18E Quick Reference Guide and Cross Reference Table

Cross Reference Table

Subchapter 18E – Wastewater Treatment and Dispersal Systems

Section .0100 – General

- .0101 Scope {.1934}
- .0102 Applicability {.1961}
- .0103 Incorporation by Reference {new}
- .0104 Abbreviations {new}
- .0105 Definitions {.1935}

Section .0200 - Permits {.1937}

- .0201 General {new}
- .0202 Application {.1937(a), (b), (c), (d), and (e)}
- .0203 Improvement Permit {.1937(f) and (m)}
- .0204 Construction Authorization {.1937(g) and (h)}
- .0205 Operation Permit {.1937(i) and (j)}
- .0206 Existing System Approvals for Reconnections and Property Additions {.1937(k) and new}
- .0207 Engineer Option Permit {.1971}

Section .0300 - Responsibilities {.1938}

- .0301 Owners {.1938(b), (h), and (j)}
- .0302 Local Health Department and State {.1938(a), (e), (f), and (g), .1964}
- .0303 Licensed or Certified Professionals {.1938(c) and (d)}
- .0304 Submittal Requirements for Plans, Specifications, and Reports Prepared by Licensed Professionals for Systems Over 3,000 Gallons/Day {.1938(c), .1946(4)}
- .0305 Submittal Requirements for Plans, Specifications, and Reports Prepared by Licensed Professionals for Systems Less Than or Equal to 3,000 Gallons/Day {new/current guidance document}

Section .0400 – Design Daily Flow and Effluent Characteristics {.1949}

- .0401 Design Daily Flow {.1949(a) and (b)}
- .0402 Septic Tank Effluent Characteristics {new}
- .0403 Adjustments to Design Daily Flow {.1949(c)}

Section .0500 – Soil and Site Evaluation

- .0501 Site Evaluation {.1939}
- .0502 Topography and Landscape Position {.1940, .1956(5)}
- .0503 Soil Morphology {.1941}
- .0504 Soil Wetness Conditions {.1942}
- .0505 Soil Depth {.1943}
- .0506 Saprolite {.1956(6)}
- .0507 Restrictive Horizons {.1944}
- .0508 Available Space {.1945}
- .0509 Site Suitability and Classification {.1947, .1948}

.0510 – Special Site Evaluations {.1970(p)}

Section .0600 – Location of Wastewater Systems {.1950}

.0601 – Location of Wastewater Systems {.1950}

.0602 – Applicability of Setbacks {.1951}

Section .0700 – Collection Sewers, Raw Sewage Lift Stations, and Pipe Materials

- .0701 Collection Sewers {.1955(o)}
- .0702 Raw Sewage Lift Stations {.1952(e)}
- .0703 Pipe Materials {.1955(e) and (f)}

Section .0800 – Tank Capacity, Leak Testing, and Installation Requirements

- .0801 Septic Tank Capacity Requirements {.1952(b)(1)}
- .0802 Pump Tank Capacity Requirements {.1952(c)}
- .0803 Grease Tank Capacity Requirements {.1955(k)}
- .0804 Siphon Tank Capacity Requirements {.1952(d)}
- .0805 Tank Leak Testing Requirements and Installation Requirements {new and .1955(a)}

Section .0900 – Subsurface Dispersal

- .0901 General Design and Installation Criteria for Subsurface Dispersal Systems {.1955(b), (c), (i), (j), (l),
- (m), and (p). .1956(6)}
- .0902 Conventional Wastewater Systems {.1955(a), (b),.1956(1)}
- .0903 Bed Systems {.1955 (d)}
- .0904 Large Diameter Pipe Systems {.1956(3)(a)(i)}
- .0905 Prefabricated Permeable Block Panel Systems {.1956(3)(a)(ii)}
- .0906 Sand Lined Trench Systems {.1956(7)}
- .0907 Low Pressure Pipe Systems {.1957(a)}
- .0908 Drip Dispersal Systems {new}
- .0909 Fill Systems {.1957(b)}
- .0910 Artificial Drainage Systems {.1956(2) and (4)}
- .0911 Privies {.1958(a), .1959, .1960}

Section .1000 - Non-Ground Absorption Wastewater Treatment Systems

- .1001 Alternative Toilets {.1958(c)}
- .1002 Reclaimed Water Systems {new and .1958(d)}

Section .1100 – System Dosing and Controls

- .1101 General Dosing System Requirements {.1952(a)}
- .1102 Pump Dosing {.1952(b)(2-5)(8-9)}
- .1103 Control Panels {.1952(b)(6-7)}
- .1104 Siphon Dosing {.1952(d)}
- .1105 Timed Dosing {new}
- .1106 Pressure Dosed Gravity Distribution Devices {new}

Section .1200 – Advanced Pretreatment Systems Standards, Siting, and Sizing Criteria {.1970} .1201 – Advanced Pretreatment System Standards {.1970(a)}

- .1202 Siting and Sizing Criteria for Advanced Pretreatment Systems with a Design Daily Flow Less Than or Equal to 1,500 Gallons/Day {.1970(d), (e), and (f)}
- .1203 Siting and Sizing Criteria for Advanced Pretreatment Systems with a Design Daily Flow Greater than 1,500 Gallons per day and less than or Equal to 3,000 Gallons per day {new}
- .1204 Advanced Pretreatment Drip Dispersal Systems {new}
- .1205 Advanced Pretreatment Sand Lined Trench Systems {.1956(7)}
- .1206 Advanced Pretreatment Bed Systems {.1970(i) and (j)}

Section .1300 – Operation and Maintenance {.1961 and .1970(m), (n), and (o)}

- .1301 Operation and Maintenance of Wastewater Systems {.1961(b), (f), (h), and (i)}
- .1302 Operation and Maintenance of Advanced Pretreatment Systems {.1970(m), (n), and (o)}
- .1303 Owner Responsibilities for Wastewater System Operation and Maintenance {.1961(a) and (e)}
- .1304 Management Entity Responsibilities for Wastewater System Operation and Maintenance {.1961(c), (f), (g), and (k), .1970(n)}
- .1305 Local Health Department Responsibilities for Wastewater System Operation and Maintenance {.1961(c), (d), and (j), .1970(n)}
- .1306 System Malfunction and Repair {.1958(b), .1961(l) and (m)}
- .1307 Wastewater System Abandonment {new}

Section .1400 – Approval of Tanks and Appurtenances

- .1401 Plans for Prefabricated Tanks {.1953}
- .1402 Tank Design and Construction {.1954}
- .1403 Tank Material Requirements {.1954 and new}
- .1404 Plans for Risers, Effluent Filters, and Pipe Penetration Boots {new}
- .1405 Risers, Effluent Filters, and Pipe Penetration Boots Approval Renewal {new}
- .1406 Modification, Suspension, and Revocation of Approvals {.1954}

Section .1500 – Approval and Use of Residential Wastewater Treatment Systems {.1957(c)}

- .1501 General
- .1502 Application {.1957(c)(1)}
- .1503 Design and Construction Standards {.1957(c)(3)}
- .1504 Effluent Sampling Requirements for Residential Wastewater Treatment Systems {.1970(n)}
- .1505 Residential Wastewater Treatment System Approval Renewal {new}

Section .1600 – Approval and Use of Pre-Engineered Package Drip Dispersal Systems {new}

- .1601 General {new/innovative drip approvals}
- .1602 Design and Construction Standards {new/innovative drip approvals}
- .1603 Drip Dispersal System Testing {new/innovative drip approvals}

Section .1700 – Approval and Permitting of Wastewater Systems, Technologies, Components, or Devices {.1969}

- .1701 General {.1969(a)}
- .1702 Application {.1969(b)}
- .1703 Department and Commission Application Review {.1969(c)}
- .1704 Approval Criteria for Provisional Systems {.1969(e)}
- .1705 Approval Criteria for Innovative Systems {.1969(g)}
- .1706 Approval Criteria for Accepted Systems {.1969(h)}

- .1707 Design and Installation Criteria for Provisional, Innovative, and Accepted Approvals {.1970(I)}
- .1708 Modification, Suspension, and Revocation of Approvals {.1969(j), (k), and (l)}
- .1709 Wastewater Sampling Requirements for Advanced Pretreatment Systems {.1970(n)}
- .1710 Compliance Criteria for Advanced Pretreatment Systems {.1970(o)}
- .1711 Provisional and Innovative Approval Renewal {new}
- .1712 Authorized Designers, Installers, and Management Entities {.1969(o), .1970(I) and new}
- .1713 Local Health Department Responsibilities {.1969(f), (i), (m), and (p)}

