

**Hearing Officers' Report for Adoption and Re-adoption of Rules in
15A NCAC 02T Waste Not Discharged to Surface Waters and
15A NCAC 02U Reclaimed Water**

**Public Hearings Held
October 10, 17, and 24, 2017**

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on
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**Department of Environmental Quality
Division of Water Resources**

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PART I – SUMMARY OF RULEMAKING ACTIVITY

The water quality program rules implemented by the Division of Water Resources underwent rule review required by S.L. 2013-413 (HB74) during 2014. The rule review, which spanned nine months of activity through the Environmental Management Commission and its Committees during 2014, resulted in a final rule review report issued by the NC Office of Administrative Hearings (NC OAH) in December 2014. The final rule review report determined that the subject rules were “necessary with substantive public interest”. The rules, therefore, needed to be re-adopted, and a readoption deadline of October 31, 2019, was established by NC OAH.

The NC Division of Water Resources (DWR) began the rulemaking process in early 2015 by inviting stakeholders to comment on draft rules that had been prepared for review. DWR staff hosted a set of stakeholder meetings during the spring of 2015. Staff presented each rule draft to stakeholders, received stakeholders' questions and comments and incorporated stakeholder input into the rule drafts as revised versions of the draft rules.

The rules as a draft rulemaking package consisted of Subchapters 15A NCAC 02B, 02H, 02T and 02U were drafted and readied in December 2015 for submittal to the Water Quality Committee (WQC) of the Environmental Management Commission (EMC), in time for the WQC of the EMC's January 2015 meeting agenda. In January 2015, instead of pursuing rulemaking through the EMC, the Department of Environmental Quality's (DEQ) Secretary's Office decided to review the rule drafts and did so throughout 2016. As the DEQ Administration finished its review at the end of 2016, the Administration also changed. Staff then were asked to provide a detailed information session on the rule package to the WQC in March 2017, and to stakeholders in April 2017, and provided the most up to date version of the draft rules for four subchapters (15A NCAC 02B, 02H, 02T and 02U).

In May 2017, the WQC of the EMC approved the draft language of the rules for the 15A NCAC 02T non-discharge programs and the 15A NCAC 02U reclaimed water programs rules that are the subject of this report (the 15A NCAC 02B and 02H rules were divided from this package), and 02T and 02U rules proceeded to the full EMC for approval to go to notice and hearing. Regulatory Impact Analyses were completed for the rule sets. The analyses determined no fiscal notes were necessary for the 15A NCAC 02T and 02U rule package, and the analyses accompanied the draft rules through the rulemaking procedure.

Following the WQC's approval of the rule drafts in May 2017, comments that were considered “pre-review comments” were received from the NC Office of Administrative Hearings Rules Review Commission staff which resulted in some technical changes to the rules as a betterment to the rule drafts that were presented to and subsequently approved by the EMC on July 13, 2017 to proceed to hearing (link to EMC agenda <https://deq.nc.gov/july-13-2017-agenda>). The Chair of the EMC assigned three Commissioners to serve as hearing officers on the rule package. The public notices were prepared, the comment period was announced and it was opened for public comment from September 15, 2017 through November 22, 2017. Public hearings were held under the authority of the NC General Statutes, Chapter 143, on October 10, 2017 in Wilmington, NC; on October 17, 2017 in Hickory, NC; and on October 24, 2017 in Raleigh, NC. Approximately 43 persons attended the public hearings, 16 persons presented oral comments, and approximately 1,375 written comment letters/memos/postcards were received during the comment period.

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PART II – HEARING OFFICER MEETINGS, CONSIDERATIONS, AND RECOMMENDATIONS

Following the close of the comment period on November 22, 2017, the three hearing officers and staff met as an entire group ten times between December 8, 2017 to May 15, 2018 to discuss, consider and deliberate over the comments and to develop recommendations. Specifically, organized meetings were held on December 8, 2017, December 20, 2017, January 23, 2018, January 30, 2018, April 3, 2018, April 6, 2018, April 20, 2018, May 4, 2018, May 10, 2018 and May 15, 2018. Due to the broad scope of programs covered by these rules, multiple one-on-one meetings between hearing officers and staff of various programs were conducted which involved “homework” by the hearing officers as well as staff, and consultations with additional staff including the attorneys of the Department and Commission.

The Hearing Officers' received over 1,300 comments and developed rule changes to address comments. The part of the proposed rule package that was most heavily commented on was 15A NCAC 02T .1400, Manure Hauler Operations rules, and the proposed deletion of the rule pertaining to records kept by the Division on manure hauler operation (15A NCAC 02T .1404). After considering the comments, the Hearing Officers' recommend retaining rule 15A NCAC 02T .1404 rather than deleting it. The Hearing Officers' specific responses to all comments are presented in Part III of this Hearing Officers' Report. The Hearing Officer's recommend that the EMC adopt and re-adopt the rules in 15A NCAC 02T and 15A NCAC 02U with the Hearing Officers' amendments to the proposed rules noticed in the *NC Register*. The 15A NCAC 02T and 02U rules recommended for adoption and re-adoption are presented in Part IV of this Hearing Officers' Report.

The Hearing Officers would like to recognize that the programs under 15A NCAC 02U have made dramatic progress in opening options for beneficial re-use water. The Hearing Officers' commend a recent report entitled “[Mainstreaming Potable Water Reuse in the United States: Strategies for Leveling the Playing Field](#)” which they believe will be helpful and timely in providing guidance and considerations to beneficial re-use programs.

During the Hearing Officers' meetings, multiple subjects were considered that the Hearing Officers' believe not only have broader applicability than the scope of this rulemaking but also are beyond the scope of the Session Law 2013-413 requirements. As a result, the Hearing Officers' make the following four recommendations:

1. During the writing of this report, the State of NC entered into a negotiated settlement agreement with the NC Environmental Justice Network, Rural Empowerment Association for Community Help, and Waterkeeper Alliance, Inc. An outgrowth of this settlement was the Secretary's establishment of the NC DEQ Environmental Justice and Equity Advisory Board on May 2, 2018. The Hearing Officers believe that, within the limits of DEQ's authority, it is appropriate that this Advisory Board consider and make recommendations on any environmental justice and equity issues raised during the comment period. The Settlement Agreement can be found on the DEQ's Title VI Compliance website.
2. In considering the comments concerning the imposition of additional regulatory requirements on dry litter operations, the Hearing Officers recognized that NCGS 143-215.10B excludes dry litter poultry operations from the definition of “animal operations” which would be subject to permitting under NCGS 143-215.10C, and that NCGS 150B-19.3 also prohibits the adoption of certain environmental regulations. It is the Hearing Officers' opinion that additional requirements for dry litter operations would be environmentally beneficial. At minimum, the Hearing Officers believe operators of dry litter facilities handling litter from one or more poultry houses of a capacity yet to be determined should: receive comprehensive nutrient management training, develop comprehensive nutrient management

plans, participate in a certification program on management of litter using sound nutrient management principles, and report management practices (including land application) to DEQ.

3. The Hearing Officers recognize that National Pollutant Discharge Elimination System (NPDES) permits for animal operations may have more stringent requirements than those found in State permits. The Hearing Officers recommend that the State engage stakeholders in a discussion about such differences to determine any need for future State permitting rules clarification.
4. Finally, the Hearing Officers acknowledge that the 15A NCAC 02T .1600, Groundwater Remediation Systems rules will be repealed after the 15A NCAC 02C rule re-adoption process is completed. The re-adoption deadline for 15A NCAC 02C rules is December 31, 2019.

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PART III – SUMMARY OF PUBLIC COMMENTS AND HEARING OFFICER RESPONSES

15A NCAC 02T .0103(1)

Proposed Language for Readoption

"Agronomic rate" is defined as the amount of waste and other materials applied to soil to meet the nitrogen needs of the crop, but does not overload the soil with nutrients or other constituents that cause or contribute to a contravention of surface water or groundwater standards, limit crop growth, or adversely impact soil quality. Nitrogen needs of the crop shall be based on realistic yield expectations (RYE) established for a soil series through published Cooperative Extension Service bulletins, Natural Resources Conservation Service publications, county soil surveys, or site specific agronomist reports.

Public Comments

1. "Revise "agronomic rate" definition. A proposed substitute: Application rate of a priority macronutrient (nitrogen or phosphorus) to a receiving crop providing the optimum amount for a realistic crop yield, based on the predominant soil type and soil hydrologic properties, while minimizing the amount of nutrients that run off to surface waters, pass below the root zone or contribute to nutrient build-up in the soil to levels inhibiting plant growth." – Joseph Hudyncia, NC Department of Agriculture & Consumer Services

Hearing Officer Response

1. The proposed substitute language limits agronomic rate to nitrogen and phosphorus, and excludes other nutrients and constituents that may be the limiting factor to waste disposal. Accordingly, it is not recommended to revise the proposed language.

Revised Language for Readoption

No revisions to the proposed language for readoption have been made.

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15A NCAC 02T .0103(8)

Proposed Language for Readoption

"Deemed permitted" means that a facility is considered ~~as having to have~~ a needed permit and ~~being to be~~ compliant with the permitting requirements of G.S. ~~143-215.1(a), 143-215.1(a)~~ even though it has not received an individual permit for its construction or operation.

Public Comments

1. "Given that 'permitting by regulation' is used in the title for .1303 it makes sense to use it in the definition of 'deemed permitted'. Proposed language addition for clarification: "Deemed permitted means a facility permitted by regulation and considered to have a needed permit. The facility is also considered to be compliant with the permitting requirements..." – Joseph Hudyncia, NC Department of Agriculture & Consumer Services

Hearing Officer Response

1. The Hearing Officers considered this comment and determined that this revision is not necessary.

Revised Language for Readoption

No revisions to the proposed language for readoption have been made.

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15A NCAC 02T .0103(34)

Proposed Language for Readoption

"Seasonal High Water Table" or "SHWT" is the highest level to which the soil is saturated, as may be determined through the identification of redoximorphic features in the soil ~~profile~~ ~~profile~~, including low chroma mottling. This does not include temporary perched conditions. Alternatively, the SHWT can also be determined from water level measurements or via soil/groundwater modeling.

Public Comments

1. "Proposed language addition: "Seasonal High Water Table" or "SHWT" is the highest level to which the soil is saturated during some portion of the year, as may be...." – Joseph Hudyncia, NC Department of Agriculture & Consumer Services

Hearing Officer Response

1. The existing rule language inherently includes the proposed addition of "during some portion of the year." Therefore, it is not recommended to amend the proposed language.

Revised Language for Readoption

No revisions to the proposed language for readoption have been made.

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15A NCAC 02T .0103(36)

Proposed Language for Readoption

"Setback" means the ~~minimum~~ separation in linear feet, measured on a horizontal plane, required between a treatment works, disposal system, or utilization system and includes physical features such as ~~building~~, buildings, roads, property lines, or water bodies.

Public Comments

1. "Currently, a setback is defined as the distance between some permitted system X and physical feature Y.⁴¹ The proposed amendment would add "includes" before the list of physical features, such that the relevant provision reads: "'Setback' means the separation . . . required between a treatment works, disposal system or utilization system and includes physical features such as buildings, roads, property lines, or water bodies."⁴² We encourage reconsideration of this amendment, as it could result in unnecessary confusion regarding the points between which separation must be maintained in order to satisfy "setback" requirements codified throughout these subchapters. Fortunately, removing "includes" should correct the problem." – American Rivers, Et. Al

Hearing Officer Response

1. It is agreed that the proposed modification could lead to confusion or misinterpretation. It is recommended to remove the word "includes" from the proposed language.

Revised Language for Readoption

"Setback" means the ~~minimum~~ separation in linear feet, measured on a horizontal plane, required between a treatment works, disposal system, or utilization system and includes physical features such as ~~building~~, buildings, roads, property lines, or water bodies.

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15A NCAC 02T .0103(42)

Proposed Language for Readoption

"Technical specialist" means an individual designated by the Soil and Water Conservation Commission, pursuant to rules adopted by that Commission, to certify animal waste management plans or specific parts of a certified animal waste management plan.

Public Comments

1. "Propose re-wording: "Technical Specialist" means an individual designated by the Soil and Water Conservation Commission to certify that the planning, design and implementation of BMPs, including certification of animal waste management plans or specific parts of a certified animal waste management plan, are to the standards and specifications of the Commission or USDA Natural Resources Conservation Service." – Joseph Hudyncia, NC Department of Agriculture & Consumer Services

Hearing Officer Response

1. Upon researching comment, Hearing Officers recommend the definition of "Technical Specialist" in 02 NCAC 59G .0102(9) which was readopted November 1, 2017, the authority for which comes from G.S. 143-215.10B and G.S. 139.4. "Technical Specialist" means an individual designated by the Soil and Water Conservation Commission to certify that the planning, design and implementation of Best Management Practices, including all or part of an animal waste management plan, meet the standards and specifications of the Soil and Water Conservation Commission or the U.S. Department of Agriculture, Natural Resources Conservation Service.

Revised Language for Readoption

"Technical specialist" means an individual designated by the Soil and Water Conservation Commission, ~~pursuant to rules adopted by that Commission, to certify animal waste management plans or specific parts of a certified animal waste management plan.~~ to certify that the planning, design and implementation of Best Management Practices, including all or part of an animal waste management plan, meet the standards and specifications of the Soil and Water Conservation Commission or the U.S. Department of Agriculture, Natural Resources Conservation Service.

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15A NCAC 02T .0103(43)

Proposed Language for Readoption

"Toxicity test" means a test for toxicity conducted using the procedures contained in 40 CFR 261, 13 Appendix ~~H II~~, which is ~~hereby~~ incorporated by reference including any subsequent amendments and editions.

Public Comments

1. "In 02T.0103 (Definitions) subsection (43) it appears that the toxicity test regulatory reference should be 40 CFR 261.24, rather than Part 261 App. II." – F. Paul Calamita, North Carolina Water Quality Association

Hearing Officer Response

1. Thank you for this clarification. The proposed language should be revised.

Revised Language for Readoption

"Toxicity test" means a test for toxicity conducted using the procedures contained in ~~40 CFR 261.24, 40 CFR 261, 13 Appendix H II~~, which is ~~hereby~~ incorporated by reference including any subsequent amendments and editions.

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15A NCAC 02T .0103(44)(b)

Proposed Language for Readoption

~~dispose/utilize of~~ dispose of or use wastes, including residuals, residues, contaminated soils and animal waste, ~~to~~ on the surface of the ~~land, land;~~ or

Public Comments

1. "Proposed language addition: 'dispose of or use wastes, including residuals, residues, contaminated soils and animal waste, on the surface of the land or soil-incorporated, or'" – Joseph Hudyncia, NC Department of Agriculture & Consumer Services

Hearing Officer Response

1. Residuals that are incorporated into the soil are initially land applied to the ground surface, then incorporated, which is inherently covered under the existing language. It is recommended to make no revisions to the proposed language.

Revised Language for Readoption

No revisions to the proposed language for readoption have been made.

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15A NCAC 02T .0103(44)(c)

Proposed Language for Readoption

dispose of wastes through a subsurface disposal system pursuant to G.S. 143-215.1(b)(4).

Public Comments

1. "Proper reference should be G.S. 143-215(a)(4)" – Steven Berkowitz, PE, On-Site Water Protection Branch, NC Department of Health and Human Services

Hearing Officer Response

1. Thank you for this clarification. The proposed language should be revised.

Revised Language for Readoption

dispose of wastes through a subsurface disposal system pursuant to G.S. ~~143-215.1(b)(4)~~; 143-215.1(a4).

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15A NCAC 02T .0105(j)

Proposed Language for Readoption

The ~~Permittee~~ ~~permittee~~ shall ~~keep permits active~~ comply with all permit conditions and requirements until the waste treatment systems authorized by the permit are properly closed or subsequently permitted under another permit issued by the appropriate permitting authority for that activity.

Public Comments

1. "In this item, the phrase, "Except as otherwise required by other rules in this Subchapter..." should be added at the beginning of this sentence to account for the changes to the dairy permit rescission requirements that are added to 02T .1306." – Keith Larick, North Carolina Farm Bureau Federation, Inc.

Hearing Officer Response

1. Hearing Officers recommend inserting the phrase "except as otherwise required by rules in this Subchapter..."

Revised Language for Readoption

Except as otherwise required by Rule .1306 in this Subchapter, the ~~The~~ ~~Permittee~~ ~~permittee~~ shall ~~keep permits active~~ comply with all permit conditions and requirements until the waste treatment systems authorized by the permit are properly closed or subsequently permitted under another permit issued by the appropriate permitting authority for that activity.

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15A NCAC 02T .0108(e)

Proposed Language for Readoption

All permits requiring an annual fee shall be issued for a time period not to exceed ~~five~~ eight years.

Public Comments

1. "First, we are deeply troubled by the proposal to extend the terms of permits issued under the 02U and 02T rules from five to eight years. Currently, under the 02T rules, "All permits requiring an annual fee shall be issued for a time period not to exceed five years."¹⁷ This requirement also applies to rules issued under the 2U rules.¹⁸ In addition, the 02T rules establish a five-year term for general permits.¹⁹ According to DWR, the extension of these permit terms to eight years is proposed "to match statutory time frames."

In reality, although the legislature previously allowed the issuance of permits for terms "not to exceed eight years,"²⁰ it deferred to the agency regarding the length of permit terms. Indeed, the legislature directed the environmental agency to "review the types of permits issued by the Department and the rule-making agencies under the Department and recommend whether the duration of any of the types of permits should be extended beyond their duration under current law or rule."²¹ Following this review, the Department indicated its intent to "conduct rule-making to allow issuance of the permits under 'Waste Not Discharged to Surface Waters' in 15A NCAC 02T .0108(e) and .0111(e) for a period of eight years."²² A "working group" of agency staff concluded that "[e]xtending the term period from five years to eight years for non-discharge, reclaimed water, and injection well permits would have little effect from a regulatory standpoint."²³

We are dismayed that the agency reached those conclusions without public input; indeed, among our greatest concerns regarding the proposed extension of permit terms is the resulting minimization of opportunity for citizen comment. Currently, the public has the chance to comment on these permits twice a decade. Although the agency has the authority to modify permit terms after initial issuance, in practice it rarely does so before the expiration of the permit term. Consequently, the renewal process is often the only opportunity for the public to recommend changes to improve environmental protection under the permit under consideration.

Unfortunately, the agency appeared to ignore the value of public input when assessing the impact of extended permit terms. In contrast, the working group opined that "[i]t is reasonable to assume that permit holders would see some decrease in costs due to savings in preparing a permit renewal application every eight years as opposed to every five."²⁴ We question whether these hypothetical cost savings outweigh the benefit that public comment periods would afford in terms of both public confidence in the agency and identification of needed permit revisions.

In addition, it strains reason to suggest that the cost-benefit analysis would be identical for every permit issued under 02T and 02U. Indeed, as the "working group" noted, "Non-discharge systems continue to increase in complexity as developers strive to minimize land requirements for disposal systems and can range from small single-family residence systems to large municipal systems capable of treating millions of gallons of wastewater per day."²⁵ This complexity and variability counsels against a one-size-fits-all approach to the extension of all non-discharge permits.

After all, the range of activity permitted under 02T and 02U suggests differing levels of public interest and community impact. And concentration of those impacts in certain areas may require more proactive and frequent agency engagement of affected communities. For instance, consider the general permit governing swine waste management. The proportions of African Americans, Latinos, and Native Americans living within 3 miles of facilities operating under this permit are 1.54, 1.39, and 2.18 times higher, respectively, than the proportion of non-

Hispanic Whites.²⁶ Underscoring the benefit of public input, this disproportionality was first raised by researchers at the University of North Carolina during the public comment period regarding the proposed renewal of that permit. DWR's ultimate decision to ignore public input gave rise to pending litigation and a "Letter of Concern" from the U.S. Environmental Protection Agency directing DEQ to "[c]onduct an assessment of [the] current Swine Waste General Permit to determine what changes to the Permit should be made in order to substantially mitigate adverse impacts to nearby residents."²⁷ We applaud the demonstrated interest in environmental protection by academics at our flagship public university and we encourage DEQ to reconsider the wisdom of foregoing such valuable input. We urge the agency not to extend the terms of permits where receipt and response to more frequent public input could inform improvements to permit terms and ultimately environmental quality." – American Rivers, Et. Al

Hearing Officer Response

1. The Hearing Officers recommend that facilities subject to Sections .1300 and .1400 of this Subchapter shall have a permit not to exceed five years. All other facilities subject to this Subchapter shall have a time period not to exceed eight years.

Revised Language for Readoption

All permits requiring an annual fee shall be issued for a time period not to exceed ~~five eight~~ years, except for those permits subject to Sections .1300 and .1400 of this Subchapter, which shall not exceed five years.

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15A NCAC 02T .0111(f)

Proposed Language for Readoption

Anyone engaged in activities covered by the general permit rules but not permitted in accordance with this Subchapter shall be in violation of G.S. 143-215.1.

Public Comments

1. "Punctuation added: 'Anyone engaged in activities covered by the general permit rules, but not permitted in accordance with this Subchapter, shall be in violation of G.S. 143-215.1.'" – Joseph Hudyncia, NC Department of Agriculture & Consumer Services

Hearing Officer Response

1. Thank you for this clarification. The proposed language should be revised.

Revised Language for Readoption

Anyone engaged in activities covered by the general permit **rules rules** but not permitted in accordance with this Subchapter shall be in violation of G.S. 143-215.1.

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15A NCAC 02T .0113

Proposed Language for Readoption

(a) The following disposal systems as well as those in Permitting By Regulation rules in this Subchapter (i.e., Rules .0203, .0303, .0403, ~~.1003~~, .1103, .1203, .1303, .1403, and .1503) ~~are~~ shall be deemed to be permitted pursuant to G.S. ~~143-215.1(b)~~ 143-215.1(b), and it shall not be necessary for the Division to issue individual permits or coverage under a general permit for construction or operation of the following disposal systems provided the system does not result in any violations of surface water or groundwater standards, there is no direct discharge to surface waters, and all criteria required for the specific system ~~is~~ are met:

- (1) Swimming pool and spa filter backwash and drainage, filter backwash from aesthetic fountains, and filter backwash from commercial or residential water features such as garden ponds or fish ~~ponds~~ ponds, that is discharged to the land surface;
- (2) Backwash from raw water intake screening devices that is discharged to the land surface;
- (3) Condensate from residential or commercial air conditioning units that is discharged to the land surface;
- (4) Discharges to the land surface from individual non-commercial car washing operations;
- (5) Discharges to the land surface from flushing and hydrostatic testing water associated with utility distribution systems, new sewer extensions or new reclaimed water distribution lines;
- (6) Street wash water that is discharged to the land surface;
- (7) Discharges to the land surface from firefighting ~~fire fighting~~ activities;
- (8) Discharges to the land surface associated with emergency removal and treatment activities for spilled oil authorized by the federal or state on-scene coordinator when such removals are undertaken to minimize overall environmental damage due to an oil spill;
- (9) Discharges to the land surface associated with biological or chemical decontamination activities performed as a result of an emergency declared by the Governor or the Director of the Division of Emergency Management and that are conducted by or under the direct supervision of the federal or state on-scene coordinator and that meet the following criteria:
 - (A) the volume produced by the decontamination activity is too large to be contained onsite;
 - (B) the Division is informed prior to commencement of the decontamination activity; and
 - (C) the wastewater is not radiologically contaminated or classified as hazardous waste;
- (10) Drilling muds, cuttings and well water from the development of wells or from other construction ~~activities~~ activities, including directional boring, except such wastes generated in the construction and development of oil and gas wells regulated by Article 27 of G.S. 113;
- (11) Purge water from groundwater monitoring wells;
- (12) Composting facilities for dead ~~animals~~, animals if the construction and operation of the facilities is approved by the North Carolina Department of Agriculture and Consumer Services; the facilities are constructed on an impervious, weight-bearing foundation, operated under a roof; and the facilities are approved by the State Veterinarian pursuant to G.S. 106-403;
- (13) Overflow from elevated potable water storage facilities;
- (14) Mobile carwashes if:
 - (A) all detergents used are biodegradable;
 - (B) no steam cleaning, engine or parts cleaning is being conducted;
 - (C) notification is made prior to operation by the owner to the municipality or if not in a municipality then the county where the cleaning service is being provided; and
 - (D) ~~all~~ non-recyclable washwater is collected and discharged into a sanitary sewer or wastewater treatment ~~facility~~ facility, upon approval of the facility's ~~owner~~. owner, such that no ponding or runoff of the washwater occurs;
- (15) Mine tailings ~~where if~~ no chemicals are used in the mining process;
- (16) Mine dewatering ~~where if~~ no chemicals are used in the mining process; ~~and~~

- (17) Wastewater created from the washing of produce, with no further processing on-site, on farms where the wastewater is irrigated onto fields so as not to create runoff or cause a ~~discharge~~; discharge; and
- (18) Discharges to the land surface of less than 5,000 gallons per week of backwash water from greensand filters, not including conventional filters, reverse osmosis, and ion exchange filters, at potable water wells, provided ponding or runoff does not occur and the backwash does not contain radioactive material or arsenic; and
- (19) Discharges to the land surface of less than 350 gallons per week of backwash water from reverse osmosis, ion exchange filters, greensand filters at private drinking water wells serving single-family residences, provided ponding or runoff does not occur.

(b) Nothing in this Rule shall be deemed to allow the violation of any ~~assigned~~ surface water, groundwater, or air quality standards, and in addition any such violation shall be considered a violation of a condition of a permit. Further, nothing in this Rule shall be deemed to apply to or permit disposal systems for which a state National Pollutant Discharge Elimination System permit is otherwise required.

(c) Any violation of this Rule or any discharge to surface waters from the disposal systems listed in Paragraph (a) of this Rule or the activities listed in other Permitted By Regulation rules in this Subchapter shall be reported in accordance with 15A NCAC 02B .0506.

(d) Disposal systems deemed permitted under this Subchapter shall remain deemed permitted, notwithstanding any violations of surface water or groundwater standards or violations of this Rule or other Permitted By Regulation rules in this Subchapter, until such time as the Director determines that they shall not be deemed permitted in accordance with the criteria established in this Rule.

(e) The Director may determine that a disposal system ~~should shall~~ not be deemed to be permitted in accordance with this Rule or other Permitted By Regulation rules in this Subchapter and require the disposal system to obtain an individual permit or a certificate of coverage under a general permit. This determination shall be made based on existing or projected environmental impacts, compliance with the provisions of this Rule or other Permitted By Regulation rules in this Subchapter, and the compliance history of the facility owner.

Public Comments

1. At the same time EMC proposes to limit public input regarding some categories of permitted activity, it proposes to eliminate public input with respect to others by expanding the scope of activities “deemed permitted” by rule.²⁸ A facility is “deemed permitted” when, even though it does not operate under a permit issued by DWR, it is viewed as “having a needed permit and being compliant with the permitting requirements of G.S. 143-215.1(a).²⁹ Typically, a certain activity otherwise required to be permitted is “deemed permitted” as long as the activity is performed consistent with specific limitations.³⁰ We caution the agency against over-reliance on permitting by regulation, particularly where the assumption of compliance is contrary to available information about operators in a particular category of deemed permitted activity.

Drastic budget cuts have substantially hindered the ability of DWR staff in regional offices to ensure compliance with the requirements necessary for an activity to be “deemed permitted.”³¹ Understaffed regional offices may respond to a complaint, but they do not conduct routine inspections of “deemed permitted” operations. As such, whenever the agency “deems permitted” an activity, it should consider the potential consequence of effectively ignoring that activity absent a citizen complaint. The agency should also consider whether foregoing a requirement for permit application will hamper the agency’s knowledge of activities that may increase in frequency over time such that the cumulative effect of turning a blind eye becomes unsustainable.³² The explosion of “deemed permitted” poultry operations in North Carolina serves as a cautionary tale.

Under North Carolina law, it is illegal to “[c]onstruct or operate an animal waste management system, as defined in G.S. 143-215.10B, without obtaining a permit under either [Part 1] or Part 1A of [Article 21].”³³ An “animal waste management system” is defined as “a combination of structures and nonstructural practices serving a feedlot that provide for the collection, treatment, storage or land application of animal waste.”³⁴ Most permits governing animal waste management systems are issued pursuant to Part 1A, which contemplates the creation of a permitting

system for hog and dairy operations as well as a small subset of dry litter poultry operations.³⁵ Rather than require other dry litter operations to get a permit for their animal waste management systems, the agency “deemed permitted” remaining operations if they comply with regulatory guidelines.³⁶ Today, those “deemed permitted” operations constitute the vast majority of dry litter poultry operations in the State.³⁷ Meanwhile, the poultry industry has expanded significantly in North Carolina, and poultry operations are now the largest and fastest growing source of nutrients from animal agriculture in North Carolina.³⁸ Yet, because DWR does not require a permit, “the locations of dry litter poultry operations and the disposal of their waste are not known to environmental regulators, making it difficult to form a complete picture of possible non-point source contributions within a specific watershed.”³⁹

To be fair, the new activities proposed to be “deemed permitted” in the instant rulemaking do not pose nearly the same threat to water quality as do the thousands of dry litter poultry operations in North Carolina. But we are gravely concerned by the proposal to retain the “deemed permitted” status for dry litter poultry operations and urge the EMC to close the loophole through which so many contributions to water pollution currently pass. We also urge the agency to track changes in the volume or impact of other “deemed permitted” activities to avoid turning a blind eye to potentially increasing environmental threats. Without appropriate consideration of such factors, the EMC risks shirking its duty to act on all permits so as to “prevent . . . pollution of the waters of the State from any new or enlarged sources” and “prevent violation of water quality standards due to the cumulative effects of permit decisions.”⁴⁰ – American Rivers, Et. Al

Hearing Officer Response

1. Hearing officers received comment in each of the sessions concerning imposition of additional regulatory requirements on dry litter operations. G.S. 143-215.10B excludes dry litter poultry operations from the definition of “animal operation” which would be subject to permitting under G.S. 143-215.10C. Also, G.S. 150B-19.3 prohibits the adoption of certain environmental regulations.

It is the hearing officers’ opinion that additional requirements for dry litter operations would be environmentally beneficial. At minimum, we believe operators of dry litter facilities handling litter from one or more poultry houses of a capacity yet to be determined should: receive comprehensive nutrient management training, develop comprehensive nutrient management plans, participate in a certification program on management of litter using sound nutrient management principles, and report management practices (including land application) to DEQ.

Revised Language for Readoption

No revisions to the proposed language for readoption have been made based upon the submitted comment. However, [technical corrections](#) have been made to 02T .0113(a)(12), (18), and (19).

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15A NCAC 02T .0113(a)(12)

Proposed Language for Readoption

Composting facilities for dead ~~animals~~, ~~animals~~ if the construction and operation of the facilities is approved by the North Carolina Department of Agriculture and Consumer Services; the facilities are constructed on an impervious, weight-bearing foundation, operated under a roof; and the facilities are approved by the State Veterinarian pursuant to G.S. 106-403;

Public Comments

1. Proposed Language: Composting facilities or systems for dead animals, if the construction and operation is approved by the North Carolina Department of Agriculture and Consumer Services (NCDA&CS); facilities or systems are constructed and operated according to applicable NCDA&CS, United States Department of Agriculture – Natural Resources Conservation Service (USDA-NRCS), or USDA – Animal and Plant Health Inspection Service (USDA-APHIS) Veterinary Services standards and in a manner that prevents pollution of surface water and ground water; and the facilities or systems are approved by the State Veterinarian pursuant to 02 NCAC 52C .0102 and G.S.106-403 – NCDA&CS

Hearing Officer Response

1. Section 33(a) of Session Law 2015-263 modified G.S. 106-399.4(a) to allow for any emergency measure or procedure relating to the composting of dead domesticated animals due to an imminent threat within NC of a contagious animal disease to be deemed permitted pursuant to G.S. 143-215.1(b). The Hearing Officers recommend modification of this rule to reflect the changes in General Statute.

Revised Language for Readoption

Composting facilities for ~~dead animals~~, ~~animals~~ ~~mortality~~ if the construction and operation of the facilities is approved by the North Carolina Department of Agriculture and Consumer Services; the facilities are constructed on an impervious, weight-bearing foundation, operated under a roof; and the facilities are approved by the State Veterinarian pursuant to G.S. 106-403. In the event of an imminent threat of a contagious animal disease, any emergency measure or procedure related to composting of animal mortality pursuant to G.S. 106-399.4(a);

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15A NCAC 02T .0120(b)

Proposed Language for Readoption

When any of the following apply, permits for new and expanding facilities shall not be granted, unless the Division determines that the permit is specifically and solely needed for the construction of facilities to resolve non-compliance with any environmental statute or rule:

- (1) The Applicant applicant or any parent, subsidiary, or other affiliate of the Applicant applicant or parent has been convicted of environmental crimes under G.S. 143-215.6B or under Federal law that would otherwise be prosecuted under G.S. 143-215.6B where all appeals and all appeals of this conviction have been abandoned or exhausted.
- (2) The Applicant applicant or any parent, subsidiary, or other affiliate of the Applicant affiliation has previously abandoned a wastewater treatment facility without properly closing the facility in accordance with the permit or this Subchapter.
- (3) The Applicant applicant or any parent, subsidiary, or other affiliate of the Applicant affiliation has not paid a civil penalty where all appeals and all appeals of this penalty have been abandoned or exhausted.
- (4) The Applicant applicant or any parent, subsidiary, or other affiliate of the Applicant affiliation is currently not compliant with any compliance schedule in a permit, settlement agreement or order.
- (5) The Applicant applicant or any parent, subsidiary, or other affiliate of the Applicant affiliation has not paid an annual fee in accordance with Rule .0105(e)(2).

Public Comments

1. “Whenever someone applies to DWR for a permit, the agency has the authority to require proof that “the applicant, or any parent, subsidiary, or other affiliate of the applicant or parent . . . [h]as substantially complied with the effluent standards and limitations and waste management treatment practices applicable to any activity in which the applicant has previously engaged, and has been in substantial compliance with other federal and state laws, regulations, and rules for the protection of the environment”⁴⁸ Indeed, the rules acknowledge this authority, at least in the context of applications for “permits for new and expanding facilities,” and articulate situations in which such permits may be denied due to noncompliance by various actors.⁴⁹ We believe the rules should also clearly state that similar noncompliance may result in the denial of an application for renewal of a permit.⁵⁰ The EMC proposes to add language stating “Permits for renewing facilities shall not be granted if the Applicant or any affiliation has not paid an annual fee in accordance with Rule .0105(e).”⁵¹ We recommend clearly articulating other forms of noncompliance by the applicant or affiliate that would trigger permitting consequences in the renewal context; at minimum, the same noncompliance that triggers rejection of a permit application under 15A NCAC 02T .0120(b) for a new or expanding facility should trigger rejection of an application for renewal of a permit.

In some instances, the EMC is not only authorized but in fact obligated to consider historical noncompliance when making permitting decisions. Of particular relevance to this rulemaking, in 1997 the legislature directed the EMC to create a “violation points system applicable to permits for animal waste management systems for swine farms.”⁵² Under this system, violations of applicable law would be assigned point values and the accumulation of a pre-determined number of points would have automatic permitting consequences up to and including permit revocation.⁵³ In order to heed the legislature’s direction, rulemaking is required to codify the points system and clarify the conditions under which one whose permit is revoked may reapply for a swine waste management permit. The EMC should not continue to ignore this decades-old legal obligation when conducting rulemaking to readopt the very subchapter, 02T, in which the violations points system would be codified.⁵⁴ We implore the EMC to take this overdue step to ensure that repeat offenders are not treated the same as compliant operations.” – American Rivers, Et. Al

Hearing Officer Response

1. The proposed language in 15A NCAC 02T .0108(b) contains the necessary mechanisms to issue or deny renewal applications based upon the compliance history of a renewing facility. This language states:

“(b) The Director ~~may~~: shall:

- (1) issue a ~~permit~~ permit:
 - (A) containing such conditions as are necessary to effectuate the purposes of Article 21, Chapter 143 of the General Statutes; and
 - ~~(B)~~ (B) ~~issue a permit~~ containing time schedules for achieving compliance with applicable effluent standards and limitations, surface water or groundwater standards and other legally applicable requirements;
- ~~(2)~~ (2) ~~(3)~~ deny a permit application ~~where~~ if necessary to effectuate:
 - (A) the purposes of Article 21, Chapter 143;
 - (B) the purposes of G.S. 143-215.67(a); or
 - ~~(C) rules on coastal waste treatment, disposal, found in Section 15A NCAC 02H .0400;~~
 - (C) ~~(D)~~ rules on groundwater quality standards found in Subchapter 02L of this ~~Chapter~~. Chapter;or
- ~~(3)~~ (4) hold public meetings when necessary to obtain additional information needed to complete the review of the application. The application shall be considered as incomplete until the close of the meeting record.”

Revised Language for Readoption

No revisions to the proposed language for readoption have been made.

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15A NCAC 02T .0305(f)

Proposed Language for Readoption

The following ~~minimum~~ separations shall be provided ~~for~~ from the sewer system to the listed feature except as allowed by Paragraph (g) of this Rule:

Storm sewers and other utilities not listed below (vertical)	24 18 inches
Water mains (vertical-water over sewer including in benched trenches)	18 inches
or (horizontal)	10 feet
Reclaimed water lines (vertical – reclaimed over sewer)	18 inches
or (horizontal)	2 feet
Any private or public water supply source, including any consisting of wells, WS-I waters <u>waters, or Class I Class I, or</u> Class II, impounded or Class III reservoirs used as a source of drinking water	100 feet
Waters classified WS (except WS I or WS V), WS-II, WS-III, WS-IV, B, SA, ORW, HQW, or SB from normal high water (or tide elevation) <u>and elevation</u> , wetlands <u>that are directly abutting these waters and wetlands classified as UWL or SWL</u>	50 feet
Any other stream, lake, impoundment, <u>wetlands classified as WL, waters classified as C, SC, or WS-V,</u> or ground water lowering and surface drainage ditches	10 feet
Any building foundation	5 feet
Any basement	10 feet
Top slope of embankment or cuts of 2 feet or more vertical height	10 feet
Drainage systems and interceptor drains	5 feet
Any swimming pool	10 feet
Final earth grade (vertical)	36 inches

Public Comments

1. “What is the rationale for having this remain at 10ft? The C and SC waters tend to have higher nutrient and bacteria loads. Efforts to reduce these loads are costly. Permitting systems at 10ft rather than at the 50ft required for SA, B, and other waters makes it very difficult to make headway in remediating these waterways. Since the rule is up for revision, this would be an excellent time to increase this distance; if not to 50ft, at least to 25ft. These waters need more protection; not less.” – Diana M. C. Rashash, PhD EI, North Carolina Cooperative Extension

Hearing Officer Response

1. The Hearing Officers do not recommend proposing increasing the setback requirements. For agricultural parcels the setback is 10 feet of vegetative buffer to minimize erosion and siltation of the stream. The horizontal separation from drinking water mains is also 10 feet. 02B rules have no further setback requirements. This would limit development on many types of properties.

Revised Language for Readoption

No revisions to the proposed language for readoption have been made.

15A NCAC 02T .0305(h)(1)(A)

Proposed Language for Readoption

~~Pump stations, except when exempted by Subparagraph (j)(2) of this Rule, Pump stations~~ shall be designed with multiple pumps such that peak flow can be pumped with the largest pump out of service. ~~Simplex pump stations (i.e. pump stations with only one pump) shall only be allowable to serve only a single building with an average daily design flow less than 600 gallons per day as calculated using Rule .0114 of this Subchapter.~~

Public Comments

1. "Recommend simplex allowance be for systems less than or equal to 600 gpd (instead of only "less than") – Steven Berkowitz, PE, On-Site Water Protection Branch, NC Department of Health and Human Services

Hearing Officer Response

1. The Hearing Officers recommend allowing simplex pump stations for discharges of 600 gpd or less. This was the original intent.

Revised Language for Readoption

~~Pump stations, except when exempted by Subparagraph (j)(2) of this Rule, Pump stations~~ shall be designed with multiple pumps such that peak flow can be pumped with the largest pump out of service. ~~Simplex pump stations (i.e. pump stations with only one pump) shall only be allowable to serve only a single building with an average daily design flow less than or equal to 600 gallons per day as calculated using Rule .0114 of this Subchapter.~~

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15A NCAC 02T .0306(d)(2)

Proposed Language for Readoption

All permitting actions shall be summarized and submitted to the Division and the appropriate Division Regional Office ~~on a quarterly basis~~ annually on Division ~~forms.~~ forms unless more frequent reporting is required by the Division. The report shall also provide a listing and summary of all enforcement actions taken or pending during the quarter. ~~The quarters begin on January 1, April 1, July 1 and October 1.~~ The report shall be submitted by February 1 of each year, within 30 days after the end of each quarter. Reporting forms are available at: <https://deq.nc.gov/about/divisions/water-resources/water-resources-permits/wastewater-branch/collection-systems/local-programs>

Public Comments

1. “As proposed, this section would require utilities to submit an annual report of all permitting actions taken during the year unless more frequent reporting is required. NCWQA believes that this section must contain a standard to guide the Division’s exercise of its discretion. We recommend that the standard be stated as “unless more frequent monitoring is required by the Division to address specific compliance issues identified by the Division.”

Also, the section should state that “The report shall also provide a listing and summary of all enforcement actions taken or pending during the ~~quarter~~ reporting period.” – F. Paul Calamita, North Carolina Water Quality Association

Hearing Officer Response

1. For the first part of the comment, the Hearing Officers do not recommend adding the language proposed by NCWQA. There may be other times the Division may request the information that are not based on compliance issues (e.g. during a routine audit, block flow allocation requests). For the second part, it is recommended that the change be made.

Revised Language for Readoption

All permitting actions shall be summarized and submitted to the Division and the appropriate Division Regional Office ~~on a quarterly basis~~ annually on Division ~~forms.~~ forms unless more frequent reporting is required by the Division. The report shall also provide a listing and summary of all enforcement actions taken or pending during the reporting period, quarter. ~~The quarters begin on January 1, April 1, July 1 and October 1.~~ The report shall be submitted by February 1 of each year, within 30 days after the end of each quarter. Reporting forms are available at: <https://deq.nc.gov/about/divisions/water-resources/water-resources-permits/wastewater-branch/collection-systems/local-programs>

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15A NCAC 02T .0403(a)(4)

Proposed Language for Readoption

Pump stations that are not connected to a telemetry system (~~i.e., remote alarm system~~) ~~are inspected~~ shall be inspected by the permittee or its representative every day (i.e., 365 days per year). Pump stations that are connected to a telemetry system ~~are~~ shall be inspected at least once per week.

Public Comments

1. “Daily inspections for pump stations without monitoring are unnecessary, particularly when such stations have sufficient storage capacity to contain any overflow for more than 24 hours. This section should be amended to read:

Pump stations that are not connected to a telemetry system (i.e., remote alarm system) are inspected by the permittee or its representative every day (i.e., 365 days per year), unless the permittee demonstrates that daily inspections are not necessary because the pump station has sufficient storage capacity to cover a longer inspection interval.” – F. Paul Calamita, North Carolina Water Quality Association

Hearing Officer Response

1. The Hearing Officers recommend allowing the Permittee to demonstrate that daily inspections are not necessary with the addition of language to indicate the storage capacity must be available above the pump on elevation and that the inspection interval will not be longer than seven days.

Revised Language for Readoption

Pump stations that are not connected to a telemetry system (~~i.e., remote alarm system~~) ~~are inspected~~ shall be inspected by the permittee or its representative every day (i.e., 365 days per ~~year~~; year), unless the permittee demonstrates that daily inspections are not necessary because the pump station has sufficient storage capacity, above the elevation at which the pump activates, to cover a longer inspection interval. In no case shall the inspection interval exceed seven days. Pump stations that are connected to a telemetry system ~~are~~ shall be inspected at least once per week.

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15A NCAC 02T .0403(a)(5)

Proposed Language for Readoption

High-priority sewers ~~are~~ shall be inspected by the permittee or its representative ~~at least~~ once every ~~six months~~ six-months, and inspections ~~are~~ shall be documented.

Public Comments

1. "This section requires permittees to inspect high priority sewer lines every six months, which is costly, unnecessary and unreasonable. The section should be revised to state: "High-priority sewers are inspected by the permittee or its representative at least once every ~~six months~~ year, and inspections are documented.'" – F. Paul Calamita, North Carolina Water Quality Association

Hearing Officer Response

1. The Hearing Officers do not recommend reducing the frequency of inspection for High Priority Lines (HPLs) to annual. HPLs are at a higher risk of failure because of their construction and/or location.

Revised Language for Readoption

No revisions to the proposed language for readoption have been made.

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15A NCAC 02T .0405(a)

Proposed Language for Readoption

Permit applications for the initial issuance of a collection system permit shall be completed and submitted to the Division within 60 days of the collection system owner's certified mail receipt of the Division's request for application submittal. Permit renewal requests shall be submitted to the Director at least 180 days prior to expiration, unless the permit has been revoked in accordance with ~~15A NCAC 02T .0110~~ 15A NCAC 02T .0110, a request has been made to rescind the permit, or the Director extends this deadline. All applications must be submitted in duplicate, completed on official forms, and fully executed. Application forms available at: <https://deq.nc.gov/about/divisions/water-resources/water-resources-permits/wastewater-branch/collection-systems/system-wide-collection-system-permitting>

Public Comments

1. Federal regulations require a permittee to submit a new application at least 180 days before the expiration date of its existing permit. *See* 40 C.F.R. § 122.21(d). The permitting authority may grant permission to apply at a later date, but may not allow applications to be submitted later than the expiration date of the existing permit. *See id.* For clarity, the Department should revise the rule to state: “Permit renewal requests shall be submitted to the Director at least 180 days prior to expiration, unless . . . the Director extends such deadline, but in no case later than the expiration date of the existing permit.” – F. Paul Calamita, North Carolina Water Quality Association

Hearing Officer Response

1. The system-wide collection system permitting program is not a Federal program and therefore not subject to the 40 CFR 122.21(d). There is no significant difference between a new permit application and a renewal permit application. Therefore, it is unclear why we wouldn't allow a renewal instead of forcing them to apply for a new one.

Revised Language for Readoption

No revisions to the proposed language for readoption have been made.

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15A NCAC 02T .0505(t)

Proposed Language for Readoption

~~The irrigation system~~ Facilities with an average daily flow greater than 10,000 GPD shall be provided with a flow meter to ~~allow accurate determination of~~ measure the volume of treated wastewater applied to each field.

Public Comments

1. “Disagree with exemption of facilities with ADF less than 10,000 GPD providing flow meter. Recommend all wastewater irrigation facilities provide accurate flow measurement or reduce flow criteria to 1,000 GPD.” – Cory Larsen, PE, Wake County Environmental Services

Hearing Officer Response

1. It has been a long standing practice to require flow meters for facilities with an average daily flow (ADF) greater than 10,000 GPD, while allowing flow estimates using water usage records, provided the water use is metered, for facilities less than 10,000 GPD. That being said, there is no objection to requiring flow meters for all facilities, as any facility can petition the Division for Alternative Design Criteria pursuant to 15A NCAC 02T .0105(n). Please note that the proposed language in 15A NCAC 02T .0705(x) should also be revised, as well as language added to the design criteria for dedicated systems in 15A NCAC 02U .0402.

Revised Language for Readoption

~~The irrigation system~~ Facilities with an average daily flow greater than 10,000 GPD shall be provided with a flow meter to ~~allow accurate determination of~~ measure the volume of treated wastewater applied to each field.

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15A NCAC 02T .0505(u)

Proposed Language for Readoption

Coastal waste treatment facilities, defined in 15A NCAC 02H .0403, shall be equipped with noise and odor control devices that shall be enclosed.

Public Comments

1. "Multiple references to portions of .0400 appear to be inconsistent with concurrent proposal to Repeal this Rule Section" – Steven Berkowitz, PE, On-Site Water Protection Branch, NC Department of Health and Human Services

Hearing Officer Response

1. It is not the Division's intent to repeal the 15A NCAC 02H .0400 rules, but to exempt non-discharge facilities from these requirements with the understanding that applicable requirements to non-discharge facilities in the aforementioned rules are being incorporated into the 02T subchapter.

Revised Language for Readoption

No revisions to the proposed language for readoption have been made.

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15A NCAC 02T .0505(v)

Proposed Language for Readoption

For coastal waste treatment facilities, defined in 15A NCAC 02H .0403, all essential treatment and disposal units shall be provided in duplicate.

Public Comments

1. "Multiple references to portions of .0400 appear to be inconsistent with concurrent proposal to Repeal this Rule Section" – Steven Berkowitz, PE, On-Site Water Protection Branch, NC Department of Health and Human Services

Hearing Officer Response

1. It is not the Division's intent to repeal the 15A NCAC 02H .0400 rules, but to exempt non-discharge facilities from these requirements with the understanding that applicable requirements to non-discharge facilities in the aforementioned rules are being incorporated into the 02T subchapter.

Revised Language for Readoption

No revisions to the proposed language for readoption have been made.

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15A NCAC 02T .0505(w)

Proposed Language for Readoption

Facilities serving residential communities shall provide five days of effluent storage.

Public Comments

1. "Recommend clarification that five days storage is the minimum required for residential facilities. The way it reads infers that only five days is required regardless of the actual storage required determined by the water balance." – Cory Larsen, PE, Wake County Environmental Services

Hearing Officer Response

1. Agreed. The proposed language implies that only five days of effluent storage is necessary regardless of the results of the water balance. The proposed language should be revised.

Revised Language for Readoption

Facilities serving residential communities shall provide five days of effluent ~~storage.~~ storage, unless additional storage is determined necessary pursuant to the water balance requirements in .0504(k) of this Section.

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15A NCAC 02T .0506(a)

Proposed Language for Readoption

The setbacks for irrigation sites shall be as follows:

	Spray (feet)	Drip (feet)
Any habitable residence or place of public assembly under separate ownership or not to be maintained as part of the project site	400	100
Any habitable residence or place of public assembly owned by the Permittee permittee to be maintained as part of the project site	200	15
Any private or public water supply source	100	100
Surface waters (streams – intermittent and perennial, perennial waterbodies, and wetlands)	100	100
Groundwater lowering ditches (where the bottom of the ditch intersects the SHWT)	100	100
Surface water diversions (ephemeral streams, waterways, ditches)	25	25
Any well with exception of monitoring wells	100	100
Any property line	150	50
Top of slope of embankments or cuts of two feet or more in vertical height	15	15
Any water line from a disposal system	10	10
Subsurface groundwater lowering drainage systems	100	100
Any swimming pool	100	100
Public right of way	50	50
Nitrification field	20	20
Any building foundation or basement	15	15

Public Comments

1. “The rules should maintain the requirement for a 100-ft setback from swimming pools instead of assuming all pools are “places of public accommodation”” – Vivian Lord
2. “Swimming pool setback should remain; it is not clear that they are covered under place of public assembly setbacks. Alternatively, specifically state swimming pools in the habitable residence or public place of assembly setback.” – Cory Larsen, PE, Wake County Environmental Services

Hearing Officer Response

- For the purposes of the 02T and 02U subchapters, “public” has been interpreted as “of or relating to people in general.” This is reflected in the public access prohibitions found in .0505(q) and other sections in the 02T and 02U subchapters. “Public” is not interpreted as the opposite of “private” in regard to places, property, etc. In addition, it is not necessary to specifically note “swimming pools” in the rule, as other places of public assembly, such as churches, schools, day cares, athletic fields, tennis courts, etc. are not specified by name, but are inherently covered under the term “place of public assembly.” Regardless, the Hearing Officers recommend that the term “public” be removed from the first two listed setbacks.

Revised Language for Readoption

The setbacks for irrigation sites shall be as follows:

	Spray (feet)	Drip (feet)
Any habitable residence or place of public assembly under separate ownership or not to be maintained as part of the project site	400	100
Any habitable residence or place of public assembly owned by the <u>Permittee</u> permittee to be maintained as part of the project site	200	15
Any private or public water supply source	100	100
Surface waters (streams – intermittent and perennial, perennial waterbodies, and wetlands)	100	100
Groundwater lowering ditches (where the bottom of the ditch intersects the SHWT)	100	100
Surface water diversions (ephemeral streams, waterways, ditches)	25	25
Any well with exception of monitoring wells	100	100
Any property line	150	50
Top of slope of embankments or cuts of two feet or more in vertical height	15	15
Any water line from a disposal system	10	10
Subsurface groundwater lowering drainage systems	100	100
Any swimming pool	100	100
Public right of way	50	50
Nitrification field	20	20
Any building foundation or basement	15	15

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15A NCAC 02T .0506(e)

Proposed Language for Readoption

Setbacks to property lines established in Paragraphs (a) and (b) of this Rule shall not be applicable when the Permittee, or the entity from which the Permittee is leasing, owns both parcels creating said property line.

Public Comments

1. “While it is important that setbacks be clearly defined, it is just as important that they serve their intended purpose of ensuring permitted activity is not conducted in problematic locations. For instance, typically, rules state the required setback between permitted activity and “any property line” to minimize impacts of permitted activity on adjacent parcels.⁴³ However, in the proposed rules, setbacks to property lines “shall not be applicable when the Permittee, or the entity from which the Permittee is leasing, owns both parcels creating said property line.”⁴⁴

At first blush, this may seem reasonable. If a permittee wishes to conduct permitted activity next to his own property, perhaps he should be allowed to assume the risk of impacting his own property by essentially waiving the protection otherwise afforded by a setback. However, this justification fails to consider the potential that the adjacent property is occupied by the permittee’s tenant. After all, the impacts of permitted activity can affect people, not just land.

According to the U.S. Census Bureau, between 2011 and 2015, only 65.1% of housing units in North Carolina were owner-occupied.⁴⁵ Yet, under the proposed rule, whether or not one owns his residence could directly impact the degree of protection afforded under the 02T and 02U rules. Not only does this unfairly burden tenants, it threatens to invite violations of well-established principles of landlord/tenant law. “North Carolina law provides that a lease, in the absence of a provision to the contrary, carries with it an implied covenant that the tenant will have the quiet and peaceable possession of the leased premises during the term of the lease.”⁴⁶ The EMC should not adopt rules that allow an absentee landlord to breach this implied covenant of quiet enjoyment by waiving setback requirements.

Of course, if a permittee does not lease the property adjacent to the parcel on which the permitted activity is conducted, this concern would be mitigated. We encourage the EMC to consider adding this caveat to prevent landlords from waiving protections or violating legal rights designed to benefit tenants. Alternatively, the EMC should consider removing this setback exception and analyzing on a case-by-case basis whether or not a variance from the setback would provide equal or better treatment of waste, equal or better protection of the waters of the state, and no increased potential for nuisance conditions from noise, odor, or vermin.⁴⁷ – American Rivers, Et. Al

2. “With the passing of HB 56 on October 4, 2017, GS 143-215.1(i) has been amended such that there are no longer setbacks to property lines for “multiple contiguous properties under common ownership and permitted for use as a disposal system.” To date, no one within NCDEQ has determined or announced the definition/interpretation of “common ownership”. In an email dated October 4, 2017, Mr. Nathaniel Thornburg made the following comment: “We no longer need to require that the Permittee provide setbacks to their own contiguous property lines, or obtain and record setback waivers.” But to my knowledge, the 2T proposed Rule Change does not address this new interpretation as a result of HB 56 passing.” – Martin Mabe, LSS, Willcox & Mabe Soil Solutions, PLLC

Hearing Officer Response

1. The proposed rule language only exempts the Permittee from complying with property line setbacks when the Permittee owns or is leasing the parcels that create the property line. The Permittee is still responsible for ensuring that the irrigation, treatment, and storage facilities maintain setbacks to any habitable residence or place of assembly under separate ownership and under the Permittee's ownership.

In addition, the Hearing Officers solicited comment from the North Carolina Department of Justice's Environmental Division. Special Deputy Attorney General Phillip T. Reynolds stated, "After reviewing the history of the rule and the supporting statutes, it seems to me that the proposed language...is simply an extension of the statutory mandate contained in N.C. Gen. Stat. § 143-215.1(i), which states in relevant part: "Multiple contiguous properties under common ownership and permitted for use as a disposal system shall be treated as a single property with regard to determination of a compliance boundary and setbacks to property lines." Because the authority to adopt the rule is predicated on the statute and because the statute clearly requires that "multiple continuous properties ... shall be treated as a single property," it does not appear that the principles of landlord/tenant law are relevant for the purposes of the specific rule."

2. [Session Law 2017-209](#) amended [G.S. 143-215.1\(i\)](#) as follows: "Multiple contiguous properties under common ownership and permitted for use as a disposal system shall be treated as a single property with regard to determination of a compliance ~~boundary~~ boundary and setbacks to property lines." Proposed Rule 15A NCAC 02T .0506(e) is a reflection of the revised general statute language.

Revised Language for Readoption

No revisions to the proposed language for readoption have been made.

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15A NCAC 02T .0604(g)

Proposed Language for Readoption

A letter from the local County Health Department denying the site for all subsurface systems shall be submitted to the Division by the ~~Applicant.~~ ~~applicant.~~

Public Comments

1. "A county health department denial letter should not be a requirement of SFR systems pursuing reclaimed water permitting since reuse is considered to be beneficial reuse of resources rather than disposal of wastewater. Some property owners will prefer a reclaimed water system over an onsite septic system when both options are available."
– Cory Larsen, PE, Wake County Environmental Services

Hearing Officer Response

1. Pursuant to the proposed language in 15A NCAC 02T .0601, "one building single-family residences generating and utilizing reclaimed water shall meet the requirements established in 15A NCAC 02U." Accordingly, the requirements in 15A NCAC 02T .0604(g) do not apply to single-family residences utilizing reclaimed water.

Revised Language for Readoption

No revisions to the proposed language for readoption have been made.

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15A NCAC 02T .0606(a)

Proposed Language for Readoption

The setbacks for Irrigation sites shall be as follows:

	Spray (feet)	Drip (feet)
Any habitable residence or place of public assembly under separate ownership or not to be maintained as part of the project site	400	100
Any habitable residence or place of public assembly owned by the Permittee permittee to be maintained as part of the project site	200	15
Any private or public water supply source	100	100
Surface waters (streams – intermittent and perennial, perennial waterbodies, and wetlands)	100	100
Groundwater lowering ditches (where the bottom of the ditch intersects the SHWT)	100	100
Surface water diversions (ephemeral streams, waterways, ditches)	25	25
Any well with exception of monitoring wells	100	100
Any property line	150	50
Top of slope of embankments or cuts of two feet or more in vertical height	15	15
Any water line from a disposal system	10	10
Subsurface groundwater lowering drainage systems	100	100
Any swimming pool	100	100
Public right of way	50	50
Nitrification field	20	20
Any building foundation or basement	15	15

Public Comments

1. “The rules should maintain the requirement for a 100-ft setback from swimming pools instead of assuming all pools are “places of public accommodation”” – Vivian Lord
2. “Swimming pool setback should remain; it is not clear that they are covered under place of public assembly setbacks. Alternatively, specifically state swimming pools in the habitable residence or public place of assembly setback.” – Cory Larsen, PE, Wake County Environmental Services

Hearing Officer Response

1. For the purposes of the 02T and 02U subchapters, “public” has been interpreted as “of or relating to people in general.” This is reflected in the public access prohibitions found in .0505(q) and other sections in the 02T and 02U subchapters. “Public” is not interpreted as the opposite of “private” in regard to places, property, etc. In addition, it is not necessary to specifically note “swimming pools” in the rule, as other places of public assembly, such as churches, schools, day cares, athletic fields, tennis courts, etc. are not specified by name, but are inherently covered under the term “place of public assembly.” Regardless, the Hearing Officers recommend that the term “public” be removed from the first two listed setbacks.

Revised Language for Readoption

The setbacks for Irrigation sites shall be as follows:

	Spray (feet)	Drip (feet)
Any habitable residence or place of public assembly under separate ownership or not to be maintained as part of the project site	400	100
Any habitable residence or place of public assembly owned by the <u>Permittee</u> permittee to be maintained as part of the project site	200	15
Any private or public water supply source	100	100
Surface waters (streams – intermittent and perennial, perennial waterbodies, and wetlands)	100	100
Groundwater lowering ditches (where the bottom of the ditch intersects the SHWT)	100	100
Surface water diversions (ephemeral streams, waterways, ditches)	25	25
Any well with exception of monitoring wells	100	100
Any property line	150	50
Top of slope of embankments or cuts of two feet or more in vertical height	15	15
Any water line from a disposal system	10	10
Subsurface groundwater lowering drainage systems	100	100
Any swimming pool	100	100
Public right of way	50	50
Nitrification field	20	20
Any building foundation or basement	15	15

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15A NCAC 02T .0606(d)

Proposed Language for Readoption

Setbacks to property lines established in Paragraphs (a) and (b) of this Rule shall not be applicable when the Permittee, or the entity from which the Permittee is leasing, owns both parcels creating said property line.

Public Comments

1. “While it is important that setbacks be clearly defined, it is just as important that they serve their intended purpose of ensuring permitted activity is not conducted in problematic locations. For instance, typically, rules state the required setback between permitted activity and “any property line” to minimize impacts of permitted activity on adjacent parcels.⁴³ However, in the proposed rules, setbacks to property lines “shall not be applicable when the Permittee, or the entity from which the Permittee is leasing, owns both parcels creating said property line.”⁴⁴

At first blush, this may seem reasonable. If a permittee wishes to conduct permitted activity next to his own property, perhaps he should be allowed to assume the risk of impacting his own property by essentially waiving the protection otherwise afforded by a setback. However, this justification fails to consider the potential that the adjacent property is occupied by the permittee’s tenant. After all, the impacts of permitted activity can affect people, not just land.

According to the U.S. Census Bureau, between 2011 and 2015, only 65.1% of housing units in North Carolina were owner-occupied.⁴⁵ Yet, under the proposed rule, whether or not one owns his residence could directly impact the degree of protection afforded under the 02T and 02U rules. Not only does this unfairly burden tenants, it threatens to invite violations of well-established principles of landlord/tenant law. “North Carolina law provides that a lease, in the absence of a provision to the contrary, carries with it an implied covenant that the tenant will have the quiet and peaceable possession of the leased premises during the term of the lease.”⁴⁶ The EMC should not adopt rules that allow an absentee landlord to breach this implied covenant of quiet enjoyment by waiving setback requirements.

Of course, if a permittee does not lease the property adjacent to the parcel on which the permitted activity is conducted, this concern would be mitigated. We encourage the EMC to consider adding this caveat to prevent landlords from waiving protections or violating legal rights designed to benefit tenants. Alternatively, the EMC should consider removing this setback exception and analyzing on a case-by-case basis whether or not a variance from the setback would provide equal or better treatment of waste, equal or better protection of the waters of the state, and no increased potential for nuisance conditions from noise, odor, or vermin.⁴⁷ – American Rivers, Et. Al

2. “With the passing of HB 56 on October 4, 2017, GS 143-215.1(i) has been amended such that there are no longer setbacks to property lines for “multiple contiguous properties under common ownership and permitted for use as a disposal system.” To date, no one within NCDEQ has determined or announced the definition/interpretation of “common ownership”. In an email dated October 4, 2017, Mr. Nathaniel Thornburg made the following comment: “We no longer need to require that the Permittee provide setbacks to their own contiguous property lines, or obtain and record setback waivers.” But to my knowledge, the 2T proposed Rule Change does not address this new interpretation as a result of HB 56 passing.” – Martin Mabe, LSS, Willcox & Mabe Soil Solutions, PLLC

Hearing Officer Response

1. The proposed rule language only exempts the Permittee from complying with property line setbacks when the Permittee owns or is leasing the parcels that create the property line. The Permittee is still responsible for ensuring that the irrigation, treatment, and storage facilities maintain setbacks to any habitable residence or place of public assembly under separate ownership and under the Permittee's ownership.

In addition, the Hearing Officers solicited comment from the North Carolina Department of Justice's Environmental Division. Special Deputy Attorney General Phillip T. Reynolds stated, "After reviewing the history of the rule and the supporting statutes, it seems to me that the proposed language...is simply an extension of the statutory mandate contained in N.C. Gen. Stat. § 143-215.1(i), which states in relevant part: "Multiple contiguous properties under common ownership and permitted for use as a disposal system shall be treated as a single property with regard to determination of a compliance boundary and setbacks to property lines." Because the authority to adopt the rule is predicated on the statute and because the statute clearly requires that "multiple continuous properties ... shall be treated as a single property," it does not appear that the principles of landlord/tenant law are relevant for the purposes of the specific rule."

2. [Session Law 2017-209](#) amended [G.S. 143-215.1\(i\)](#) as follows: "Multiple contiguous properties under common ownership and permitted for use as a disposal system shall be treated as a single property with regard to determination of a compliance ~~boundary~~ boundary and setbacks to property lines." Proposed Rule 15A NCAC 02T .0506(e) is a reflection of the revised general statute language.

Revised Language for Readoption

No revisions to the proposed language for readoption have been made.

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15A NCAC 02T .0702

Proposed Language for Readoption

As used in this Section, "High-rate infiltration" shall ~~mean:~~ mean any application rate that exceeds 1.75 inches of wastewater effluent per week or 0.156 gallons per day per square foot of land.

- ~~(1) — In coastal areas as defined in Section 15A NCAC 02H .0400 .0406, an application rate that exceeds 1.75 inches of wastewater effluent per week (0.156 gallons per day per square foot of land).~~
- ~~(2) — In non-coastal areas, an application rate that exceeds 1.50 gallons of wastewater effluent per day per square foot of land (16.8 inches per week).~~

Public Comments

1. "This does not seem to truly be a "high rate" of infiltration for much of the State." – Steven Berkowitz, PE, On-Site Water Protection Branch, NC Department of Health and Human Services

Hearing Officer Response

1. The existing 15A NCAC 02T .0702 language differentiates between coastal and non-coastal loading rates with those being 0.156 GPD/ft² (i.e., 91 in/yr) and 873.6 in/yr, respectively. The intent of the rule change is to create a state-wide high-rate infiltration loading rate threshold of 91 in/yr. Having a single threshold eliminates confusion and provides consistency. In addition, during the 2006 Subchapter 02T adoption process, it was determined that irrigation of wastewater or reclaimed water above the 91 in/yr threshold was not beneficial or conducive to establishing and maintaining a viable cover crop.

Revised Language for Readoption

No revisions to the proposed language for readoption have been made.

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15A NCAC 02T .0705(w)

Proposed Language for Readoption

The application rate shall not exceed 10 gallons per day per square foot (GPD/ft²).

Public Comments

1. "In the Draft 2T rules, page 97 states the following on line 1:

(w) The application rate shall not exceed 10 gallons per day per square foot (GPD/ft²).

The comment for this section reads:

Commented [A22]: Change: Add maximum infiltration rate requirement currently established in 15A NCAC 02H .0404(g)(6)(C). Effect: Reduce confusion for permittee having to reference multiple rule Subchapters, and includes rule is subchapter that allows for alternative design consideration.

The referenced regulation here reads:

(6) Waste disposal facilities are to be designed on the basis of site conditions and soil percolation rates. In Parts (A), (B), and (C) of this Subparagraph are given the maximum loading rates for three different treatment systems. Higher loading rates or other methods of waste disposal may be approved by the Director based upon data submitted by the applicant.

(A) Subsurface Disposal Trench. One and one-half gallons per day per square foot of trench bottom based on maximum trench width of three feet. Trenches shall be separated at least eight feet center to center. (B) Low Pressure Distribution System. One gallon per day per square foot of effective absorption area encompassed by the distribution system. The calculation of the amount of effective absorption area required shall be based on a maximum distribution line separation of five feet center to center. (C) Rotary Distributors. Ten gallons per day per square foot of surface area.

Please note that the referenced regulation is under the heading of interim treatment systems, but the 2T rules do not seem to draw the distinction. Furthermore the rate specified in the referenced rule is for rotary distributors and in the Draft Rules it is being applied to all infiltration systems.

This rate seems to be arbitrary and is being applied in a fashion that does not seem to serve any environmental purpose. Furthermore this regulation (or the entire Draft Rule for that matter) does not seem to recognize the NCGS 143-215.1(A7) which is as follows:

For high rate infiltration wastewater disposal systems that utilize non-native soils or materials in a basin sidewall to enhance infiltration, the non-native soils or materials in the sidewall shall not be considered part of the disposal area provided that all of the following standards are met:

- (1) In addition to the requirements established by the Commission pursuant to subsection (a4) of G.S. 143-215.1, the treatment system shall include a mechanism to provide filtration of effluent to 0.5 microns or less and all essential treatment units shall be provided in duplicate.*

(2) *Particle size analysis in accordance with ASTM guidelines for all native and non-native materials shall be performed. Seventy-five percent (75%) of all non-native soil materials specified shall have a particle size of less than 4.8 millimeters.*

(3) *Non-native materials shall comprise no more than fifty percent (50%) of the basin sidewall area.*

(4) *Systems meeting the standards set out in subdivisions (1), (2), and (3) of this subsection shall be considered nondischarge systems, and the outfall of any associated groundwater lowering device shall be considered groundwater provided the outfall does not violate water quality standards.*

It is my opinion that there is no environmental reason for setting an upper limit on high rate infiltration and that, in general the Draft Rule should make reference to the above general statute to actually fulfill the claim in the comment section of making it easy to find all of the requirements in one rule.” – Michael C. Gallant, PE

Hearing Officer Response

1. 15A NCAC 02T .0105(n) allows the Director to approve alternative Design Criteria in cases where the Applicant demonstrates that the alternative provides (1) equal or better treatment of waste; (2) equal or better protection of the waters of the state; and (3) no increased potential for nuisance conditions from noise, odor, or vermin.

Revised Language for Readoption

No revisions to the proposed language for readoption have been made.

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15A NCAC 02T .0706(a)

Proposed Language for Readoption

The setbacks for Infiltration Units shall be as follows:

	<u>Spray</u> (feet)	<u>Drip</u> (feet)	<u>Basin</u> (feet)
<u>Any habitable residence or place of public assembly under separate ownership or not to be maintained as part of the project site</u>	<u>400</u>	<u>100</u>	<u>100</u>
<u>Any habitable residence or place of public assembly owned by the Permittee to be maintained as part of the project site</u>	<u>200</u>	<u>15</u>	<u>50</u>
<u>Any private or public water supply source</u>	<u>100</u>	<u>100</u>	<u>100</u>
<u>Surface waters (streams – intermittent and perennial, perennial waterbodies, and wetlands)</u>	<u>200</u>	<u>200</u>	<u>200</u>
<u>Groundwater lowering ditches (where the bottom of the ditch intersects the SHWT)</u>	<u>200</u>	<u>200</u>	<u>200</u>
<u>Subsurface groundwater lowering drainage systems</u>	<u>200</u>	<u>200</u>	<u>200</u>
<u>Surface water diversions (ephemeral streams, waterways, ditches)</u>	<u>50</u>	<u>50</u>	<u>50</u>
<u>Any well with exception of monitoring wells</u>	<u>100</u>	<u>100</u>	<u>100</u>
<u>Any property line</u>	<u>150</u>	<u>50</u>	<u>50</u>
<u>Top of slope of embankments or cuts of two feet or more in vertical height</u>	<u>100</u>	<u>100</u>	<u>100</u>
<u>Any water line from a disposal system</u>	<u>10</u>	<u>10</u>	<u>10</u>
<u>Public right of way</u>	<u>50</u>	<u>50</u>	<u>50</u>
<u>Nitrification field</u>	<u>20</u>	<u>20</u>	<u>20</u>
<u>Any building foundation or basement</u>	<u>15</u>	<u>15</u>	<u>15</u>
<u>Impounded public water supplies</u>	<u>500</u>	<u>500</u>	<u>500</u>
<u>Public shall groundwater supply (less than 50 feet deep)</u>	<u>500</u>	<u>500</u>	<u>500</u>
			(feet)
Any habitable residence or place of public assembly under separate ownership or not to be maintained as part of the project site			400
Any habitable residence or place of public assembly owned by the permittee to be maintained as part of the project site			200
Any private or public water supply source			100
Surface waters (streams—intermittent and perennial, perennial waterbodies, and wetlands)			200
Groundwater lowering ditches (where the bottom of the ditch intersects the SHWT)			200

Subsurface groundwater lowering drainage systems	200
Surface water diversions (ephemeral streams, waterways, ditches)	50
Any well with exception of monitoring wells	100
Any property line	200
Top of slope of embankments or cuts of two feet or more in vertical height	100
Any water line from a disposal system	10
Any swimming pool	100
Public right of way	50
Nitrification field	20
Any building foundation or basement	15
Impounded public water supplies	500
Public shall groundwater supply (less than 50 feet deep)	500

Public Comments

1. “The rules should maintain the requirement for a 100-ft setback from swimming pools instead of assuming all pools are “places of public accommodation”” – Vivian Lord

Hearing Officer Response

1. For the purposes of the 02T and 02U subchapters, “public” has been interpreted as “of or relating to people in general.” This is reflected in the public access prohibitions found in .0505(q) and other sections in the 02T and 02U subchapters. “Public” is not interpreted as the opposite of “private” in regard to places, property, etc. In addition, it is not necessary to specifically note “swimming pools” in the rule, as other places of public assembly, such as churches, schools, day cares, athletic fields, tennis courts, etc. are not specified by name, but are inherently covered under the term “place of public assembly.” Regardless, the Hearing Officers recommend that the term “public” be removed from the first two listed setbacks.

Revised Language for Readoption

The setbacks for Infiltration Units shall be as follows:

	<u>Spray</u>	<u>Drip</u>	<u>Basin</u>
	<u>(feet)</u>	<u>(feet)</u>	<u>(feet)</u>
Any habitable residence or place of public assembly under separate ownership or not to be maintained as part of the project site	<u>400</u>	<u>100</u>	<u>100</u>
Any habitable residence or place of public assembly owned by the Permittee to be maintained as part of the project site	<u>200</u>	<u>15</u>	<u>50</u>
Any private or public water supply source	<u>100</u>	<u>100</u>	<u>100</u>
Surface waters (streams – intermittent and perennial, perennial waterbodies, and wetlands)	<u>200</u>	<u>200</u>	<u>200</u>
Groundwater lowering ditches (where the bottom of the ditch intersects the SHWT)	<u>200</u>	<u>200</u>	<u>200</u>

<u>Subsurface groundwater lowering drainage systems</u>	<u>200</u>	<u>200</u>	<u>200</u>
<u>Surface water diversions (ephemeral streams, waterways, ditches)</u>	<u>50</u>	<u>50</u>	<u>50</u>
<u>Any well with exception of monitoring wells</u>	<u>100</u>	<u>100</u>	<u>100</u>
<u>Any property line</u>	<u>150</u>	<u>50</u>	<u>50</u>
<u>Top of slope of embankments or cuts of two feet or more in vertical height</u>	<u>100</u>	<u>100</u>	<u>100</u>
<u>Any water line from a disposal system</u>	<u>10</u>	<u>10</u>	<u>10</u>
<u>Public right of way</u>	<u>50</u>	<u>50</u>	<u>50</u>
<u>Nitrification field</u>	<u>20</u>	<u>20</u>	<u>20</u>
<u>Any building foundation or basement</u>	<u>15</u>	<u>15</u>	<u>15</u>
<u>Impounded public water supplies</u>	<u>500</u>	<u>500</u>	<u>500</u>
<u>Public shall groundwater supply (less than 50 feet deep)</u>	<u>500</u>	<u>500</u>	<u>500</u>
			(feet)
Any habitable residence or place of public assembly under separate ownership or not to be maintained as part of the project site			400
Any habitable residence or place of public assembly owned by the permittee to be maintained as part of the project site			200
Any private or public water supply source			100
Surface waters (streams—intermittent and perennial, perennial waterbodies, and wetlands)			200
Groundwater lowering ditches (where the bottom of the ditch intersects the SHWT)			200
Subsurface groundwater lowering drainage systems			200
Surface water diversions (ephemeral streams, waterways, ditches)			50
Any well with exception of monitoring wells			100
Any property line			200
Top of slope of embankments or cuts of two feet or more in vertical height			100
Any water line from a disposal system			10
Any swimming pool			100
Public right of way			50
Nitrification field			20
Any building foundation or basement			15
Impounded public water supplies			500
Public shall groundwater supply (less than 50 feet deep)			500

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15A NCAC 02T .0706(f)

Proposed Language for Readoption

Setbacks to property lines established in Paragraphs (a) and (d) of this Rule shall not be applicable when the Permittee, or the entity from which the Permittee is leasing, owns both parcels creating said property line.

Public Comments

1. “While it is important that setbacks be clearly defined, it is just as important that they serve their intended purpose of ensuring permitted activity is not conducted in problematic locations. For instance, typically, rules state the required setback between permitted activity and “any property line” to minimize impacts of permitted activity on adjacent parcels.⁴³ However, in the proposed rules, setbacks to property lines “shall not be applicable when the Permittee, or the entity from which the Permittee is leasing, owns both parcels creating said property line.”⁴⁴

At first blush, this may seem reasonable. If a permittee wishes to conduct permitted activity next to his own property, perhaps he should be allowed to assume the risk of impacting his own property by essentially waiving the protection otherwise afforded by a setback. However, this justification fails to consider the potential that the adjacent property is occupied by the permittee’s tenant. After all, the impacts of permitted activity can affect people, not just land.

According to the U.S. Census Bureau, between 2011 and 2015, only 65.1% of housing units in North Carolina were owner-occupied.⁴⁵ Yet, under the proposed rule, whether or not one owns his residence could directly impact the degree of protection afforded under the 02T and 02U rules. Not only does this unfairly burden tenants, it threatens to invite violations of well-established principles of landlord/tenant law. “North Carolina law provides that a lease, in the absence of a provision to the contrary, carries with it an implied covenant that the tenant will have the quiet and peaceable possession of the leased premises during the term of the lease.”⁴⁶ The EMC should not adopt rules that allow an absentee landlord to breach this implied covenant of quiet enjoyment by waiving setback requirements.

Of course, if a permittee does not lease the property adjacent to the parcel on which the permitted activity is conducted, this concern would be mitigated. We encourage the EMC to consider adding this caveat to prevent landlords from waiving protections or violating legal rights designed to benefit tenants. Alternatively, the EMC should consider removing this setback exception and analyzing on a case-by-case basis whether or not a variance from the setback would provide equal or better treatment of waste, equal or better protection of the waters of the state, and no increased potential for nuisance conditions from noise, odor, or vermin.⁴⁷ – American Rivers, Et. Al

2. “With the passing of HB 56 on October 4, 2017, GS 143-215.1(i) has been amended such that there are no longer setbacks to property lines for “multiple contiguous properties under common ownership and permitted for use as a disposal system.” To date, no one within NCDEQ has determined or announced the definition/interpretation of “common ownership”. In an email dated October 4, 2017, Mr. Nathaniel Thornburg made the following comment: “We no longer need to require that the Permittee provide setbacks to their own contiguous property lines, or obtain and record setback waivers.” But to my knowledge, the 2T proposed Rule Change does not address this new interpretation as a result of HB 56 passing.” – Martin Mabe, LSS, Willcox & Mabe Soil Solutions, PLLC

Hearing Officer Response

1. The proposed rule language only exempts the Permittee from complying with property line setbacks when the Permittee owns or is leasing the parcels that create the property line. The Permittee is still responsible for ensuring that the infiltration, treatment, and storage facilities maintain setbacks to any habitable residence or place of public assembly under separate ownership and under the Permittee's ownership.

In addition, the Hearing Officers solicited comment from the North Carolina Department of Justice's Environmental Division. Special Deputy Attorney General Phillip T. Reynolds stated, "After reviewing the history of the rule and the supporting statutes, it seems to me that the proposed language...is simply an extension of the statutory mandate contained in N.C. Gen. Stat. § 143-215.1(i), which states in relevant part: "Multiple contiguous properties under common ownership and permitted for use as a disposal system shall be treated as a single property with regard to determination of a compliance boundary and setbacks to property lines." Because the authority to adopt the rule is predicated on the statute and because the statute clearly requires that "multiple continuous properties ... shall be treated as a single property," it does not appear that the principles of landlord/tenant law are relevant for the purposes of the specific rule."

2. [Session Law 2017-209](#) amended [G.S. 143-215.1\(i\)](#) as follows: "Multiple contiguous properties under common ownership and permitted for use as a disposal system shall be treated as a single property with regard to determination of a compliance ~~boundary~~ boundary and setbacks to property lines." Proposed Rule 15A NCAC 02T .0506(e) is a reflection of the revised general statute language.

Revised Language for Readoption

No revisions to the proposed language for readoption have been made.

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15A NCAC 02T .1101

Proposed Language for Readoption

This Section shall apply ~~applies~~ to the treatment, storage, transportation, use, and disposal of residuals. Not regulated under this Section is the treatment, storage, transportation, use, or disposal of:

- (1) oil, grease, grit and screenings from wastewater treatment facilities;
- (2) septage from wastewater treatment facilities;
- (3) ash that is regulated in accordance with Section .1200;
- (4) residuals that are regulated in accordance with Section .1300 and Section .1400 of this Subchapter;
- (5) residuals that are prepared for land application, used, or disposed of in a solid waste management facility permitted by the Division of Waste Management;
- (6) residuals that are disposed of in an incinerator permitted by the Division of Air Quality;
- (7) residuals that are transported out of state for treatment, storage, use, or disposal; ~~and~~
- (8) residuals that meet the definition of a hazardous waste in accordance with 40 CFR 260.10 as adopted by reference in 15A NCAC 13A .0102(b) or that have a concentration of polychlorinated biphenyls equal to or greater than 50 milligrams per kilogram of total solids on a dry weight basis; and (i.e., dry weight basis):
- (9) byproduct waste resulting from any process of industry, manufacturing, trade, business, or the development of any natural resource (i.e., not from a wastewater treatment, water supply treatment, or air pollution control facility permitted under the authority of the Commission).

Public Comments

1. "The Department's residuals management regulations appear to be entirely missing any reference to EQ materials. As noted above, per federal regulations, EQ materials are those that have been treated to Class A standards for pathogens, that meet pollutant concentration limits, and that meet vector attraction reduction requirements options 1-8 (Class A materials that are injected or incorporated for vector attraction reduction are not EQ materials). EQ materials are "virtually unregulated for use, whether used in bulk, or sold or given away in bags or other containers." *A Plain English Guide to the EPA Part 503 Biosolids Rule*, p. 7.

Many of the Nation's wastewater plants are generating EQ materials; many more are seriously considering the plant upgrades necessary to do so. If a wastewater treatment plant invests the significant capital needed to comply with the federal regulations for EQ materials, it should be allowed to distribute and/or land apply those materials without any management or site restrictions.

NCWQA recommends that the Department revise the proposed amendments to:

1. Add a definition for EQ to 15A NCAC 02T .1102.
2. Add separate text to .1103 to allow EQ materials to be permitted by regulation, subject only to federally imposed treatment requirements (not setbacks or management practices)." – F. Paul Calamita, North Carolina Water Quality Association

Hearing Officer Response

1. The State of North Carolina is not delegated to implement the Federal program for the use or disposal of sewage sludge. The residuals management program in North Carolina is a state-run program that is independent and complementary of Federal regulations. Historically, North Carolina has not implemented standards for "Exception Quality (EQ)" residuals, and it is not proposed to be added to the 02T .1100 section.

Revised Language for Readoption

No revisions to the proposed language for readoption have been made.

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15A NCAC 02T .1101 (9)

Proposed Language for Readoption

byproduct waste resulting from any process of industry, manufacturing, trade, business, or the development of any natural resource (i.e., not from a wastewater treatment, water supply treatment, or air pollution control facility permitted under the authority of the Commission).

Public Comments

1. "What is the definition of byproduct waste?" – Robert T. Branch
2. "What is the difference between the Definition of "essential treatment unit" Definition (16) in 15A NCAC .02T .0103 Definitions, and wastewater treatment as identified in Item 9?" – Robert T. Branch
3. "What wastes does item 9 intend to exclude?" – Robert T. Branch
4. "Are dissolved aeration units (DAF), gravity belt thickeners, drying beds, or other fractionation units to be considered wastewater treatment units?" – Robert T. Branch
5. "Are byproducts that meet Class A requirements for non-biological residuals still exempt under Item 9 still covered by 15A NCAC 02T .1103 Permitting By Regulation?" – Robert T. Branch
6. "Are similar waste streams that are currently permitted under 2T regulations, going to be excluded because of the method of their generation?" – Robert T. Branch
7. "Which agency will permit the wastes covered under item 9 that are currently permitted under residuals management permits?" – Robert T. Branch
8. "What will be the implementation schedule for these permits, once they transition to another agency?" – Robert T. Branch

Hearing Officer Response

1. For the scope of Section .1100, a byproduct is considered a secondary product that is derived from the industrial, manufacturing, or development of a primary product.
2. Wastewater treatment as used in 15A NCAC 02T .1101(9) is the overall process of using physical, chemical, and/or biological processes to remove contaminants from the wastewater stream. Essential treatment units, as defined in 15A NCAC 02T .0103(16), are those individual treatment units whose loss would likely result in the entire wastewater treatment process being unable to meet the required performance criteria.
3. The proposed rule change intends to explicitly exclude wastes that do not meet the definition of residuals in 15A NCAC 02T .0103(30). This definition states, "Residuals' means any solid, semisolid, or liquid waste, other than effluent or residues from agricultural products and processing, generated from a wastewater treatment facility, water supply treatment facility or air pollution control facility permitted under the authority of the Commission."

4. While dissolved air flotation (DAF) units, gravity belt thickeners, etc. are wastewater treatment units, (DAF), the intent of this rule is to allow the Division of Water Resources the ability to evaluate on a case by case basis to determine if the generated wastes are residuals or byproducts.
5. Facilities currently permitted under 15A NCAC 02T .1100 may remain covered by 15A NCAC 02T .1103 until the byproducts have been transferred to the proper permitting agency, and provided that the byproducts meet the Class A requirements and are generated at a permitted residuals facility.
6. Yes. It is the intent of the Division of Water Resources to relocate wastes that do not meet the definition of residuals in 15A NCAC 02T .0103(30) or permit requirement under [G.S. 143-215.1\(a\)](#), and are currently covered under residuals management permits to the proper regulatory agency.
7. The regulating agency for wastes covered under 15A NCAC 02T .1101(9) that are currently permitted under residuals management permits will depend upon the waste product. Most likely the regulating agency will either be the NC Department of Agriculture and Consumer Service or the Department of Environmental Quality's Division of Waste Management.
8. It is the Division of Water Resources intent to allow permit coverage of all existing residuals management permits for wastes that do not meet the definition of residuals in 15A NCAC 02T .0103(30) until these wastes are permitted by the proper regulatory agency. Once the transition to the proper regulatory agency has been completed, the Permittee may request rescission of their existing residuals management permit.

Revised Language for Readoption

No revisions to the proposed language for readoption have been made.

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15A NCAC 02T .1102(8)

Proposed Language for Readoption

~~"Bulk residuals" shall mean residuals that are transported and not sold or given away in a bag or other container for application to the land.~~

Public Comments

1. "The definition and usage of "Bulk residuals" must be retained for clarity and consistency with federal requirements (02T .1102 and other sections).

NCWQA appreciates the Department's efforts to simplify the rules applicable to residuals management. However, the NCWQA strongly renews its request that the Department retain the definition and usage of "bulk residuals." The deletion of "bulk residuals" and reliance on the categories "Class A" and "Class B" will result in uncertainty and inconsistencies with federal law.

Under the federal regulations, biosolids must comply with pollutant limits, pathogen reduction requirements, and vector attraction reduction requirements, and, depending on the treatment provided, may be required to comply with various management requirements. The manner by which biosolids are distributed (bulk or bagged) determines in part which requirements are applicable. Here's a brief summary of federal framework:..." – F. Paul Calamita, North Carolina Water Quality Association

Hearing Officer Response

1. Agreed. The definition of "bulk residuals" should be restored in order to differentiate between bulk and bagged residuals. In addition, it is recommended that definitions for "Class A residuals" and "Class B residuals" be added to 15A NCAC 02T .1102 in order to provide clarity to the 02T .1100 section. Addition of "Class A residuals" and "Class B residuals" is considered a logical outgrowth of retaining the definition of "bulk residuals," and is added for clarification.

Revised Language for Readoption

(8) "Bulk residuals" shall mean residuals that are transported and not sold or given away in a bag or other container for application to the land.

(9) "Class A residuals" shall mean residuals that are either bagged or bulk residuals meeting:

(a) the Pollutant Limits in Rule .1105(a) of this Section and Rule .1105(c) of this Section;

(b) the Pathogen Reduction Requirements in Rule .1106(a) of this Section; and

(c) the Vector Attraction Reduction Requirements in Rule .1107 of this Section.

(10) "Class B residuals" shall mean residuals that are bulk residuals meeting:

(a) the Pollutant Limits in Rule .1105(a) of this Section and Rule .1105(b) of this Section;

(b) the Pathogen Reduction Requirements in Rule .1106(b) of this Section; and

(c) the Vector Attraction Reduction Requirements in Rule .1107 of this Section.

15A NCAC 02T .1103(a)(3)

Proposed Language for Readoption

Land application sites onto which Class A residuals that are sold or given away in a bag or other ~~container~~ container, are ~~applied~~ applied, provided the following criteria ~~is~~ are met:

- (A) the residuals meet the pollutant limits in Rule .1105(a) and Rule .1105(c) of this Section,
- (B) the residuals meet the pathogen requirements in Rule .1106(a)(1) of this Section,
- (C) the residuals meet the vector attraction reduction requirements in Rule .1107(a) of this Section, and
- (D) the land application activities are carried out according to the instructions provided in the informational ~~sheet~~, sheet ~~or bag~~ bag, or other container label as required in Rule ~~.1109(c)~~ .1109(a) of this Section.

Public Comments

1. "In 15A NCAC 02T .1105(c), the Department proposes the following change:

~~Bulk Class A~~ residuals shall not be applied to a lawn, home garden, or public contact use site nor shall residuals be sold or given away in a bag or other container for application to the land if the concentration of any pollutant in the residuals exceeds the concentration for that pollutant as stipulated in the following (i.e., on a dry weight basis): [the pollutant concentration limits].

These modifications would appear to prevent Class A residuals meeting the ceiling concentrations from being land applied under the CPLR option. Indeed, the Department proposes to limit the CPLR option in 15A NCAC 02T .1105(b) to only Class B residuals:

~~Bulk Class B~~ residuals shall not be land applied to the land if the land application causes the exceedance of the cumulative pollutant loading rate for any pollutant as stipulated in the following (i.e., on a dry weight basis): [the cumulative pollutant loading rate].

First, the current use of the term "bulk" in 15A NCAC 02T .1105(b) & (c) is appropriate and necessary to clearly authorize both land application of Class A and Class B residuals under the CPLR option, while remaining consistent with federal law. It is particularly inappropriate to restrict the land application of Class A residuals under the CPLR option, because such residuals meet more stringent pathogen reduction requirements. As the table above shows, Class A bulk residuals applied under the CPLR option have *fewer* restrictions under federal law. The proposed amendment would turn this upside down. Further, the term "bulk" excludes bagged biosolids, which are not subject to the CPLR option, and maintains consistency with federal law. For this reason, the Department should continue to refer to "bulk" rather than "Class A."

Second, the current version of 15A NCAC 02T .1105(c) correctly recognizes that bulk residuals may not be applied to a lawn or home garden unless the residuals meet the pollutant concentration limit. This distinction is important and should be preserved because Class A residuals sold or given away in a bag may be applied to lawns and home gardens even if the pollutant concentration limits are not met, provided that: (1) the ceiling concentrations for pollutants are not exceeded, and (2) the Annual Pollutant Loading Rates are not exceeded.

NCWQA notes that edits (e.g., reinsertion of "bulk") may be also required to 15A NCAC 02T .1103(a)(3) and (4) to reflect the corrections made in 15 NCAC 02T .1105 regarding pollutant limits." – F. Paul Calamita, North Carolina Water Quality Association

Hearing Officer Response

1. Thank you for your comment. Please note that the proposed language has been updated to correct rule citations in Rule .1106.

Revised Language for Readoption

Land application sites onto which Class A residuals that are sold or given away in a bag or other ~~container~~ container, are ~~applied~~ applied, provided the following criteria ~~is~~ are met:

- (A) the residuals meet the pollutant limits in Rule .1105(a) and Rule .1105(c) of this Section,
- (B) the residuals meet the pathogen requirements in Rule ~~.1106(a)~~ .1106(a)(1) of this Section,
- (C) the residuals meet the vector attraction reduction requirements in Rule .1107(a) of this Section, and
- (D) the land application activities are carried out according to the instructions provided in the informational ~~sheet~~, ~~sheet~~ ~~or bag~~ bag, or other container label as required in Rule ~~.1109(c)~~ .1109(a) of this Section.

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15A NCAC 02T .1103(a)(4)

Proposed Language for Readoption

Land application sites onto which ~~bulk~~ Class A biological residuals are applied, ~~provided that if~~ the residuals and activities ~~meet~~ meeting the following criteria:

- (A) the residuals meet the pollutant limits in Rule .1105(a) and Rule .1105(c) of this Section,
- (B) the residuals meet the pathogen requirements in Rule .1106(b) of this Section,
- (C) the residuals meet the vector attraction reduction requirements in Rule .1107(a) of this Section, and
- (D) the land application activities meet all applicable conditions of Rule .1108(b) ~~.1108(b)(1)~~ and Rule .1109(a)(1) ~~.1109(b)~~ of this Section.

Public Comments

1. "In 15A NCAC 02T .1105(c), the Department proposes the following change:

~~Bulk Class A~~ residuals shall not be applied to a lawn, home garden, or public contact use site nor shall residuals be sold or given away in a bag or other container for application to the land if the concentration of any pollutant in the residuals exceeds the concentration for that pollutant as stipulated in the following (i.e., on a dry weight basis): [the pollutant concentration limits].

These modifications would appear to prevent Class A residuals meeting the ceiling concentrations from being land applied under the CPLR option. Indeed, the Department proposes to limit the CPLR option in 15A NCAC 02T .1105(b) to only Class B residuals:

~~Bulk Class B~~ residuals shall not be land applied to the land if the land application causes the exceedance of the cumulative pollutant loading rate for any pollutant as stipulated in the following (i.e., on a dry weight basis): [the cumulative pollutant loading rate].

First, the current use of the term "bulk" in 15A NCAC 02T .1105(b) & (c) is appropriate and necessary to clearly authorize both land application of Class A and Class B residuals under the CPLR option, while remaining consistent with federal law. It is particularly inappropriate to restrict the land application of Class A residuals under the CPLR option, because such residuals meet more stringent pathogen reduction requirements. As the table above shows, Class A bulk residuals applied under the CPLR option have *fewer* restrictions under federal law. The proposed amendment would turn this upside down. Further, the term "bulk" excludes bagged biosolids, which are not subject to the CPLR option, and maintains consistency with federal law. For this reason, the Department should continue to refer to "bulk" rather than "Class A."

Second, the current version of 15A NCAC 02T .1105(c) correctly recognizes that bulk residuals may not be applied to a lawn or home garden unless the residuals meet the pollutant concentration limit. This distinction is important and should be preserved because Class A residuals sold or given away in a bag may be applied to lawns and home gardens even if the pollutant concentration limits are not met, provided that: (1) the ceiling concentrations for pollutants are not exceeded, and (2) the Annual Pollutant Loading Rates are not exceeded.

NCWQA notes that edits (e.g., reinsertion of "bulk") may be also required to 15A NCAC 02T .1103(a)(3) and (4) to reflect the corrections made in 15 NCAC 02T .1105 regarding pollutant limits." – F. Paul Calamita, North Carolina Water Quality Association

Hearing Officer Response

1. Agreed. The term “bulk” should be reinstated. Please note that the proposed language has been updated to correct rule citations in Rule .1106.

Revised Language for Readoption

Land application sites onto which bulk Class A biological residuals are applied, ~~provided that if~~ the residuals and activities ~~meet meeting~~ the following criteria:

- (A) the residuals meet the pollutant limits in Rule .1105(a) and Rule .1105(c) of this Section,
- (B) the residuals meet the pathogen requirements in Rule .1106(a) ~~.1106(b)~~ of this Section,
- (C) the residuals meet the vector attraction reduction requirements in Rule .1107(a) of this Section, and
- (D) the land application activities meet all applicable conditions of Rule .1108(b) ~~.1108(b)(1)~~ and Rule .1109(a)(1) ~~.1109(b)~~ of this Section.

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15A NCAC 02T .1105(b)

Proposed Language for Readoption

~~Bulk Class B~~ residuals shall not be land applied ~~to the land~~ if ~~the land~~ application causes the ~~exceedance of the~~ cumulative pollutant loading ~~rate rate, on a dry weight basis, to be exceeded~~ for any pollutant as stipulated in the ~~following: following~~ (i.e., on a dry weight basis):

<u>Pollutant</u>	<u>Cumulative Pollutant Loading Rate</u> (kilograms per hectare)
Arsenic	41
Cadmium	39
Copper	1,500
Lead	300
Mercury	17
Nickel	420
Selenium	100
Zinc	2,800

- (1) ~~A person shall determine compliance~~ Compliance with the cumulative pollutant loading rates shall be determined using one of the following methods:
- (A) by calculating the existing cumulative level of pollutants using ~~actual~~ analytical data from all historical land application ~~events~~ of residuals not otherwise exempted by this ~~Paragraph~~ Paragraph;
 - or
 - (B) for land on which land application events of residuals has not occurred or for which the data required in Rule .1105(b) is incomplete, by determining background concentrations through representative soil sampling.
- ~~(2) — When applied to the land, bulk residuals shall be exempt from complying with this Paragraph as long as they meet all of the following criteria:~~
- ~~(A) — the monthly average concentrations stipulated in Rule .1105(c) of this Section.~~
 - ~~(B) — the pathogen reduction requirements stipulated in Rule .1106(b) of this Section, and~~
 - ~~(C) — the vector attraction reduction requirements stipulated in Rule .1107 of this Section.~~

Public Comments

1. “In 15A NCAC 02T .1105(c), the Department proposes the following change:

~~Bulk Class A~~ residuals shall not be applied ~~to a lawn, home garden, or public contact use site nor shall residuals be sold or given away in a bag or other container for application to the land~~ if the concentration of any pollutant in the residuals exceeds the concentration for that pollutant as stipulated in the following (i.e., on a dry weight basis): [the pollutant concentration limits].

These modifications would appear to prevent Class A residuals meeting the ceiling concentrations from being land applied under the CPLR option. Indeed, the Department proposes to limit the CPLR option in 15A NCAC 02T .1105(b) to only Class B residuals:

~~Bulk Class B~~ residuals shall not be land applied ~~to the land~~ if ~~the land~~ application causes the exceedance of the cumulative pollutant loading rate for any pollutant as stipulated in the following (i.e., on a dry weight basis): [the cumulative pollutant loading rate].

First, the current use of the term “bulk” in 15A NCAC 02T .1105(b) & (c) is appropriate and necessary to clearly authorize both land application of Class A and Class B residuals under the CPLR option, while remaining consistent with federal law. It is particularly inappropriate to restrict the land application of Class A

residuals under the CPLR option, because such residuals meet more stringent pathogen reduction requirements. As the table above shows, Class A bulk residuals applied under the CPLR option have *fewer* restrictions under federal law. The proposed amendment would turn this upside down. Further, the term “bulk” excludes bagged biosolids, which are not subject to the CPLR option, and maintains consistency with federal law. For this reason, the Department should continue to refer to “bulk” rather than “Class A.”

Second, the current version of 15A NCAC 02T .1105(c) correctly recognizes that *bulk* residuals may not be applied to a lawn or home garden unless the residuals meet the pollutant concentration limit. This distinction is important and should be preserved because Class A residuals sold or given away in a *bag* may be applied to lawns and home gardens even if the pollutant concentration limits are not met, provided that: (1) the ceiling concentrations for pollutants are not exceeded, and (2) the Annual Pollutant Loading Rates are not exceeded.

NCWQA notes that edits (e.g., reinsertion of “bulk”) may be also required to 15A NCAC 02T .1103(a)(3) and (4) to reflect the corrections made in 15 NCAC 02T .1105 regarding pollutant limits.” – F. Paul Calamita, North Carolina Water Quality Association

Hearing Officer Response

1. The existing .1105(b) language is for bulk Class A and Class B residuals. With the proposed deletion of .1105(b)(2), the new .1105(b) rule language applies only to Class B residuals. Since Class B residuals can only be “bulk” residuals, as now proposed to be defined in .1102(10), retaining the word “bulk” is repetitive.

Revised Language for Readoption

No revisions to the proposed language for readoption have been made.

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15A NCAC 02T .1105(c)

Proposed Language for Readoption

~~Bulk Class A~~ residuals shall not be applied ~~to a lawn, home garden, or public contact use site nor shall residuals be sold or given away in a bag or other container for application to the land~~ if the concentration of any pollutant in the residuals exceeds the concentration for that ~~pollutant~~ pollutant, as stipulated in the following on a dry weight basis: (i.e., on a dry weight basis):

<u>Pollutant</u>	<u>Monthly Average Concentration</u> <u>(milligrams per kilogram)</u>
Arsenic	41
Cadmium	39
Copper	1,500
Lead	300
Mercury	17
Nickel	420
Selenium	100
Zinc	2,800

Public Comments

1. "In 15A NCAC 02T .1105(c), the Department proposes the following change:

~~Bulk Class A~~ residuals shall not be applied ~~to a lawn, home garden, or public contact use site nor shall residuals be sold or given away in a bag or other container for application to the land~~ if the concentration of any pollutant in the residuals exceeds the concentration for that pollutant as stipulated in the following (i.e., on a dry weight basis): [the pollutant concentration limits].

These modifications would appear to prevent Class A residuals meeting the ceiling concentrations from being land applied under the CPLR option. Indeed, the Department proposes to limit the CPLR option in 15A NCAC 02T .1105(b) to only Class B residuals:

~~Bulk Class B~~ residuals shall not be land applied ~~to the land~~ if the ~~land~~ application causes the exceedance of the cumulative pollutant loading rate for any pollutant as stipulated in the following (i.e., on a dry weight basis): [the cumulative pollutant loading rate].

First, the current use of the term "bulk" in 15A NCAC 02T .1105(b) & (c) is appropriate and necessary to clearly authorize both land application of Class A and Class B residuals under the CPLR option, while remaining consistent with federal law. It is particularly inappropriate to restrict the land application of Class A residuals under the CPLR option, because such residuals meet more stringent pathogen reduction requirements. As the table above shows, Class A bulk residuals applied under the CPLR option have *fewer* restrictions under federal law. The proposed amendment would turn this upside down. Further, the term "bulk" excludes bagged biosolids, which are not subject to the CPLR option, and maintains consistency with federal law. For this reason, the Department should continue to refer to "bulk" rather than "Class A."

Second, the current version of 15A NCAC 02T .1105(c) correctly recognizes that *bulk* residuals may not be applied to a lawn or home garden unless the residuals meet the pollutant concentration limit. This distinction is important and should be preserved because Class A residuals sold or given away in a bag may be applied to lawns and home gardens even if the pollutant concentration limits are not met, provided that: (1) the ceiling concentrations for pollutants are not exceeded, and (2) the Annual Pollutant Loading Rates are not exceeded.

NCWQA notes that edits (e.g., reinsertion of “bulk”) may be also required to 15A NCAC 02T .1103(a)(3) and (4) to reflect the corrections made in 15 NCAC 02T .1105 regarding pollutant limits.” – F. Paul Calamita, North Carolina Water Quality Association

Hearing Officer Response

1. With the proposed language for .1105(b) being solely for Class B residuals, the proposed language in .1105(c) is specific only to Class A residuals. Since Class A residuals can either be “bulk” and “bagged” residuals, as now proposed to be defined in .1102(9), retaining the word “bulk” and the phrase “to a lawn, home garden, or public contact use site...” is repetitive. Please also note that the North Carolina residuals management program does not regulate or recognize the “Annual Pollutant Loading Rates” in [40 CFR 503](#).

Revised Language for Readoption

No revisions to the proposed language for readoption have been made.

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15A NCAC 02T .1106(a)(1)

Proposed Language for Readoption

The Class A pathogen requirements shall be met when ~~bulk~~ biological residuals are applied to a lawn, home garden, or public contact use ~~site site~~, or sold or given away in a bag or other container for ~~land application~~, ~~application to the land~~.

Public Comments

1. "In 15A NCAC 02T .1106(a)(1), the Department proposes the following change:

The Class A pathogen requirements shall be met when ~~bulk~~ biological residuals are applied to a lawn, home garden, or public contact use site, or sold or given away in a bag or other container for land application ~~to the land~~.

Under federal law, Class A pathogen requirements shall be met when bulk residuals are applied to a lawn or home garden. See 40 C.F.R. § 503.15(a)(2). On the other hand, Class A pathogen requirements are met when residuals are sold or given away in a bag or other container. See *id.* § 503.15(a)(3). For this reason, the Department should retain the reference to "bulk" in .1106(a)(2) above.

On a related note, federal law allows Class B materials to be applied to a public contact use site if certain site restrictions are employed. See *id.* § 503.15(a)(1). The Department should revise the text consistent with federal law." – F. Paul Calamita, North Carolina Water Quality Association

Hearing Officer Response

1. Based upon the restoration of the "bulk residuals" definition, as well as the proposed definitions for "Class A residuals" and "Class B residuals," it is proposed to restructure Rule .1106 to accommodate for these changes and to increase clarity and simplicity. It is proposed that: existing Paragraph (a)(1) be struck; existing Paragraph (a)(2) be renamed Paragraph (c); proposed Paragraph (a)(3) be renamed Paragraph (d); existing Paragraph (b) be renamed Paragraph (a); and existing Paragraph (c) be renamed (b).

Revised Language for Readoption

~~(a) The following pathogen requirements shall be met when biological residuals are applied to the land or placed in a surface disposal unit:~~

~~(1) The Class A pathogen requirements shall be met when bulk biological residuals are applied to a lawn, home garden, or public contact use site or sold or given away in a bag or other container for application to the land.~~

~~(2) Biological residuals placed in a surface disposal unit shall be exempt from meeting the Class A or Class B pathogen requirements if the vector attraction reduction method in Rule .1107(b)(2) of this Section is met.~~

~~(3) Programs involving the land application of biological residuals generated by wastewater treatment facilities treating industrial wastewater only that are operational at the time of this Rule's effective date shall comply with the requirements stipulated in this Rule no later than five years from the effective date of this Rule unless the Permittee is adhering to an established schedule in an individual permit, settlement agreement, special order pursuant to G.S. 143-215.2, or other similar document that establishes a later deadline.~~

~~(a) (b) For Class A biological residuals to be classified as Class A with respect to pathogens, shall meet the following requirements: shall be met:~~

~~(1) The requirements in this Paragraph are shall be met either prior to no later than meeting or at the same time as the vector attraction reduction requirements in Rule .1107 of this Section, Section are met, unless the~~

vector attraction reduction methods ~~stipulated~~ in Rule .1107(a)(6), Rule .1107(a)(7), and Rule .1107(a)(8) of this Section are met.

- (2) ~~The biological~~ Biological residuals ~~are shall be~~ monitored for the density of fecal coliform or Salmonella sp. bacteria at the time that the ~~biological~~ residuals are used or ~~disposed disposed~~, or at the time they are prepared for sale or giving away in a bag or other container for land application ~~to the land for the density of fecal coliform or Salmonella sp. bacteria~~ to demonstrate that: the following:

- (A) the density of fecal coliform is less than 1,000 Most Probable Number per gram of total solids on a dry weight basis; (i.e., dry weight basis); or
(B) the density of ~~Salmonella~~ Salmonella sp. bacteria is less than three Most Probable Number per four grams of total solids on a dry weight basis. (i.e., dry weight basis).

- (3) The biological residuals meet one of the following ~~alternatives:~~ requirements:

- (A) Time/Temperature. The temperature of the biological residuals shall be maintained at a specific value for a period of consecutive time in accordance with the following:

Total Solids (percent)	Temperature (t) (degrees Celsius)	Time	Equation to Determine Minimum Holding Time (D) (days)
≥ 7	≥ 50	≥ 20 minutes	$\frac{131,700,000}{10^{0.1400t}}$
≥ 7	≥ 50	≥ 15 seconds ¹	$\frac{131,700,000}{10^{0.1400t}}$
< 7	≥ 50	≥ 15 seconds <30 minutes	$\frac{131,700,000}{10^{0.1400t}}$
< 7	≥ 50	≥ 30 minutes	$\frac{50,070,000}{10^{0.1400t}}$

1 – when residuals are heated by warmed gases or an immiscible liquid

- (B) Alkaline Treatment. The pH of the biological residuals shall be raised to above 12 and shall remain remains above 12 for 72 consecutive hours. The temperature of the biological residuals shall be above 52 degrees Celsius for 12 hours or longer during the period that the pH of the biological residuals is above 12. At the end of the 72-hour period during which the pH is above 12, the biological residuals shall be air dried to achieve a total solids greater than 50 percent; percent;

- (C) Prior Testing for Enteric Viruses/Viable Helminth Ova. The biological residuals shall be analyzed prior to pathogen reduction treatment to determine whether the biological residuals contain enteric viruses or viable helminth ova. The density of enteric viruses prior to pathogen reduction treatment shall be less than one Plaque-forming Unit per four grams of total solids on a dry weight basis (i.e., dry weight basis) or the density of viable helminth ova shall be less than one per four grams of total solids on a dry weight basis. (i.e., dry weight basis). When the density of enteric viruses or viable helminth ova are equal to or greater than these values, the biological residuals shall be considered ~~to be~~ Class A following pathogen reduction treatment if the resultant densities are less than these values and the operating parameters for the pathogen reduction treatment are documented. documented to the satisfaction of the Division. After this demonstration, the biological residuals shall be considered ~~to be~~ Class A as long as if the operating parameters for the pathogen reduction treatment are met and documented; documented to the satisfaction of the Division;

- (D) No Prior Testing for Enteric Viruses/Viable Helminth Ova. The density of enteric viruses in the biological residuals shall be less than one Plaque-forming Unit per four grams of total solids on a dry weight basis (i.e., dry weight basis) or the density of viable helminth ova in the biological

- residuals shall be less than one per four grams of total solids on a dry weight basis (i.e., dry weight basis) at the time that the biological residuals are used or disposed or ~~is are~~ prepared for sale or giving away in a bag or other ~~container contained~~ for land application; application to the land;
- (E) Process to Further Reduce Pathogens - Composting. The biological residuals shall be composted using either the within-vessel method or the static aerated pile method, during which the temperature of the biological residuals is maintained at 55 degrees Celsius or higher for three consecutive days or longer. Alternatively, the biological residuals shall be composted using the windrow method, during which the temperature of the biological residuals is maintained at 55 degrees Celsius or higher for 15 consecutive days or longer. The windrow shall be turned five times during the period when the biological residuals are maintained at 55 degrees Celsius or ~~higher; higher.~~ Natural decay of the biological residuals under uncontrolled conditions ~~are not sufficient to meet this process; shall not be deemed to comply with these composting requirements;~~
- (F) Process to Further Reduce Pathogens - Heat Drying. The biological residuals shall be dried by direct or indirect contact with hot gases to reduce the moisture content of the biological residuals to 10 percent or lower. During the process, either the temperature of the biological residuals particles ~~exceeds shall exceed~~ 80 degrees Celsius or the wet bulb temperature of the gas in contact with the biological residuals as they leave the dryer exceeds 80 degrees ~~Celeius; Celsius;~~
- (G) Process to Further Reduce Pathogens - Heat Treatment. The biological residuals shall be heated to a temperature of 180 degrees Celsius or higher for 30 minutes. This process ~~is only available to shall be applied only to~~ biological residuals that are in a liquid ~~state; state;~~
- (H) Process to Further Reduce Pathogens - Thermophilic Aerobic Digestion. The biological residuals shall be agitated with air or oxygen to maintain aerobic conditions, and the mean cell residence time of the biological residuals shall be 10 days at between 55 and 60 degrees Celsius. This process ~~is only available to shall be applied only to~~ biological residuals that are in a liquid ~~state; state;~~
- (I) Process to Further Reduce Pathogens - Beta Ray Irradiation. The biological residuals shall be irradiated with beta rays from an accelerator at dosages of at least 1.0 megarad at room temperature ~~(i.e., approximately 20 degrees Celsius); (i.e., approximately 20 degrees Celsius);~~
- (J) Process to Further Reduce Pathogens - Gamma Ray Irradiation. The biological residuals shall be irradiated with gamma rays from certain isotopes, such as Cobalt 60 and Cesium 137, at room temperature ~~(i.e., approximately 20 degrees Celsius); (i.e., approximately 20 degrees Celsius); or~~
- (K) Process to Further Reduce Pathogens - Pasteurization. The temperature of the biological residuals shall be maintained at 70 degrees Celsius or higher for 30 minutes or longer.

(b) (e) For Class B biological residuals ~~to be classified as Class B with respect to pathogens shall meet~~ one of the following ~~shall be met; requirements:~~

- (1) Fecal Coliform Density Demonstration. Seven samples of the biological residuals ~~are shall be~~ collected at the time the residuals are used or disposed, and the geometric mean of the density of fecal coliform in the samples collected ~~is shall be~~ less than either 2,000,000 Most Probable Number per gram of total solids on a dry weight basis (i.e., dry weight basis) or 2,000,000 Colony Forming Units per gram of total solids on a dry weight basis. (i.e., dry weight basis).
- (2) Process to Significantly Reduce Pathogens. The biological residuals meet one of the following requirements: processed in a process to significantly reduce pathogens. ~~The processes to significantly reduce pathogens are as follows:~~
- (A) Aerobic Digestion. Biological residuals ~~are shall be~~ agitated with air or oxygen to maintain aerobic conditions for a specific mean cell time at a specific temperature. Values for the mean cell residence time and temperature ~~are shall be~~ between 40 days at 20 degrees Celsius and 60 days at 15 degrees ~~Celeius; Celsius;~~
- (B) Air Drying. Biological residuals ~~are shall be~~ dried on sand beds or on paved or unpaved basins for ~~a minimum of~~ three months. During two of the three months, the ambient average daily temperature ~~is shall be~~ above zero degrees ~~Celeius; Celsius;~~
- (C) Anaerobic Digestion. Biological residuals ~~are shall be~~ treated in the absence of air for a specific mean cell residence time at a specific temperature. Values for the mean cell residence time and

temperature ~~are~~ shall be between 15 days at 35 to 55 degrees Celsius and 60 days at 20 degrees ~~Celeius;~~ Celsius;

- (D) Composting. Using either the within-vessel, static aerated pile, or windrow composting methods, the temperature of the biological residuals ~~is~~ shall be raised to 40 degrees Celsius or higher and ~~remains shall remain~~ at 40 degrees Celsius or higher for five days. For four hours during the five days, the temperature in the compost pile ~~exceeds shall exceed~~ 55 degrees Celsius. Natural decay of the biological residuals under uncontrolled conditions ~~are not sufficient to meet this process shall not be deemed to comply with these composting requirements; or~~
- (E) Lime Stabilization. Sufficient lime ~~is~~ shall be added to the biological residuals to raise the pH to 12 after two hours of contact.

(c) Biological residuals placed in a surface disposal unit shall be exempt from meeting the Class A or Class B pathogen requirements if the vector attraction reduction method in Rule .1107(b)(2) of this Section is met.

(d) The pathogen reduction requirements in Paragraphs (a)(2) and (b) of this Rule shall not apply for biological residuals generated from treatment of waste shown to not contain pathogens.

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15A NCAC 02T .1108(b)

Proposed Language for Readoption

For land onto which Class A bulk residuals are applied or stockpiled, the following ~~minimum~~ setbacks in feet (i.e., in feet) shall be as follows: adhered to:

Public Comments

1. “In 15A NCAC 02T .1108(b), the Department proposes to delete the term “bulk” and create paragraphs establishing separate setbacks for Class A and Class B residuals. NCWQA believes the term bulk should be retained because deleting the term “bulk” suggests there are setbacks for all Class A products – even those sold or given away in a bag or other container. This could be interpreted to apply to and impact individual property owners land applying compost on laws and home gardens.

Further, NCWQA recommends that the Department clarify the setback requirements for exceptional quality (EQ) materials (no setbacks required, as discussed below) versus bulk Class A PC materials (no land application within 10 meters of a water of the U.S.) versus bulk Class B (all listed setbacks apply).

NCWQA notes that edits may be also required to 15A NCAC 02T .1103(a)(4) to reflect the corrections made in 15 NCAC 02T .1108 regarding setbacks applicable to Class A PC materials.” – F. Paul Calamita, North Carolina Water Quality Association

Hearing Officer Response

1. It is agreed that the term “bulk” should be reinstated in the proposed rule in order to differentiate between Class A bulk and bagged residuals. Please note that it is not intended to include “Exceptional Quality (EQ)” residuals in the 02T .1100 section.

Revised Language for Readoption

For land onto which Class A bulk residuals are applied or stockpiled, the following ~~minimum~~ setbacks in feet (i.e., in feet) shall be as follows: adhered to:

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15A NCAC 02T .1108(c)

Proposed Language for Readoption

For land onto which Class B residuals are applied or stockpiled, the following setbacks in feet shall be as follows:

~~(2) — If the bulk residuals do not meet the requirements of Rules .1105(e), .1106(b), and .1107 of this Section:~~

	Surface Application by Vehicle	Surface Application by Irrigation	Injection / Incorporation
Habitable residences or places of public assembly under separate ownership or not to be maintained as part of the project site	400	400	200
Habitable residences or places of public assembly owned by the Permittee, permittee, to be maintained as part of the project site	0	200	0
Any property line <u>Property lines</u>	50	150	50
Public right rights of way	50	50	50
Any private <u>Private</u> or public water supply source sources	100	100	100
Surface waters (streams - intermittent and perennial, perennial waterbodies, and wetlands)	100 <u>32.8</u>	100 <u>32.8</u>	50 <u>32.8</u>
Surface water diversions (ephemeral streams, waterways, ditches)	25	100 <u>25</u>	25
Groundwater lowering ditches (where the bottom of the ditch intersects the SHWT)	25	100	25
Subsurface groundwater lowering drainage systems	0	100	0
Any well <u>Wells</u> with exception of to monitoring wells	100	100	100
Bedrock outcrops	25	25	25
Top of slope of embankments or cuts of two feet or more in vertical height	15	15	15
Any building foundation <u>Building foundations</u> or basement <u>basements</u>	0	15	0
Any water line <u>Water lines</u>	0	10	0
Swimming pools	100	100	100
Nitrification field <u>fields</u>	0	20	0

Public Comments

1. “The rules should maintain the requirement for a 100-ft setback from swimming pools instead of assuming all pools are “places of public accommodation”” – Vivian Lord
2. “Strongly disagree with reduction of setback to surface waters to Class B residuals to 32.8 feet. Surface applications at this distance will result in discharges of nutrients, metals, pathogens, and other pollutants to surface waters based on field observation of land application events.” – Cory Larsen, PE, Wake County Environmental Services

Hearing Officer Response

1. For the purposes of the 02T and 02U subchapters, “public” has been interpreted as “of or relating to people in general.” This is reflected in the public access prohibitions found in .0505(q) and other sections in the 02T and 02U subchapters. “Public” is not interpreted as the opposite of “private” in regard to places, property, etc. In addition, it is not necessary to specifically note “swimming pools” in the rule, as other places of public assembly, such as churches, schools, day cares, athletic fields, tennis courts, etc. are not specified by name, but are inherently covered under the term “place of public assembly.” Regardless, the Hearing Officers recommend that the term “public” be removed from the first two listed setbacks.
2. The reduction in the setback from 100 feet to 32.8 feet for surface waters is proposed in order to comply with the requirements in [G.S. 150B-19.3](#), which reads, “An agency authorized to implement and enforce State and federal environmental laws may not adopt a rule for the protection of the environment or natural resources that imposes a more restrictive standard, limitation, or requirement than those imposed by federal law or rule, if a federal law or rule pertaining to the same subject matter has been adopted, unless adoption of the rule is required by one of the subdivisions of this subsection. A rule required by one of the following subdivisions of this subsection shall be subject to the provisions of G.S. 150B-21.3(b1) as if the rule received written objections from 10 or more persons under G.S. 150B-21.3(b2):...” Accordingly, this setback must be reduced to the 32.8 foot requirement in [40 CFR 503.14](#).

Revised Language for Readoption

For land onto which Class B residuals are applied or stockpiled, the following setbacks in feet shall be as follows:

~~(2) — If the bulk residuals do not meet the requirements of Rules .1105(e), .1106(b), and .1107 of this Section:~~

	Surface Application by Vehicle	Surface Application by Irrigation	Injection / Incorporation
Any habitable residence <u>Habitable residences</u> or place places of public assembly under separate ownership or not to be maintained as part of the project site	400	400	200
Any habitable residence <u>Habitable residences</u> or place places of public assembly owned by the Permittee, permittee , to be maintained as part of the project site	0	200	0
Any property line <u>Property lines</u>	50	150	50
Public right rights of way	50	50	50
Any private <u>Private</u> or public water supply source sources	100	100	100
Surface waters (streams - intermittent and perennial, perennial waterbodies, and wetlands)	100 <u>32.8</u>	100 <u>32.8</u>	50 <u>32.8</u>
Surface water diversions (ephemeral streams, waterways, ditches)	25	100 <u>25</u>	25
Groundwater lowering ditches (where the bottom of the ditch intersects the SHWT)	25	100	25
Subsurface groundwater lowering drainage systems	0	100	0
Any well <u>Wells</u> with exception of to monitoring wells	100	100	100
Bedrock outcrops	25	25	25
Top of slope of embankments or cuts of two feet or more in vertical height	15	15	15
Any building foundation <u>Building foundations</u> or basement basements	0	15	0
Any water line <u>Water lines</u>	0	10	0

Swimming pools	100	100	100
Nitrification <u>field</u> fields	0	20	0

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15A NCAC 02T .1108(e)

Proposed Language for Readoption

Setback waivers from habitable residences or places of public assembly under separate ownership, or not to be maintained as part of the project site, shall be written, notarized, and signed by all parties involved.

Public Comments

1. "Additionally, in the spray rules under section 0.500 and in the single family rules under 0.606 there is a provision for allowing a property line setback waiver. There is no reason to not allow for the development and implementation of a property setback waiver for the land application section of the rules. Even if the adjoining parcels are not under the "common ownership" there should be the option of reducing the setbacks." – Martin Mabe, LSS, Willcox & Mabe Soil Solutions, PLLC

Hearing Officer Response

1. Thank you for noticing this oversight. This rule should be amended to include the language from 15A NCAC 02T .0506(d).

Revised Language for Readoption

Setback waivers shall be written, notarized, signed by all parties involved and recorded with the county Register of Deeds. Waivers involving the compliance boundary shall be in accordance with 15A NCAC 02L .0107.

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15A NCAC 02T .1108(f)

Proposed Language for Readoption

Setbacks to property lines established in Paragraphs (a), (c), and (d) of this Rule shall not be applicable when the Permittee; the entity from which the Permittee is leasing; or the entity that executed the notarized landowner agreement in 15A NCAC 02T .1104(c)(4) owns both parcels creating said property line.

Public Comments

1. “While it is important that setbacks be clearly defined, it is just as important that they serve their intended purpose of ensuring permitted activity is not conducted in problematic locations. For instance, typically, rules state the required setback between permitted activity and “any property line” to minimize impacts of permitted activity on adjacent parcels.⁴³ However, in the proposed rules, setbacks to property lines “shall not be applicable when the Permittee, or the entity from which the Permittee is leasing, owns both parcels creating said property line.”⁴⁴

At first blush, this may seem reasonable. If a permittee wishes to conduct permitted activity next to his own property, perhaps he should be allowed to assume the risk of impacting his own property by essentially waiving the protection otherwise afforded by a setback. However, this justification fails to consider the potential that the adjacent property is occupied by the permittee’s tenant. After all, the impacts of permitted activity can affect people, not just land.

According to the U.S. Census Bureau, between 2011 and 2015, only 65.1% of housing units in North Carolina were owner-occupied.⁴⁵ Yet, under the proposed rule, whether or not one owns his residence could directly impact the degree of protection afforded under the 02T and 02U rules. Not only does this unfairly burden tenants, it threatens to invite violations of well-established principles of landlord/tenant law. “North Carolina law provides that a lease, in the absence of a provision to the contrary, carries with it an implied covenant that the tenant will have the quiet and peaceable possession of the leased premises during the term of the lease.”⁴⁶ The EMC should not adopt rules that allow an absentee landlord to breach this implied covenant of quiet enjoyment by waiving setback requirements.

Of course, if a permittee does not lease the property adjacent to the parcel on which the permitted activity is conducted, this concern would be mitigated. We encourage the EMC to consider adding this caveat to prevent landlords from waiving protections or violating legal rights designed to benefit tenants. Alternatively, the EMC should consider removing this setback exception and analyzing on a case-by-case basis whether or not a variance from the setback would provide equal or better treatment of waste, equal or better protection of the waters of the state, and no increased potential for nuisance conditions from noise, odor, or vermin.⁴⁷ – American Rivers, Et. Al

2. “With the passing of HB 56 on October 4, 2017, GS 143-215.1(i) has been amended such that there are no longer setbacks to property lines for “multiple contiguous properties under common ownership and permitted for use as a disposal system.” To date, no one within NCDEQ has determined or announced the definition/interpretation of “common ownership”. In an email dated October 4, 2017, Mr. Nathaniel Thornburg made the following comment: “We no longer need to require that the Permittee provide setbacks to their own contiguous property lines, or obtain and record setback waivers.” But to my knowledge, the 2T proposed Rule Change does not address this new interpretation as a result of HB 56 passing.” – Martin Mabe, LSS, Willcox & Mabe Soil Solutions, PLLC

3. "As an initial matter, NCWQA supports proposed paragraph (f), which states that "Setbacks to property lines as noted in Paragraphs (a), (c) and (d) are not applicable when the Permittee; the entity from which the Permittee is leasing; or the entity that executed the notarized landowner agreement in 15A NCAC 02T.1104(c)(4) owns both parcels creating said property line." This change provides important streamlining where adjacent properties are under co-ownership or operation such that internal buffers make no sense." – F. Paul Calamita, North Carolina Water Quality Association

Hearing Officer Response

1. The proposed rule language only exempts the Permittee from complying with property line setbacks when the Permittee owns or is leasing the parcels that create the property line. The Permittee is still responsible for ensuring that the infiltration, treatment, and storage facilities maintain setbacks to any habitable residence or place of public assembly under separate ownership and under the Permittee's ownership.

In addition, the Hearing Officers solicited comment from the North Carolina Department of Justice's Environmental Division. Special Deputy Attorney General Phillip T. Reynolds stated, "After reviewing the history of the rule and the supporting statutes, it seems to me that the proposed language...is simply an extension of the statutory mandate contained in N.C. Gen. Stat. § 143-215.1(i), which states in relevant part: "Multiple contiguous properties under common ownership and permitted for use as a disposal system shall be treated as a single property with regard to determination of a compliance boundary and setbacks to property lines." Because the authority to adopt the rule is predicated on the statute and because the statute clearly requires that "multiple continuous properties ... shall be treated as a single property," it does not appear that the principles of landlord/tenant law are relevant for the purposes of the specific rule."

2. [Session Law 2017-209](#) amended [G.S. 143-215.1\(i\)](#) as follows: "Multiple contiguous properties under common ownership and permitted for use as a disposal system shall be treated as a single property with regard to determination of a compliance ~~boundary.~~ boundary and setbacks to property lines." Proposed Rule 15A NCAC 02T .0506(e) is a reflection of the revised general statute language.
3. Thank you for your comment.

Revised Language for Readoption

No revisions to the proposed language for readoption have been made.

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15A NCAC 02T .1109(a)(1)

Proposed Language for Readoption

Residuals ~~Bulk residuals~~ shall not be land applied ~~to the land~~ under the following conditions:

- (A) if the requirements specified by 40 CFR 503.14(a) as stated on January 1, 1996 and incorporated by reference ~~cannot be~~ have not been met;
- (B) if the application causes prolonged nuisance conditions;
- (C) if the land fails to assimilate the ~~bulk~~ residuals or the application causes the contravention of surface water or groundwater standards;
- (D) if the land is flooded, frozen, or snow-covered or is otherwise in a condition such that runoff of the residuals would occur;
- (E) within the 100-year flood elevation unless the ~~bulk~~ residuals are injected or incorporated within a 24-hour period following the application of residuals to land; ~~land application event~~;
- (F) during precipitation events or within 24 hours following a rainfall event of 0.5 inches or greater in a 24-hour period;
- (G) if the slope of the land is greater than 10 percent when ~~bulk~~ liquid residuals are surface applied, and if the slope of the land is greater than 18 percent when ~~bulk~~ liquid residuals are injected or incorporated;
- (H) if the land does not have an established vegetative cover crop unless the land is in a state or federal no-till program or the ~~bulk~~ residuals are incorporated within a 24-hour period following the injection or application of residuals to land; ~~land application event or injected~~;
- (I) if the vertical separation of the seasonal high water table and the depth of residuals application is less than one foot;
- (J) if the vertical separation of the depth to bedrock and the depth of residuals application is less than one foot; or
- (K) if the application exceeds agronomic ~~rates~~ rates, except for dedicated sites where the Applicant ~~applicant~~ has specifically requested higher rates in an applications pursuant to Rule .1104(d) of this Section.
- (L) new land application sites located within a WS-I watershed pursuant to 15A NCAC 02B .0212 or within the Critical Area of a WS-II pursuant to Sub-Item (4)(g) of Rule 15A NCAC 02B .0212, or within the Critical Area of a WS-III or WS-IV watershed pursuant to Sub-Item (4)(h) of Rules 15A NCAC 02B .0215, and .0216.

Public Comments

1. "NCWQA questions the current list of management practices in .1109(a)(1). It appears that several are not required by federal law (for example, the prohibition on prolonged nuisance conditions, which is also problematic because of its vagueness).

NCWQA recommends that the Department carefully review the management practices at 40 C.F.R. § 503.14, and consider eliminating any .1109(a)(1) terms that are not found therein." – F. Paul Calamita, North Carolina Water Quality Association

Hearing Officer Response

1. The State of North Carolina is not delegated to implement the Federal program for the use or disposal of sewage sludge. The residuals management program in North Carolina is a state-run program that is independent and complementary of Federal regulations.

Revised Language for Readoption

No revisions to the proposed language for readoption have been made.

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15A NCAC 02T .1109(a)(1)(H)

Proposed Language for Readoption

if the land does not have an established vegetative cover crop unless the land is in a state or federal no-till program or the bulk residuals are incorporated within a 24-hour period following the injection or application of residuals to land; ~~land application event or injected;~~

Public Comments

1. "Rule 15A NCAC 02T .1109(a)(1)(H) requires that residuals cannot be applied to land with no established cover crop unless the land is enrolled in a federal or state no-till program, or unless the residuals are incorporated within 24 hours. This requirement overlooks the fact that much of the land that uses no-till is not enrolled in a federal or state no-till program. For example, in the Tar-Pam River Basin, the Census of Agriculture from 2012 (the most recent available) indicates that 302,697 acres were under the no-till practice¹. But the Tar-Pam Basin Oversight Committee, which only reports land under a state or federal program, calculated that 46,808 acres were under a state or federal program for the no-till practice in crop year 2012². NCFB requests that 02T .1109(a)(1)(H) be revised to allow for the inclusion of land that is using the no-till practice, but not require that the land be under a state or federal no-till program." – Keith Larick, North Carolina Farm Bureau Federation, Inc.

Hearing Officer Response

1. The Hearing Officers agree to removing the limitation of no-till fields to only those enrolled in a state or federal no-till program. However, the proposed language should be modified to require that the fields be a Division-approved site for no-till practices, and this approval should come through the application process and land owner agreement.

Revised Language for Readoption

if the land does not have an established vegetative cover crop unless the land is a Division-approved no-till site in a state or federal no-till program or the bulk residuals are incorporated within a 24-hour period following the injection or application of residuals to land; ~~land application event or injected;~~

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15A NCAC 02T .1300

Proposed Language for Readoption

Not applicable – These are general comments about Section .1300

Public Comments – Create Violation Point System

1. The EMC should meet the legal obligation to conduct rulemaking for developing a violations points system to ensure that repeat offenders are not treated the same as compliant operations. EMC should create and include violations points system applicable to permits for animal waste management systems for swine farms, per S.L. 1997-458 (G.S. 143-215.6E) – Amer. Rivers et.al.
2. The EMC should follow the command of N.C. General Statute 143-215.6E and create a violation points system to reduce the threat posed by serial polluters operating swine facilities. – Haddix et.al.
3. Urge revisions of the 02T rules to include a detailed Violations Points System (VPS), as required by statute, to reduce the threat posed by serial polluters operating swine facilities. The rules should be modified to include a VPS because the NC General Statutes require it. – SELC et. al.
4. The rules should be modified to include a VPS because it would result in protection of water resources by requiring DEQ to hold serial violators accountable. – SELC et. al.
5. The rules should be modified to include a VPS because other states have successfully implemented similar systems. – SELC et. al.
6. The rules should be modified to include a VPS because an analysis of public records reveals that serial polluters operating swine facilities pose a serious risk to NC's environment and public health. – SELC et. al.
7. The Department can act, during this rule review process, to institute the Violation Points System. The Commission is reviewing, amending, and re-adopting a series of administrative rules pursuant to the Regulatory Reform Act of 2013, S.L. 2013-413. Its proposed revisions to the 02T rules contains several additions to sections .1303, .1304, and .1305 that are designed to prevent waste discharge and to protect surface water quality. The Commission has until October 2019 to re-adopt these rules, with amendments and additions. – SELC et. al.
8. The state's Environmental Management Commission must follow the directions given by the NC General Assembly to create a violation point system in regard to swine facilities. Such a system would reduce the environmental threats as well as impacts to communities from habitual violations from a specific swine CAFO (NCGS 143-215.6E). – L. Baldwin
9. The EMC needs to create a violation point value system for swine operations. – W. Hendrick

Hearing Officer Response

The creation of a violations points system is outside the scope of this readoption process and would require additional rulemaking action. Furthermore, General Statute 143-215.6A and 143B-282.1(b) require that any civil penalty assessment be based in consideration of eight assessment factors applied to the specific circumstances of the violation(s). Wake County Superior Court ruled in Dec 2003 in Heater Utilities v. NCDENR that imposing a penalty "decision tree" with preset penalties violated the statute. A Violations Points System would similarly violate the same statutes. The department has adopted a tiered enforcement policy consistent with 143-215.6A and 143B-282.1 with provisions for escalating enforcement actions to address violations. A tiered enforcement policy has existed in the animal feeding operations program since 2000.

Considering all the above factors, the hearing officers do not recommend the creation of a Violation Points System as part of this rule making. Effective May 3, 2018, DEQ entered into a settlement agreement to address an environmental justice complaint in which DEQ committed to draft rules regarding a violation points system consistent with G.S. 143-215.6A within 12 months.

Revised Language for Readoption

No revisions recommended.

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15A NCAC 02T .1300

Proposed Language for Readoption

Not applicable – These are general comments about Section .1300

Public Comments – Environmental Justice

1. