternative materials, capacity determination, or performance ~~requirements; and~~ requirements.

~~(22) any other system so specified by the LHD, based on wastewater system complexity and LHD's experience with the proposed system type.~~

(b) A PE, in accordance with G.S. 89C, may propose an alternative design for a facility projected to generate HSE in accordance with Rule .0401(h) of this Subchapter. The alternative design shall include supporting documentation showing that the proposed system design will meet DSE in Table III of Rule .0402(a) of this Subchapter. The alternative design shall be reviewed and approved by the Department unless the system has been approved in accordance with Section .1700 of this Subchapter.

[2] Changed by S.L. 2023-77, Section 8, and 2024-49, Section 4.19.

(c) Prior to the issuance of an IP or CA, the LSS or LG shall sign and affix their seal to the consent required by this Rule, which shall be attached to the plans and specifications submitted to the LHD.

~~(c)~~(d) Plans and specifications for the use of a groundwater lowering system to comply with the vertical separation to a SWC shall be prepared by a licensed professional if required in G.S. 89C, 89E, or 89F. Prior to the issuance of an IP or CA, the plans and specifications shall be reviewed and approved by the authorized agent if the plans and specifications meet the requirements of Rules .0504 and .0910 of this Subchapter and accepted design practices.

~~(d)~~(e) An installer shall construct, install, or repair wastewater systems as required by G.S. 90A, Article 5. The installer shall be responsible for the following:

(1) certification at the required level according to the system design specifications as required by G.S. 90A, Article 5;
(2) notification to the LHD upon completion of the system installation and each stage requiring inspection as conditioned on a CA;
(3) participation in a preconstruction conference when specified in the CA or by the RWTS or PIA Approval;
(4) participation during the inspection of the wastewater system by the authorized agent;
(5) participation during the post-construction conference and all other requirements when the wastewater system is permitted in accordance with Rule .0207 of this Subchapter and G.S. 130A-336.1 or G.S. 130A-336.2; and
(6) final cover of the system after LHD approval. The wastewater system shall be in the same condition when covered as when approved.

~~(e)~~(f) The Management Entity, or its employees, shall hold a valid and current certificate or certifications as required for the system from the Water Pollution Control Systems Operators Certification Commission. Nothing in this Subchapter shall preclude any requirements for system Management Entities in accordance with G.S. 90A, Article 3.

~~(f)~~(g) Nothing in this Rule shall be construed as allowing any licensed professional to provide services for which he or she has neither the educational background, expertise, or license to perform, or is beyond his or her scope of work and the applicable statutes for their respective professions.

~~(g)~~(h) The PE, AOWE, or authorized designer shall provide a written statement to the owner specifying that construction is complete and in accordance with approved plans, specifications, and modifications. This statement shall be based on periodic observations of construction and a final inspection for design compliance. Record drawings shall be provided to the owner and LHD when any change has been made to the wastewater system installation from the approved plans.

(i) A LHD may not require any system other than those identified in Paragraph (a) of this Rule to be designed by a PE.

History Note: *Authority G.S. 89C; 89E; 89F; 90A; ~~130A-335.~~ 130A-335; S.L. 2023-77, s.8;* ***S.L. 2024-49, s.4.19.***

15A NCAC 18E .0304 SUBMITTAL REQUIREMENTS FOR PLANS, SPECIFICATIONS, AND REPORTS PREPARED BY LICENSED PROFESSIONALS FOR SYSTEMS OVER 3,000 GALLONS/DAY

All wastewater systems with a DDF greater than 3,000 gpd shall be designed by a PE, with site evaluation by an LSS, and LG, as applicable, in accordance with G.S. 89C, 89E, and 89F. The wastewater system plans, specifications, and reports shall contain the information necessary for construction of the wastewater system. Plans, specifications, and reports shall include the following information:

(1) Applicant information and DDF determination:
  (a) the seal, signature, and the date on all plans, specifications, and reports prepared by the PE, LSS, and any other licensed or registered professionals who contributed to the plans, specifications, or reports;
  (b) name, address, and phone number for the owner and all licensed professionals who have prepared plans, specifications, and reports for the wastewater system; and
  (c) DDF and projected wastewater strength based on the application submitted to the LHD that includes calculations and the basis for the proposed DDF and wastewater strength.
(2) Special site evaluation in accordance with Rule .0510 of this Subchapter, including soil and site evaluation, hydraulic and hydrologic assessment reports, and site plans:
  (a) soil and site evaluation report, written by the LSS, on the field evaluation of the soil conditions and site features within the proposed initial and repair dispersal field areas including the following:
    (i) vertical soil profile descriptions for pits and soil borings in accordance with Section .0500 of this Subchapter;
    (ii) recommended LTAR, system type, trench width, length, depth on downslope side of trench for proposed initial and repair dispersal field areas with justification;
    (iii) soil and site-based criteria for dispersal field design and site modifications;
    (iv) for sites originally classified unsuitable, written documentation indicating that the proposed system can be expected to function in accordance with Rule .0509(c) of this Subchapter; and
    (v) recommended effluent standard for proposed initial and repair dispersal field areas with justification; and
  (b) hydraulic assessment reports on site-specific field information that shall include:
    (i) in-situ Ksat measurements at the proposed infiltrative surface elevation where possible and at each distinct horizon within and beneath the treatment zone to a depth of 48 inches below the ground surface or to a depth referenced in an associated hydraulic assessment, such as groundwater mounding analysis or lateral flow analysis;

(ii) logs from deep borings identifying restrictive layers, changes in texture and density, and aquifer boundaries;
(iii) groundwater mounding for level sites or lateral flow analysis for sloping sites in accordance with Rule .0510(e) of this Subchapter, as applicable; and
(iv) contaminant transport analysis showing projected compliance with groundwater standards at property lines or at the required setback from water supply sources within the property, as applicable;

(3) Site plan prepared by the PE based on a boundary survey prepared by a registered land surveyor with the following information:
(a) site topography, proposed site modifications, location of existing and proposed site features listed in Rule .0601 of this Subchapter, proposed facility location, location of proposed initial and repair dispersal field areas and types, and location of LSS soil pits, hand auger borings, deep borings, and in-situ Kats tests, as applicable;
(b) existing and proposed public wells or water supply sources on the property or within 500 feet of any proposed initial and repair dispersal field areas;
(c) existing and proposed private wells or water supply sources within 200 feet of existing or proposed system component locations;
(d) other existing and proposed wells, existing and proposed water lines including fire protection, irrigation, etc., within the property boundaries and within 10 feet of any projected system component;
(e) surface waters with water quality classification, jurisdictional wetlands, and existing and proposed stormwater management drainage features and groundwater drainage systems;
(f) topographic map with two-foot contour intervals or spot elevations when there is less than a two-foot elevation difference across the site identifying areas evaluated for initial and repair dispersal field areas, proposed location of trenches, and pits and soil borings labeled to facilitate field identification;
(g) location of tanks and advanced pretreatment components, including means of access for pumping and maintenance; and
(h) any site modifications and site and slope stabilization plans.

(4) System components design, installation, operation, and maintenance information:
(a) collection systems and sewers:
(i) plan and profile drawings, including location, pipe diameter, invert and ground surface elevations of manholes and cleanouts;
(ii) proximity to utilities and site features listed in Rule .0601 of this Subchapter;
(iii) drawings of service connections, manholes, cleanouts, valves and other appurtenances, aerial crossings, road crossings, water lines, stormwater management drainage features, streams, or ditches; and
(iv) installation and testing procedures and pass or fail criteria;
(b) tank information:
(i) plan and profile drawings of all tanks, including tank dimensions and all elevations;
(ii) access riser, manhole, chamber interconnection, effluent filter, and inlet and outlet details;
(iii) construction details for built-in-place tanks, including dimensions, reinforcement details and calculations, and construction methods;
(iv) identification number for Department approved tanks;
(v) installation criteria and water tightness testing procedures with pass or fail criteria; and
(vi) anti-buoyancy calculations and provisions;
(c) pump stations, including raw sewage lift stations and pump tanks:
(i) information required in Sub-item (4)(b) of this Rule;
(ii) specifications for pumps, discharge piping, pump removal system, and all related appurtenances;
(iii) dosing system total dynamic head calculations, pump specifications, pump curves and expected operating conditions, including dosing, flushing, etc.;
(iv) control panel, floats and settings, high-water alarm components, location, and operational description under normal and high-water conditions;
(v) emergency storage capacity calculations, timer control settings, and provisions for stand-by power; and
(vi) lighting, ventilation, if applicable, wash-down water supply with back siphon protection, and protective fencing;
(d) advanced pretreatment systems:
(i) information required in Sub-items (4)(b) and (c) of this Rule;
(ii) drawings and details showing all advanced pretreatment units and appurtenances such as pumps, valves, floats, etc., size and type of piping, disinfection unit, blowers if needed, location of control panels, height of control panels, etc; and

(iii) documentation from the manufacturer supporting the proposed design and use of the advanced pretreatment system to achieve specified effluent standards if not otherwise approved by the Department in accordance with Section .1700 of this Subchapter;

(e) dispersal field plans and specifications with design and construction details:

(i) final field layout, including ground elevations based on field measurements at a maximum of two-foot intervals or spot elevations when there is less than a two-foot elevation difference across the site;

(ii) trench plan and profile drawings, including cross sectional details, length, spacing, connection details, cleanouts, etc., and invert elevations for each lateral;

(iii) manifolds, supply lines, pipe sizes, cleanouts and interconnection details, and invert elevations;

(iv) flow distribution device design;

(v) artificial drainage system locations, elevations, discharge points, and design details, as applicable;

(vi) site preparation procedures;

(vii) construction phasing and wastewater system testing; and

(viii) final landscaping and compliance with erosion control requirements, such as site stabilization procedures and drainage;

(f) materials specification for all materials to be used, methods of construction, means for assuring the quality and integrity of the finished product; and

(g) operation and maintenance procedures for the Management Entity, inspection schedules, and maintenance specifications for mechanical components and dispersal field vegetative cover; and

(5) any other information determined to be applicable by the LHD or the Department, such as the impact of projected wastewater constituents on the trench and receiving soil.

History Note: *Authority G.S. 130A-335.*