Reverse Cross Reference Table

15A NCAC 18A .1934 Scope .0101 Scope

15A NCAC 18A .1935 Definitions .0105 Definitions

15A NCAC 18A .1937 Permits .0202 Application .0203 Improvement Permit .0204 Construction Authorization .0205 Operation Permit .0206 Existing System Approvals for Reconnections and Property Additions

15A NCAC 18A .1938 Responsibilities

.0301 Owners .0302 Local Health Department and Department .0303 Licensed or Certified Professionals .0304 Submittal Requirements for Plans, Specifications, and Reports Prepared by Licensed Professionals for Systems Over 3,000 Gallons/Day

15A NCAC 18A .1939 Site Evaluation .0501 Site Evaluation

15A NCAC 18A .1940 Topography and Landscape Position .0502 Topography and Landscape Position

15A NCAC 18A .1941 Soil Characteristics (Morphology) .0503 Soil Morphology

15A NCAC 18A .1942 Soil Wetness Conditions .0504 Soil Wetness Condition

15A NCAC 18A .1943 Soil Depth .0505 Soil Depth

15A NCAC 18A .1944 Restrictive Horizons .0507 Restrictive Horizons

15A NCAC 18A .1945 Available Space .0508 Available Space

15A NCAC 18A .1946 Other Applicable Factors

 .0304 Submittal Requirements for Plans, Specifications, and Reports Prepared by Licensed
 Professionals for Systems Over 3,000 Gallons/Day

 15A NCAC 18A .1947 Determination of Overall Site Suitability

.0509 Site Suitability and Classification

- 15A NCAC 18A .1948 Site Classification .0509 Site Suitability and Classification
- 15A NCAC 18A .1949 Sewage Flow Rates for Design Units .0401 Design Daily Flow {.1949(a) and (b)} .0403 Adjustments to Design Daily Flow {.1949(c)}
- 15A NCAC 18A .1950 Location of Sanitary Sewage Systems .0601 Location of Wastewater Systems
- 15A NCAC 18A .1951 Applicability of Rules .0602 Applicability of Setbacks
- 15A NCAC 18A .1952 Septic Tank, Effluent Filter, Dosing Tank, and Lift Station Design .0801 Septic Tank Capacity Requirements
 .0802 Pump Tank Capacity Requirements
 .0804 Siphon Tank Capacity Requirements
 .1101 General Dosing System Requirements
 .1102 Pump Dosing
 .1103 Control Panels
 .1104 Siphon Dosing
- 15A NCAC 18A .1953 Prefabricated Septic Tanks and Pump Tanks .1401 Plans for Prefabricated Tanks

15A NCAC 18A .1954 Minimum Standards for Precast Reinforced Concrete Tanks .1402 Tank Design and Construction .1403 Tank Material Requirements .1406 Modification, Suspension, and Revocation of Approvals

15A NCAC 18A .1955 Design Installation Criteria for Conventional Sewage Systems .0701 Collection Sewers .0703 Pipe Materials .0803 Grease Tank Capacity Requirements .0805 Tank Leak Testing Requirements and Installation Requirements .0901 General Design and Installation Criteria for Subsurface Dispersal Systems .0902 Conventional Wastewater Systems .0903 Bed Systems

15A NCAC 18A .1956 Modifications to Septic Tank Systems

.0502 Topography and Landscape Position .0506 Saprolite .0901 General Design and Installation Criteria for Subsurface Dispersal Systems .0902 Conventional Wastewater Systems .0904 Large Diameter Pipe Systems .0905 Prefabricated Permeable Block Panel Systems .0906 Sand Lined Trench Systems .0910 Artificial Drainage Systems .1205 Advanced Pretreatment Sand Lined Trench Systems

15A NCAC 18A .1957 Criteria for Design of Alternative Sewage Systems .0907 Low Pressure Pipe Systems .0909 Fill Systems .1502 Application .1503 Design and Construction Standards

15A NCAC 18A .1958 Non-Ground Absorption Sewage Treatment Systems .0911 Privies .1001 Alternative Toilets .1002 Reclaimed Water Systems .1306 System Malfunction and Repair

- 15A NCAC 18A .1959 Privy Construction .0911 Privies
- 15A NCAC 18A .1960 Maintenance of Privies .0911 Privies

15A NCAC 18A .1961 Maintenance of Sewage Systems

- .1301 Operation and Maintenance of Wastewater Systems
- .1303 Owner Responsibilities for Wastewater System Operation and Maintenance
- .1304 Management Entity Responsibilities for Wastewater System Operation and Maintenance

.1305 Local Health Department Responsibilities for Wastewater System Operation and Maintenance

- .1306 System Malfunction and Repair
- 15A NCAC 18A .1962 Applicability .0102 Applicability
- 15A NCAC 18A .1964 Interpretations and Technical Assistance .0302 Local Health Department and State
- 15A NCAC 18A .1965 Appeals Procedure G.S. 150B and 10 NCAC 1B
- 15A NCAC 18A .1966 Severability Removed
- 15A NCAC 18A .1967 Injunctions G.S. 130A-18
- 15A NCAC 18A .1968 Penalties G.S. 130A-22(c), 130A-23, and 130A-25

15A NCAC 18A .1969 Approval and Permitting of On-Site Subsurface Wastewater Systems, Technologies, Components, or Devices

.1701 General

.1702 Application

.1703 Department and Commission Application Review

.1704 Approval Criteria for Provisional Systems

.1705 Approval Criteria for Innovative Systems

.1706 Approval Criteria for Accepted Systems

.1708 Modification, Suspension, and Revocation of Approvals

.1712 Authorized Designers, Installers, and Management Entities

.1713 Local Health Department Responsibilities

15A NCAC 18A .1970 Advanced Wastewater Pretreatment System

.0510 – Special Site Evaluations

.1201 Advanced Pretreatment System Standards

.1202 Siting and Sizing Criteria for Advanced Pretreatment Systems with a Design Daily Flow Less Than or Equal to 1,500 Gallons/Day

.1206 Advanced Pretreatment Bed Systems

.1302 Operation and Maintenance of Advanced Pretreatment Systems

.1304 Management Entity Responsibilities for Wastewater System Operation and Maintenance

.1305 Local Health Department Responsibilities for Wastewater System Operation and Maintenance

.1504 Effluent Sampling Requirements for Residential Wastewater Treatment Systems

.1707 Design and Installation Criteria for Provisional, Innovative, and Accepted Approvals

.1709 Wastewater Sampling Requirements for Advanced Pretreatment Systems

.1710 Compliance Criteria for Advanced Pretreatment Systems

.1712 Authorized Designers, Installers, and Management Entities

15A NCAC 18A .1971 Engineered Option Permit .0207 Engineer Option Permit

Quick Reference Guide

Section .0100 – General

15A NCAC 18E .0101 Scope

Rule Replaces: Rule .1934.

Summary/Biggest Changes: The language is very similar, just expanded a little bit to address additions made to 18E, such as reclaimed water systems.

15A NCAC 18E .0102 Applicability

Rule Replaces: Rule .1962.

Summary/Biggest Changes: This is possibly the most important rule in 18E, as it affects previously permitted systems and future permitted systems. The language has changed to address comments we received from the Rules Review Commission and to address Session Law 2023-77 which requires substantively identical language to the law.

18E does not apply to any wastewater system for which a permit was issued prior to January 1, 2024, unless the design daily flow or wastewater strength changes.

All wastewater systems shall comply with the setback requirements in place at the time the system was permitted. All wastewater systems shall comply with operation and maintenance in accordance with 15A NCAC 18E .1300.

If an owner/applicant wants to receive the benefits in 18E and a permit has already been issued to them under 15A NCAC 18A .1900, they will need to re-apply under 18E to receive those benefits, such as reduced setbacks or updated design flows. Both an Improvement Permit (IP) and Construction Authorization (CA) will need to be issued.

15A NCAC 18E .0103 Incorporation by Reference

Rule Replaces: This is a new rule that collects all the rules, standards, and other references that have been previously scattered throughout 15A NCAC 18A .1900 and lists them all in one location with information on how to obtain a copy of the document. Currently, there are only 10 references incorporated by reference in 15A NCAC 18A .1900. 18E has 50 references incorporated by reference. We added the references we have been using in guidance to promote consistency across the state.

15A NCAC 18E .0104 Abbreviations

Rule Replaces: This is a new rule that places all abbreviations in one rule so that individuals can refer to this rule for abbreviations and their meanings.

15A NCAC 18E .0105 Definitions

Rule Replaces: Rule .1935.

Summary/Biggest Changes: Definitions were kept, removed, added, or updated. Rule .1935 has 64 definitions. 18E has 119 definitions. The definition of "accessory dwelling unit" was added and the definitions of "applicant" and "serial distribution" were modified pursuant to Session Law 2023-77.

Section .0200 – Permits

15A NCAC 18E .0201 General

Rule Replaces: This is a new rule that explains our permitting process and the steps involved in it. For someone unfamiliar with our rules, it will help explain the permitting process. This rule also references the private option permits available to owners and applicants. The G.S. 130A-335(a2) permit option is not included in this Rule.

15A NCAC 18E .0202 Application

Rule Replaces: Combination of Rule .1937(c), (d), and (e).

Summary/Biggest Changes: This rule specifies the information required in an application and when an application must be submitted. The information required to be submitted by the owner/applicant has been expanded to include more information about site features.

The application requirements for an existing system approval have been included in this rule. Also, a significant change was added that states "a pending application for an IP, CA, or existing system authorization for which the local health department (LHD) is awaiting action by the applicant shall expire 12 months from the date of application."

Minor changes are required to this Rule pursuant to Session Law 2023-77, and these changes must go through rulemaking. However, all changes in Session Law 2023-77 are in effect January 1, 2024.

Interpretation Question and Answer:

If someone submits an application in 2023, but a permit is not issued until after January 1, 2024, does the application fall under the .1900 rules or the 18E rules? If the permit is issued after January 1, 2024, the permit must meet 18E.

15A NCAC 18E .0203 Improvement Permit

Rule Replaces: Rule .1937(f) and (m).

Summary/Biggest Changes: This rule identifies all the information that should be included in the IP. Also included is information on when an IP can be suspended or revoked.

Session Law 2023-77 requires that the IP include usable soil depth to a limiting condition, long term acceptance rate (LTAR), and maximum trench depth that considers percent slope for initial and repair systems. These added requirements must go through rulemaking. However, all changes in Session Law 2023-77 are in effect January 1, 2024.

Permits must be written for conventional systems when possible. An initial dispersal <u>area</u> must be shown on the permit. This is due to large diameter pipe now being an accepted system with a different trench spacing than conventional systems.

15A NCAC 18E .0204 Construction Authorization

Rule Replaces: Rule .1937(g) and (h).

Summary/Biggest Changes: This rule identifies all the information that should be included in the CA and allows for separate CAs to be issued for individual wastewater system components. Also included is information on when a CA can be suspended or revoked.

Interpretation Question and Answer:

If nothing with the drainfield is changing but the septic tank needs to be moved, how should that be handled under 18E? Does the owner/applicant need to apply for both an IP and a CA? Or just a CA? Only a CA needs to be issued.

Interpretation Question and Answer:

If an IP is issued in 2023, and the CA is not issued until 2024, the CA meets the requirements of .1900, correct? The CA would meet the requirements of .1900, NOT 18E. This is based on the date of the IP issued. Since the IP was issued before January 1, 2024, and the IP was issued, in part, based on a site evaluation taking into account available space under .1900, that is what we base the design on. The applicant always has the option to re-apply for a new IP under 18E to receive a CA under the requirements of 18E. In addition, G.S. 130A-337(b) states: "Upon determining that the system is properly installed or repaired and that the system is capable of being operated in accordance with the conditions of the <u>Improvement Permit</u>, the rules, this Article and any conditions to be imposed in the operation permit, as applicable, the local health department shall issue an operation permit..." This implies that the Operation Permit (OP) is based on the IP, which is the foundation for the three-tier permitting process.

15A NCAC 18E .0205 Operation Permit

Rule Replaces: Rules .1937(i) and (j) and .1938(h).

Summary/Biggest Changes: This rule identifies all the information that should be included in the OP and what steps should be taken when an OP cannot be issued. Also included is information on when an OP can be suspended or revoked.

Interpretation Question and Answer:

If the wastewater system has already been installed and the OP issued, and the OP needs to be re-issued, do the IP and CA also have to be re-issued? For example, an existing church with an OP for their existing wastewater system is re-applying under 18E to get the reduced flows for seats in a church. Do the IP and CA need to be re-issued, or can just the OP be re-issued with the new number of seats in the church? The owner needs to apply for an OP and then the OP may be re-issued. The re-issued OP will only reference the applicable changes to the system and reference the original OP for system components, design, etc. that are unchanged. The authorized agent re-issuing the OP is not responsible for verifying the existing system components, and is only responsible for ensuring that the system is not malfunctioning and meets the conditions of Rule .0102(d).

15A NCAC 18E .0206 Existing System Approvals for Reconnections and Property Additions

Rule Replaces: Rule .1937(k) and expands to include existing system approvals for property additions and reconnections other than manufactured homes in manufactured home parks.

Summary/Biggest Changes: Session Law 2023-77 allows LHD, certified inspectors, or Authorized On-Site Wastewater Evaluators, as applicable, to approve reconnections or verify that property additions will not negatively impact the on-site wastewater system, repair area, and other setbacks in Rule .0600 of 18E. These added requirements must go through rulemaking. However, all changes in Session Law 2023-77 are in effect January 1, 2024.

The rule specifies the information that is required when an approval is issued and the process to follow when an approval request is denied.

The wastewater system owner "is responsible for providing the location of the property lines and site modifications. When the existing wastewater system cannot be located, the owner is responsible for locating the existing wastewater system and providing that information to the local health department, Authorized On-Site Wastewater Evaluator, or certified inspector. The owner is responsible for the accuracy of the information provided on the application and the owner is responsible for ensuring that all setback requirements in Rule .0600 of Subchapter E of Chapter 18 of Title 15A of the North Carolina Administrative Code are met for the property addition."

Rule .0206 describes the following situations, who can issue the approval, and steps to be taken:

- Reconnections within the existing footprint with no proposed increase in design daily flow (DDF) or wastewater strength
- Property additions that require a building permit but do not increase the DDF or wastewater strength, such as porches or swimming pools
- Property additions that increase the DDF or wastewater strength

G.S. 160D-1110 (Building Code Enforcement General Statute) has been amended with the following language:

(h1) No local government may withhold a building permit under this section where the project does not propose to increase the design daily flow or wastewater strength of the existing system, and the property owner submits an on-site wastewater existing system inspection exemption affidavit. The property owner shall affirm that any modifications will meet local and State on-site wastewater system setback requirements pursuant to G.S. 130A-335.

The exemption affidavit form has been created by the Building Code Council and was distributed by October 1, 2023. If the proposed project does not meet setbacks in accordance with Rule .0601, the owner is liable if the owner completes the affidavit.

Interpretation Question and Answer:

When doing an existing system inspection, and going out to confirm that the new addition meets setbacks, what should be done if it is determined that the well does not meet the setback from the septic system? Should a Notice of Violation (NOV) be issued for the septic system or for the well? Should it just be a notice of non-compliance (in 18E but not in .1900)? Or is there something else we should be doing? For "no flow" additions such as decks and swimming pools, if the proposed addition meets setbacks, we will approve the proposed addition. A notice of intent to suspend/revoke shall be issued for the wastewater system OP since it is too close to a private drinking water well. For reconnections, it would depend if the system was installed before or after the well was installed, or if the system was installed prior to July 1, 1977. If the well was installed after the system was installed, an NOV would be issued for the well. If the system was installed after the well installation, the system would not comply with Rule .0206(b)(5). Thus, no reconnection approval shall be given.

Interpretation Question and Answer:

An OP was issued in 2010. After January 1, 2024, the owner wants to install an above ground pool in the backyard. Can the owner get the reduced setback of five feet in 18E with an existing system approval application? Existing system approvals must meet Rule .0600, so existing system approvals can be issued for the reduced setback and the owner does not need to apply for an IP/CA.

Interpretation Question and Answer:

Can an owner submit a building inspection affidavit retroactively to eliminate a notice of noncompliance? If we know about a problem, we still must issue notices of non-compliance or NOVs.

15A NCAC 18E .0207 Alternative Wastewater System Permitting Options

Rule Replaces: Rule .1971.

Summary/Biggest Changes: Specifies the owner's responsibilities and the LHD's responsibilities for private option permits in accordance with GS 130A-336.1 and 336.2. Session Law 2023-90 directs the common form for AOWE permits to be created by the North Carolina On-Site Wastewater Contractor Inspector Certification Board. This change will need to go through rulemaking to be added to 18E, but this will remain in the working copy for clarity since this is in the law. In addition, Session Law 2023-90 removes the completeness review previously required by the LHD. Therefore, parts of this rule have been deleted from the working copy since this is now law. However, this change will need to go through rulemaking to be added to 18E.

Section .0300 – Responsibilities

15A NCAC 18E .0301 Owners

Rule Replaces: Rule .1938(b) and (j) and expands on all the owner's responsibilities relating to on-site wastewater systems.

Summary/Biggest Changes: Session Law 2023-77 changes the language to include that the entire initial wastewater system and repair area shall be required to be on property controlled by the wastewater system owner. Property is considered controlled by the wastewater system owner when the owner has an easement or encroachment agreement for the property where the wastewater system or repair area is located. Previous language said "owned or controlled", so this new language makes this issue much clearer. If language remained as "owned or controlled", this would mean that encroachment agreements into rights-of-way would not be required if the owner "owns" the right-of-way (which is typical in most subdivisions). Some have suggested using "owned and controlled" for this language, but that would eliminate off-site systems since the owner doesn't own the property that the supply line would cross.

15A NCAC 18E .0302 Local Health Department and Department

Rule Replaces: Rule .1938(a), (e), (f), and (g).

Summary/Biggest Changes: This rule identifies when the On-Site Water Protection Branch (OSWP) review is required and not required. Also identified is when an LHD shall issue an NOV and a notice of non-compliance. Biggest change is that an NOV can be issued when a wastewater system does not meet the control requirements in Rule .0301, when the wastewater system was installed without a permit, or when a facility is expanded without a permit.

The LHD shall issue an NOV to the owner in the following situations:

- the wastewater system is malfunctioning in accordance with Rule .1303(a)(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;
- 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;
- the owner does not meet the ownership and control requirements of Rule .0301(b);
- the wastewater system was installed without a permit issued in accordance with Section .0200; or
- the facility was expanded without a permit issued in accordance with Section .0200.

The LHD shall issue a written notice of non-compliance to the owner when the wastewater system is non-compliant with G.S. 130A, Article 11, 18E, or the performance standards or conditions in the OP or ATO.

Interpretation Question and Answer:

Plans show a three-bedroom house that is now being rented as a six-bedroom house. What actions can be taken regarding this issue? The OP can be suspended or notice of non-compliance issued.

15A NCAC 18E .0303 Licensed or Certified Professionals

Rule Replaces: Rule .1938(c), (d), and (h).

Summary/Biggest Changes: The list for when a PE is required has been expanded based on discussions between the North Carolina Board of Examiners for Engineers and Surveyors and the OSWP. This list was reviewed by the legislatively-appointed Task Force.

Installer and operator responsibilities have also been identified.

Session Law 2023-77 changes the language in this Rule so that a "local health department may not require any system other than those specifically identified in this rule to be designed by a professional engineer, regardless of system complexity or the local health department's experience with the proposed system type." This means that LHDs cannot require a PE to design a pump or LPP system that is less than or equal to 600 gpd unless it meets the requirements of this Rule. These changes must go through rulemaking. However, all changes in Session Law 2023-77 are in effect January 1, 2024.

Session Law 2023-77 also adds language to state that "wastewater systems with adjusted design daily flow in accordance with Rule .0403 shall be designed by a professional engineer if used in combination with another condition listed in this rule." These changes must go through rulemaking. However, all changes in Session Law 2023-77 are in effect January 1, 2024.

15A NCAC 18E .0304 Submittal Requirements for Plans, Specifications, and Reports Prepared by Licensed Professionals for Systems over 3,000 Gallons/Day

Rule Replaces: Rule .1938(i) and provides additional detail on the information required to be submitted to OSWP for review.

Summary/Biggest Changes: This rule very closely follows the guidance documents and checklists created by OSWP for submittal of systems with a design flow over 3,000 gallons/day and industrial wastewater systems to OSWP for review.

15A NCAC 18E .0305Submittal Requirements for Plans, Specifications, and Reports Prepared byLicensed Professionals for Systems Less Than or Equal to 3,000 Gallons/Day

Rule Replaces: This is a new rule that replaces guidance provided by OSWP on the information required to be submitted to the LHD and/or OSWP for review of systems requiring a special site evaluation, advanced pretreatment, or for systems designed to treat industrial process wastewater.

Section .0400 – Design Daily Flow and Effluent Characteristics

15A NCAC 18E .0401 Design Daily Flow

Rule Replaces: Rule .1949(a) and (b) and has been expanded to provide flow rates for additional facilities not included in Rule .1949.

Summary/Biggest Changes: The biggest change is that Session Law 2023-77 has changed the minimum design daily flow for a single-bedroom dwelling unit to be 120 gallons per day per bedroom or 60 gallons per day per person when occupancy exceeds two persons per bedroom, whichever is greater. These

changes must go through rulemaking. However, all changes in Session Law 2023-77 are in effect January 1, 2024. Many other design daily flow changes are incorporated in this rule.

Table II includes the following notations:

- * means that the facility has the potential to generate HSE. Examples of some of the facilities that could generate HSE include: summer camps, RVs, food preparation facilities such as restaurants, food stands, and meat markets, highway rest areas and visitor centers, and schools.
- ∞ means that the designer shall use the maximum building occupancy assigned by the local fire marshal when calculating the DDF, unless another method for determining the DDF is proposed which includes the justification for not using the maximum building occupancy. Some examples of these facilities include: bars/cocktail lounges, community centers, gyms, fitness centers, and public or private assembly halls used for recreation, regularly scheduled meeting, events, or amusement.

Unless otherwise noted in Table II, the DDF per unit includes employees.

Where laundry is not specified for a facility in Table II, but is proposed to be provided, the DDF shall be adjusted to account for the proposed usage and machine water capacity.

HVAC unit or ice machine condensate, gutter or sump pump discharge, water treatment system back flush lines, or similar incidental flows shall not discharge to the wastewater system unless a PE designs the wastewater system for these flows.

There has been no change in minimum DDF from any facility other than a dwelling unit. It is still 100 gpd. For facilities with multiple design units, the minimum DDF shall be 100 gpd/design unit and the DDF of the facility shall be the sum of all the design unit flows.

The definition of a design unit has changed, and the definition of a facility has been added. Design unit now means a discrete connection such as an individual dwelling unit, place of business, or place of public assembly on which wastewater DDF is based. Multiple design units may comprise a facility. Facility has been defined as one or more design units located on a single or multiple lots or tracts of land and served by a wastewater system comprised of one or more wastewater systems.

Interpretation Question and Answer:

There are some flows in Table II that the flow is either one "or" the other, but whichever is greater was not included. Does this mean that the flow can be either one or the other? It can be interpreted as meaning "whichever is greater".

15A NCAC 18E .0402 Septic Tank Effluent Characteristics

Rule Replaces: This is a new rule that defines domestic and high strength wastewater. This rule also addresses how the issue of wastewater strength shall be handled for flow reductions. Table VIII in Rule .1970 was the starting point for a definition of domestic wastewater and was adjusted based on septic tank effluent data received by OSWP from advanced pretreatment system samples.

Summary/Biggest Changes: Session Law 2023-77 changes the language to allow the maximum nitrogen concentration for domestic strength effluent to not exceed 100 mg/L of Total Kjeldahl Nitrogen (TKN).

This change could potentially allow high-strength wastewater to be included as domestic strength since nitrates and nitrites are not included in TKN. These changes must go through rulemaking. However, all changes in Session Law 2023-77 are in effect January 1, 2024.

Facilities that generate HSE or when an adjusted DDF is proposed shall address the issue of wastewater strength in accordance with either advanced pretreatment, or the dispersal field is sized based on a mass loading adjusted LTAR and a site-specific nitrogen migration analysis has been conducted.

Advanced pretreatment shall be used with the following:

- the DDF is greater than 1,500 gpd and the wastewater is HSE;
- a flow reduction is proposed and the DDF is greater than 1,500 gpd; or
- a flow reduction is proposed with HSE wastewater.

15A NCAC 18E .0403 Adjustments to Design Daily Flow

Rule Replaces: Rule .1949(c) and has been expanded to include S.L. 2013-413 and 2014-120.

Summary/Biggest Changes: A peaking factor to be used when determining an adjusted DDF when no daily water use readings have been provided is included. OSWP may do flow reductions for dwelling units when the facility has a design flow greater than 3,000 gallons/day and is made up of individual dwelling units.

Section .0500 – Soil and Site Evaluation

*Provisionally suitable has been removed from 18E. Sites are either suitable or unsuitable.

15A NCAC 18E .0501 Site Evaluation

Rule Replaces: Rule .1939.

Summary/Biggest Changes: None

15A NCAC 18E .0502 Topography and Landscape Position

Rule Replaces: Rules .1940 and .1956(5).

Summary/Biggest Changes: The formula for slope correction, and when it must be used, has been added to this rule.

15A NCAC 18E .0503 Soil Morphology

Rule Replaces: Rule .1941.

Summary/Biggest Changes: For prismatic structure, there is both suitable and unsuitable structure, where previously all prismatic structure was unsuitable.

Apparent cation exchange capacity has been added as a parameter to help determine the suitability of clay mineralogy. Atterberg limits are no longer being used to determine the suitability of clay mineralogy.

15A NCAC 18E .0504 Soil Wetness Condition

Rule Replaces: Rule .1942.

Summary/Biggest Changes: Session Law 2023-77 changes the language to state "color value shall be determined based on a chroma 2 or less using the Munsell Soil Color Book." This change was needed to remain consistent with current practices. These changes must go through rulemaking. However, all changes in Session Law 2023-77 are in effect January 1, 2024.

15A NCAC 18E .0505 Soil Depth

Rule Replaces: Rule .1943.

Summary/Biggest Changes: For septic tank effluent systems, the minimum soil depth for the site to be suitable is now 18 inches. Systems with advanced pretreatment are addressed in Section .1200.

15A NCAC 18E .0506 Saprolite

Rule Replaces: Rule .1956(6).

Summary/Biggest Changes: Saprolite is now considered a soil and site condition and not a system modification. Language on how to allow a mix of soil and saprolite in the vertical separation distance has been added. Session Law 2023-77 adds language to allow the following: "For saprolite sites evaluated for suitability by a licensed soil scientist, other than a licensed soil scientist employed as an authorized agent, the evaluation may be made using borings or pits to evaluate saprolite." These changes must go through rulemaking. However, all changes in Session Law 2023-77 are in effect January 1, 2024.

Interpretation Question and Answer:

In order to issue an IP using suitable saprolite now, does the site need to be classified as unsuitable to soil depth (Rule .0505) first? No, there is no requirement to find the site unsuitable to soil depth prior to using suitable saprolite. Rule .0506(a) lays out that sites can be "reclassified" as suitable in accordance with this Rule [Rule .0506(b)]. However, Rule .0506(b) states that sites shall be classified as suitable in accordance with (b)(1) and (b)(2). There is no mention of Rule .0506(a) in this Paragraph and no mention of "reclassifying." Thus, Rule .0506(a) is one option for saprolite, and this option shall meet Paragraph (b) of this Rule. Rule .0506(b) provides the previous option as well as another option in permitting a site, as long as (b)(1) and (b)(2) are met.

15A NCAC 18E .0507 Restrictive Horizons

Rule Replaces: Rule .1944.

Summary/Biggest Changes: The depth of soil shall be greater than or equal to 18 inches for the site to be suitable.

15A NCAC 18E .0508 Available Space

Rule Replaces: Rule .1945.

Summary/Biggest Changes: Language has been added from the legislatively-appointed Task Force which allows an owner who has a repair exempt lot to increase the design daily flow for a facility to 480 gallons/day if certain conditions can be met. Prior to 18E, design daily flow expansions were required to have additional repair area for the expansion. However, the Rule now does not require additional repair area if the lot is repair exempt under (c) of this Rule, and the expansion does not increase the design daily flow to greater than 480 gpd.

Session Law 2023-77 adds the following language to Rule .0508: "a wastewater system certified in accordance with NSF International Standard 350 or that has data from a two-year field demonstration documenting that the wastewater system meets NSF International Standard 350 or better may eliminate the requirement for repair area when installed in Group I soils and that include classification as a Type VI(b) pursuant to 15A NCAC 18E .1301. The wastewater system shall only be used to treat domestic strength effluent and shall also meet a Total Nitrogen effluent standard of 20 mg/L." These changes must go through rulemaking. However, all changes in Session Law 2023-77 are in effect January 1, 2024.

The dispersal field may be installed level but off contour if an authorized agent has determined that there is sufficient vertical separation to a LC along the entire trench length in accordance with Rule .0901(g)(2).

Interpretation Question and Answer:

We have a repair exempt lot with a two-bedroom home on it. The OP identifies some repair area as currently required in Rule .1945(d). Under Rule .0508(f), if the owner now wants to expand to a three bedroom can the area shown on the OP as repair be used to expand the system from a two bedroom to a three-bedroom system. Or do they need to find additional area beyond the repair area to use for the expansion and not use the repair area previously identified. The system can be expanded without finding additional repair area. The repair area shown on the OP can be used for the expansion.

15A NCAC 18E .0509 Site Suitability and Classification

Rule Replaces: Rules .1947 and .1948. Rule .0509(c) replaces Rule .1948(d).

Summary/Biggest Changes: Sites are either classified as suitable or unsuitable. There no longer is the classification of provisionally suitable.

15A NCAC 18E .0510 Special Site Evaluations

Rule Replaces: Rules .1946(4) and .1970(p) and identifies when a special site evaluation is required from Rule .1970 and the drip approvals.

Summary/Biggest Changes: The requirements for the soil and site evaluation for systems with a design daily flow greater than 3,000 gallons/day are included in this rule. An option for when groundwater mounding or lateral flow analysis is not required has also been included.

Section .0600 – Location of Wastewater Systems

15A NCAC 18E .0601 Location of Wastewater Systems

Rule Replaces: Rule .1950.

Summary/Biggest Changes: The list of site features has been expanded to include items not previously listed in Rule .1950.

The separation distance between an on-site wastewater system and a well serving a single-family home has been reduced to 50 feet.

The setback between an on-site wastewater system in saprolite and a well serving a single-family home may be reduced from 100 feet to 50 feet when a variance is issued for the well.

Some setbacks can be reduced if the septic tank and pump tank pass a leak test.

No minimum setback is required from a well that has been permanently abandoned in accordance with 15A NCAC 02C .0113 and for which a record of abandonment has been submitted in accordance with 15A NCAC 02C .0114.

The pipe that can be used to sleeve a collection sewer under an area subject to vehicular traffic has been expanded.

The setbacks from collection sewers to specific site features have been reduced depending on the type of pipe used for the setback.

The separation distance between water and sewer lines has been modified to include the same separations as required by public water supply.

The embankments diagram below explains the following entries in Table IX of Rule .0601:

| 0 1 0 | |
|--|-------------------------------------|
| Top of slope of embankment or cuts of two feet or more vertical | 15 |
| height with a slope greater than 50 percent | |
| Top of slope of embankment or cuts of two feet or more vertical | 15 |
| height with a slope greater than 33 percent and less than or equal | |
| to 50 percent | If the site has suitable soil depth |
| | that extends for a minimum |
| | horizontal distance of 15 feet from |
| | the edge of the dispersal field, no |
| | minimum setback is required. |
| Top of slope of embankment or cuts of two feet or more vertical | 0 |
| height with a slope less than 33 percent | |



| Well/Spring Type & Location | Wastewater System Setback |
|---|---------------------------------|
| Any transient or non-transient non-community water supply well Community well Shared water supply well Well that complies with 15A NCAC 18A .1700 Wells near saprolite system w/o variance Water supply spring Springs, uncased wells, and ungrouted wells used for drinking water and located downslope from dispersal field | 100' |
| A private drinking water well serving a single family dwelling (SFD) unit Any other well or source not listed in this table, excluding monitoring wells Water supply wells constructed prior to 7/1/93 in accordance w/ 15A NCAC 18A .1720 (For repairs, site or space considerations) Shared wells, wells near saprolite systems or transient non- community public well (For repairs, site or space considerations w/ <u>variance</u>) Non-transient non-community well (For repairs, site or space considerations w/ <u>variance</u>) Spring serving a SFD unit and located upslope of wastewater system Non-water supply spring | 50' |

| Injection well | 25' |
|--|------------|
| Geothermal well (closed loop) or injection well (leak test approved ST and or PT) | 15' |
| Permanently abandoned well (performed & recorded in accordance w/ 2C rules) & monitoring wells | No setback |

15A NCAC 18E .0602 Applicability of Setbacks

Rule Replaces: Rule .1951.

Summary/Biggest Changes: Language from Session Law 2004-140, relating to the separation distances in Group I soils on sites that meet specific criteria, has been added.

Section .0700 – Collection Sewers, Raw Sewage Lift Stations, Septic Tank Effluent Pump Systems, and Pipe Materials

15A NCAC 18E .0701 Collection Sewers

Rule Replaces: Rule .1955(o).

15A NCAC 18E .0702 Raw Sewage Lift Stations

Rule Replaces: Rule .1952(e).

15A NCAC 18E .0703 Pipe Materials

Rule Replaces: Rule .1955(e) and (f) and includes guidance provided by OSWP over the past 18 years.

Section .0800 - Tank Capacity, Leak Testing, and Installation Requirements

15A NCAC 18E .0801 Septic Tank Capacity Requirements

Rule Replaces: Rule .1952(b)(1).

Summary/Biggest Changes: The minimum septic tank size for a place of residence, place of public assembly, or place of business is 1,000 gallons.

When a grinder pump is installed prior to the septic tank, two septic tanks in series shall be used.

Session Law 2023-77 adds language to include "septic tanks for multiple dwelling units shall not be required to be sized in accordance with Table XV of Rule .0801. The minimum septic tank capacity serving two or more dwelling units shall be based on the total design daily flow of 120 gallons per day

per bedroom or 60 gallons per day per occupant for all dwelling units." These changes must go through rulemaking. However, all changes in Session Law 2023-77 are in effect January 1, 2024. *The interpretation of this language is that multiple dwelling units must comply with Rule .0801(a)(1) or the calculations of this added language, whichever is greater.*

15A NCAC 18E .0802 Pump Tank Capacity Requirements

Rule Replaces: Rule .1952(c).

Summary/Biggest Changes: The minimum pump tank capacity shall equal the minimum septic tank capacity, no matter the soil group.

15A NCAC 18E .0803 Grease Tank Capacity Requirements

Rule Replaces: Rule .1955(k).

Summary/Biggest Changes: This rule now specifies a minimum grease tank size. For grease tanks greater than 1,500 gallons in size, two or more tanks in series are required to meet the grease tank capacity. A grease rated effluent filter is required at the outlet end of the grease tank.

15A NCAC 18E .0804 Siphon Tank Capacity Requirements

Rule Replaces: Rule .1952(d).

15A NCAC 18E .0805 Tank Leak Testing and Installation Requirements

Rule Replaces: Rules .1952(a) and .1954(b)(4) and includes new information.

Summary/Biggest Changes: The list of when a leak test is required has been expanded to include when required by a PE or in the advanced pretreatment approval, among other items.

The procedures for a water and vacuum leak test have been added to the rules. Session Law 2023-77 adds language that states "For a hydrostatic test, the tank shall be filled with water to the underside of the top of the tank or, for corrugated tanks, to the bottom of the uppermost corrugation that forms the top of the tank. For vacuum tests, a tank manufacturer may choose to test the tanks using a negative pressure of five inches of mercury for two minutes with a loss of vacuum less than or equal to two-fifths of one inch or a negative pressure of two and one-half inches of mercury for five minutes with a loss of vacuum less than or equal to one-fifth of one inch." These changes must go through rulemaking. However, all changes in Session Law 2023-77 are in effect January 1, 2024.

Section .0900 – Subsurface Dispersal

15A NCAC 18E .0901 General Design and Installation Criteria for Subsurface Dispersal Systems

Rule Replaces: Rules .1955(b), (c), (i), (j), (l), (m), and (p) and Table III(b) in .1956(6).

15A NCAC 18E .0902 Conventional Wastewater Systems

Rule Replaces: Rules .1955(a) and (b) and .1956(1).

15A NCAC 18E .0903 Bed Systems

Rule Replaces: Rule .1955(d).

Summary/Biggest Changes: Session Law 2023-77 adds language that includes "sites for bed systems must have a soil texture of Group I, II, or III to a depth of 48 inches below the naturally occurring soil surface or to a depth of 12 inches below the infiltrative surface, whichever is deeper." These changes must go through rulemaking. However, all changes in Session Law 2023-77 are in effect January 1, 2024.

15A NCAC 18E .0904 Large Diameter Pipe Systems

Rule Replaces: Rule .1956(3)(a)(i).

Summary/Biggest Changes: The trench spacing for large diameter pipe has been modified to reflect guidance OSWP has developed.

15A NCAC 18E .0905 Prefabricated Permeable Block Panel Systems

Rule Replaces: Rule .1956(3)(a)(ii).

Summary/Biggest Changes: Horizontal panels have been included in the rule and the restrictions based on flow have been removed.

Recent rule interpretations as to when panel block can receive their 50 percent reduction have also been included in this rule.

Session Law 2023-63 adds language that states "Prefabricated permeable block panel system trenches shall be located a minimum of 8 feet on center or three times the trench width. When used in sand-lined trench systems, bed, or fill systems, prefabricated permeable block panel systems shall use the equivalent trench width of 6 feet to calculate the minimum trench length unless otherwise instructed by the manufacturer on a case-by-case basis." Thus, in a two-foot-wide trench, PPBPS can be installed on six feet centers. This change must go through rulemaking. However, this change in Session Law 2023-63 is in effect January 1, 2024. Typically, prefabricated permeable block panel systems are located nine feet on center for horizontal panels and eight feet on center for vertical panels. Refer to the manufacturer's design manual for their recommendations on when to use the six-foot center-to-center spacing. In addition, PPBPS gets a 50% reduction in sand-lined trench, bed, or fill systems.

15A NCAC 18E .0906 Sand Lined Trench Systems

Rule Replaces: Rule .1956(7).

Summary/Biggest Changes: Drip dispersal design criteria have been included.

Page 24 of 35

Session Law 2023-77 adds language that states "Sand lined trench systems receiving domestic strength effluent may be used when the design daily flow is less than or equal to 1,500 gallons per day. Trench length for trench dispersal products approved with a specific dispersal field reduction in area or trench length when receiving domestic strength effluent in accordance with Subchapter E of Chapter 18 of Title 15A of the North Carolina Administrative Code or a Provisional, Innovative, and Accepted approval shall be calculated in accordance with Subchapter E of Chapter 18 of Title 15A of the North Carolina Administrative Code approval." These changes must go through rulemaking. However, all changes in Session Law 2023-77 are in effect January 1, 2024.

15A NCAC 18E .0907 Low Pressure Pipe Systems

Rule Replaces: Rule .1957(a).

Summary/Biggest Changes: The minimum pressure head has been increased to three feet.

15A NCAC 18E .0908 Drip Dispersal Systems

Rule Replaces: Siting, sizing, and installation criteria for anaerobic drip dispersal systems in Innovative Approval IWWS 1993-01-R7A.

15A NCAC 18E .0909 Fill Systems

Rule Replaces: Rule .1957(b).

New fill systems shall be installed only on sites with uniform slopes less than four percent.

15A NCAC 18E .0910 Artificial Drainage Systems

Rule Replaces: Rule .1956(2) and (4) and expands to include the information that shall be provided for the design of an artificial drainage system.

15A NCAC 18E .0911 Privies

Rule Replaces: Rules .1959 and .1960.

Section .1000 – Non-Ground Absorption Wastewater Treatment Systems

15A NCAC 18E .1001 Alternative Toilets

Rule Replaces: Rule .1958(c).

15A NCAC 18E .1002 Reclaimed Water Systems

Rule Replaces: Rule .1958(d) and includes new options for the use of reclaimed water systems with onsite wastewater systems. *Summary/Biggest Changes*: The reclaimed water standards in 15A NCAC 02U are referenced. Siting and sizing reductions are given to be used with reclaimed water systems. More guidance from OSWP will be needed in the near future for the use of reclaimed water systems.

Section .1100 – Dosing Systems and Controls

15A NCAC 18E .1101 General Dosing System Requirements

Rule Replaces: Rule .1952(a).

Summary/Biggest Changes: Outlines general requirements for dosing systems, such as when a dosing system is needed, when dual alternating pumps are needed, and minimum dose volume requirements.

Session Law 2023-77 adds language that states "Dosing system tests may be conducted by the installer of the on-site wastewater system. The installer of the system shall give the local health department, licensed soil scientist, authorized designer, Authorized On-Site Wastewater Evaluator, or professional engineer, as applicable, the option to witness the test. Professional engineers and Authorized On-Site Wastewater Evaluators shall be authorized to witness the dosing tests for systems they have designed and for local health department permits upon a signed acceptance of responsibility for the verification of the dosing system. Documentation of the test shall be submitted to the local health department, professional engineer, or Authorized On-Site Wastewater Evaluator for attachment to the permit or Notice of Intent to Construct, as applicable." These changes must go through rulemaking. However, all changes in Session Law 2023-77 are in effect January 1, 2024.

15A NCAC 18E .1102 Pump Dosing

Rule Replaces: Rule .1952(b)(2-5) and (8-9).

Summary/Biggest Changes: Specifies the pump and pump discharge system requirements.

15A NCAC 18E .1103 Control Panels

Rule Replaces: Rule .1952(b)(6-7).

Summary/Biggest Changes: Control panels will now be required for all pump systems. Piggybacks will no longer be allowed. The minimum control panel requirements are included in this rule.

15A NCAC 18E .1104 Siphon Dosing

Rule Replaces: Parts of Rule .1952(d) that relate to the siphon and siphon discharge system, including the siphon, discharge piping, and high-water alarm system.

15A NCAC 18E .1105 Timed Dosing

Rule Replaces: This is a new rule that specifies when timed dosing shall be used and the requirements that timed dosing must meet.

15A NCAC 18E .1106 Pressure Dosed Gravity Distribution Devices

Rule Replaces: This is a new rule that describes the requirements that pressure manifolds, distribution boxes, and drop boxes must meet.

SECTION .1200 – Advanced Pretreatment Systems Standards, Siting, and Sizing Criteria

If a product already has a reduction that receives DSE, such as 25% reduction systems and PPBPS, the product keeps that percent reduction. Advanced pretreatment can be used to get other siting and sizing considerations.

Trench dispersal products approved for a specific dispersal field reduction in area or trench length when receiving DSE shall not be reduced by more than 50 percent as a result of an increased LTAR in accordance with this Section.

15A NCAC 18E .1201 Advanced Pretreatment System Standards

Rule Replaces: Rule .1970(a).

Summary/Biggest Changes: Identifies the different treatment standards: NSF/ANSI 40, Treatment Standard I, and Treatment Standard II.

15A NCAC 18E .1202Siting and Sizing Criteria for Advanced Pretreatment Systems with a DesignDaily Flow Less Than or Equal to 1,500 Gallons/Day

Rule Replaces: Rule .1970(d), (e), and (f).

Summary/Biggest Changes: The maximum design daily flow has been increased to 1,500 gallons/day and the siting and sizing criteria for all three treatment standards are included in this rule.

Some of the horizontal setbacks have been modified to allow for additional differences between the treatment standards.

15A NCAC 18E .1203Siting and Sizing Criteria for Advanced Pretreatment Systems with a DesignDaily Flow Greater Than 1,500 Gallons/Day and Less Than or Equal to 3,000 Gallons/Day

Rule Replaces: This is a new rule and gives some siting and sizing reductions for systems up to 3,000 gallons/day.

Wastewater systems utilizing advanced pretreatment with a DDF greater than 3,000 gallons/day may propose LTAR adjustments in accordance with Paragraphs (a) through (c) of this Rule. The Department shall review and approve the proposed LTAR adjustments in accordance with Rule .0302(e). Documentation shall also be provided that the proposed system meets the requirements of Rule .0510(e).

15A NCAC 18E .1204 Advanced Pretreatment Drip Dispersal Systems

Rule Replaces: This is a new rule and includes the siting and sizing conditions for aerobic drip dispersal systems from Innovative Approvals IWWS 1993-01-R6B and IWWS 2007-01-R2.

Summary/Biggest Changes: Some of the criteria have been modified from the innovative approvals to allow for additional differences between the treatment standards.

15A NCAC 18E .1205 Advanced Pretreatment Sand Lined Trench Systems

Rule Replaces: This rule replaces the requirements for advanced pretreatment systems and sand lined trenches in Rule .1956(7).

15A NCAC 18E .1206 Advanced Pretreatment Bed Systems

Rule Replaces: Rule .1970(i) and (j).

Summary/Biggest Changes: Combines the siting and sizing criteria for all bed systems utilizing advanced pretreatment in one location. The siting and sizing criteria separation for Treatment Standard I and II systems has been raised from 1,000 gallons/day to 1,500 gallons/day.

Section .1300 – Operation and Maintenance

15A NCAC 18E .1301 Operation and Maintenance of Wastewater Systems

Rule Replaces: Rule .1961(b), (f), (h), and (i).

Summary/Biggest Changes: The list of systems in Table XXXII has been expanded to include system types not listed before, such as sand-lined trench, accepted, and off-site systems.

Clarifications have been added such as what is considered to be maintenance versus a repair, and when an owner can request a reduction in effluent sampling frequency, effluent sampling constituents, or the operator inspection frequency.

15A NCAC 18E .1302 Operation and Maintenance of Advanced Pretreatment Systems

Rule Replaces: Rule .1970(d), (e), and (f).

Summary/Biggest Changes: All the general operation and maintenance requirements for advanced pretreatment systems are included in this rule.

New criteria for when an individual site is in compliance with treatment standards have been included. Alternatively, a procedure to show compliance by mass loading has also been included.

15A NCAC 18E .1303 Owner Responsibilities for Wastewater System Operation and Maintenance

Rule Replaces: Rule .1961(a) and (e).

Summary/Biggest Changes: This rule includes the owner's responsibilities for the on-site wastewater system operation and maintenance and when a system is defined to be malfunctioning. The requirements for a contract between an owner and operator are also included in this rule.

Session Law 2023-77 adds language that states "The owner of a malfunctioning wastewater system shall contact the local health department, regardless of whether the system was permitted using an Engineer Option Permit or an Authorized On-Site Wastewater Evaluator Permit Option." Thus, a LHD shall be contacted for all repair permits, but a LHD may give options to an owner for obtaining a repair permit for their malfunctioning system. This rule also now contains the definition of a malfunctioning wastewater system. This change must go through rulemaking. However, all changes in Session Law 2023-77 are in effect January 1, 2024.

15A NCAC 18E .1304 Management Entity Responsibilities for Wastewater System Operation and Maintenance

Rule Replaces: Rules .1961(c), (f), (g), and (k), and .1970(n).

Summary/Biggest Changes: This rule includes all the operator's responsibilities.

15A NCAC 18E .1305Local Health Department Responsibilities for Wastewater System Operationand Maintenance

Rule Replaces: Rules .1961(c), (d), and (j), and .1970(n).

Summary/Biggest Changes: The local health department may give the owner the option to contract with a private operator to perform Type IIIb and IIIh system inspections. This rule also identifies when a LHD shall issue a notice of non-compliance for an on-site wastewater system.

15A NCAC 18E .1306 System Malfunction and Repair

Rule Replaces: Rules .1958(b) and .1961(l) and (m).

Summary/Biggest Changes: Session Law 2023-77 adds language that states "Wastewater systems shall be repaired to eliminate public health hazards. The owner of the system may request, on a form provided by the Department, that the local health department, professional engineer, or Authorized On-Site Wastewater Evaluator use their best professional judgment to develop a repair that should enable the wastewater system to comply with Rule .1303(a)(1) of Subchapter E of Chapter 18 of Title 15A of the North Carolina Administrative Code. The local health department, professional engineer, or Authorized On-Site Wastewater Evaluator shall document, on the Department-provided form, the aspects of the rules being altered to achieve the repair. The owner of the wastewater system shall be liable for any

damages caused by a system repaired in this manner and shall agree in writing to all terms and conditions set forth by the local health department, professional engineer, or Authorized On-Site Wastewater Evaluator that developed the repair, including any operation and maintenance requirements. This written agreement shall be attached to any Construction Authorization, Operation Permit, Notice of Intent to Construct, or Authorization to Operate, as applicable. Best professional judgment shall not be used when (i) the Improvement Permit, Construction Authorization, Notice of Intent to Construct, or Authorization to Operate indicates the repair area and system type, however, this does not preclude the owner from applying for a different wastewater system than the one specified on the permit as a repair, (ii) there are reductions in setback to drinking water wells less than what is required in Rule .0601 of Subchapter E of Chapter 18 of Title 15A of the North Carolina Administrative Code, (iii) there are reductions in no reasonable expectation that the repaired wastewater system will function to eliminate public health hazards."

Session Law 2023-77 also makes significant changes to the repair permitting process. To summarize, best professional judgment (BPJ) can be used on systems permitted prior to January 1, 2024, or on any system permitted after January 1, 2024, that does not have a repair area and system type specified, or on any system permitted after January 1, 2024, that has exhausted their designated repair system, and when the owner requests BPJ on a form provided by the Department. On this form, the authorized agent shall list any rules that are being altered for BPJ, and this form shall be attached to the applicable CA, OP, NOI, or ATO. BPJ will now have some guardrails on it by not allowing reduced setbacks to drinking water wells, not allowing a greater than 50% reduced setback to surface water bodies, and the repair system shall have a reasonable expectation to function. Anytime BPJ is used, the owner must submit this request on a form provided by the Department.

These changes must go through rulemaking. However, all changes in Session Law 2023-77 are in effect January 1, 2024.

Details on the design for pump and haul systems have been included in this rule.

For systems installed before July 1, 1977, Rules .1306(g) and (h) apply when repairing the wastewater system:

.1306(g) For facilities with a malfunctioning wastewater system installed prior to July 1, 1977, the authorized agent shall use their best professional judgement, based on education and experience, to repair the system.

.1306(h) For facilities with a wastewater disposal method installed prior to July 1,1977, which has been in continual use and acts as the sole source of wastewater disposal, the authorized agent shall use their best professional judgement, based on education and experience, to repair the wastewater disposal method.

Interpretation Question and Answer:

When a system is repaired after January 1, 2024, and the existing system has a piggyback, does the repair need to have a control panel or can they continue to use their piggyback as long as the piggyback is okay to use? If the piggyback or control panel needs to be replaced, does the replacement need to meet 18E? Or can they replace it with a piggyback or control panel that is identical to what was already there? If the piggyback does not need to be replaced and is functioning correctly, it can continue to be

used. If there is an upgrade to the system, such as going to a pressure manifold, then a control panel meeting the provisions of 18E would be needed. Properly functioning components of an existing system that comply with their current OP and are unaffected by the new permit, are not required to meet 18E.

Interpretation Question and Answer:

A septic system permitted under the .1900 rules fails after January 1, 2024. You have advised us that if the owner wants to take advantage of any of the reduced setbacks in 18E (or some other benefit) both an IP and CA need to be issued under 18E. Since we are re-issuing the IP and the repair must meet the rules, do we need to identify repair area also (essentially have both initial and repair for the repair)? We don't believe we need to have both initial and repair area. When repairing a malfunctioning system and issuing a new IP, repair area is not required since we are already repairing the wastewater system.

Interpretation Question and Answer:

An IP, CA, and OP are all issued under the .1900 rules. The system is now failing and needs to be repaired. Since all the original permits were issued under the .1900 rules, cannot the repair of this system also be under the .1900 rules and not 18E? Rule .1306 is the repair and BPJ rule. We don't think so because a permit has to be issued to repair the system and the permit would be issued under 18E, but we wanted to verify that we are correct in this interpretation. Rule .1306(c)(2)(A) does not allow BPJ, and Rule .0102 specifies that all systems must meet Section .1300, which includes Rule .1306. BPJ could only be used in this situation if the requirements of Rule .1306(c)(2) allow the use of BPJ.

15A NCAC 18E .1307 Wastewater System Abandonment

Rule Replaces: This is a new rule that codifies OSWP's guidance for abandoning on-site wastewater systems.

Section .1400 - Approval of Tanks, Risers, Effluent Filters, and Pipe Penetration Boots

15A NCAC 18E .1401 Plans for Prefabricated Tanks

Rule Replaces: Rule .1953.

Summary/Biggest Changes: Tanks will now be required to pass a structural test prior to being approved by OSWP. The requirements for plans and specifications for tanks are now broken into two categories: less than or equal to 4,000 gallons and greater than 4,000 gallons.

15A NCAC 18E .1402 Tank Design and Construction

Rule Replaces: Rule .1954.

Summary/Biggest Changes: The design criteria for septic tanks, pump tanks, grease tanks, and siphon dosing tanks are included in this rule.

15A NCAC 18E .1403 Tank Material Requirements

Page 31 of 35

Rule Replaces: Replaces the concrete tank material requirements from Rule .1954 and also includes new information.

Summary/Biggest Changes: The concrete tank strength has been increased to 4,000 psi at 28 days and must be at least 3,500 psi to leave the yard. Plastic and fiberglass tank material requirements have been included in this rule.

No dates are required on concrete tanks.

15A NCAC 18E .1404 Plans and Specifications for Risers, Effluent Filters, and Pipe Penetration Boots

Rule Replaces: This is a new rule that codifies OSWP's guidance on approval requirements for risers, effluent filters, and pipe penetration boots.

All septic tank risers and pump tank risers are required to have a secondary lid for safety.

15A NCAC 18E .1405 Risers, Effluent Filters, and Pipe Penetration Boots Approval Renewal

Rule Replaces: This is a new rule that allows riser, effluent filter, and pipe penetration boot approval to expire at the end of each year. OSWP is required to reach out to the manufacturers each year to renew their approval.

15A NCAC 18E .1406 Modification, Suspension, and Revocation of Approvals

Rule Replaces: Rule .1954(e).

Section .1500 – Approval and Use of Residential Wastewater Treatment Units

15A NCAC 18E .1501 General

Rule Replaces: This is a new rule that outlines the general requirements for residential wastewater treatment units.

15A NCAC 18E .1502 Application

Rule Replaces: Rule .1957(c)(1).

Summary/Biggest Changes: Identifies all the information that shall be included in an application for a residential wastewater treatment system.

15A NCAC 18E .1503 Design and Construction Standards

Rule Replaces: Rule .1957(c)(3).

Summary/Biggest Changes: Identifies the design criteria that a residential wastewater treatment system is required to meet for approval.

15A NCAC 18E .1504 Sampling Requirements for Residential Wastewater Treatment Systems

Rule Replaces: Rule .1970(n).

Summary/Biggest Changes: Identifies the sampling requirements for residential wastewater treatment systems.

15A NCAC 18E .1505 Residential Wastewater Treatment System Approval Renewal

Rule Replaces: This is a new rule that allows residential wastewater treatment system approvals to expire at the end of each year. OSWP is required to reach out to the manufacturers each year to renew their approval.

Section .1600 – Approval of Pre-Engineered Package Drip Dispersal Systems

15A NCAC 18E .1601 General

Rule Replaces: This is a new rule that provides general information and approval requirements for drip dispersal systems.

15A NCAC 18E .1602 Design and Construction Standards

Rule Replaces: This is a new rule that includes design and construction standards of drip dispersal systems from the innovative approvals.

15A NCAC 18E .1603 Drip Dispersal System Testing

Rule Replaces: This is a new rule that specifies how a drip dispersal system shall be field tested.

Section .1700 - Approval and Permitting of Wastewater Systems, Technologies, Components, or Devices

15A NCAC 18E .1701 General

Rule Replaces: Rule .1969(a).

15A NCAC 18E .1702 Application

Rule Replaces: Rule .1969(b).

Summary/Biggest Changes: Includes all the information that is required to be submitted with the application.

15A NCAC 18E .1703 Department and Commission Application Review

Rule Replaces: Rule .1969(c).

Summary/Biggest Changes: Outlines the Department and Commission review of applications.

15A NCAC 18E .1704 Approval Criteria for Provisional Systems

Rule Replaces: Rule .1969(e).

Summary/Biggest Changes: Criteria have been separated into dispersal system criteria and advanced pretreatment system criteria. Information has also been included that was previously required by OSWP guidance. A few additional options for how a product can obtain approval have also been added to this rule.

15A NCAC 18E .1705 Approval Criteria for Innovative Systems

Rule Replaces: Rule .1969(g).

Summary/Biggest Changes: Criteria have been separated into dispersal system criteria and advanced pretreatment system criteria. Information has also been included that was previously required by OSWP guidance. A few additional options for how a product can obtain approval have also been added to this rule.

15A NCAC 18E .1706 Approval Criteria for Accepted Systems

Rule Replaces: Rule .1969(h).

Summary/Biggest Changes: An alternate survey protocol has been included in this rule.

15A NCAC 18E .1707Design and Installation Criteria for Provisional, Innovative, and AcceptedApprovals

Rule Replaces: Rule .1970(I).

15A NCAC 18E .1708 Modification, Suspension, and Revocation of Approvals

Rule Replaces: Rule .1969(j), (k), and (l).

15A NCAC 18E .1709 Wastewater Sampling Requirements for Advanced Pretreatment Systems

Rule Replaces: Rule .1970(n) and has been expanded to allow for reduced sampling requirements based on specific criteria.

Summary/Biggest Changes: An option to only do field testing has been included, along with the criteria that must be met to only do field testing. The requirement for influent sampling of all advanced pretreatment systems has been removed. Multiple options for a manufacturer to reduce sampling requirements have been added.

15A NCAC 18E .1710 Compliance Criteria for Advanced Pretreatment Systems

Rule Replaces: Rule .1970(o).

Summary/Biggest Changes: The compliance criteria have been modified based on the advanced pretreatment sampling data that has been received by OSWP over the years.

15A NCAC 18E .1711 Provisional and Innovative Approval Renewal

Rule Replaces: This is a new rule that allows provisional and innovative approvals to expire at the end of each year. OSWP is required to reach out to the manufacturers each year to renew their approval.

Interpretation Question and Answer:

If a product approval has expired and not been renewed, and a permit was issued before the approval expired but the system is not being installed until after the product approval has expired, can that product still be installed since the permit was issued when the approval was valid? This will need to be evaluated on a case-by-case basis. We will need to look at the public health threat for these permits (e.g. we have discovered the system doesn't work as designed, etc). The IP and CA will be revoked only if there is a good reason to revoke the permit.

15A NCAC 18E .1712 Authorized Designers, Installers, and Management Entities

Rule Replaces: Rules .1969(o) and .1970(l).

15A NCAC 18E .1713 Local Health Department Responsibilities

Rule Replaces: Rule .1969(f), (i), (m), and (p).

Summary/Biggest Changes: Session Law 2023-77 adds language that states "The local health department shall permit systems designated as Accepted in an equivalent manner to a conventional system without the owner having to request the equivalent treatment from the local health department." This change must go through rulemaking. However, all changes in Session Law 2023-77 are in effect January 1, 2024.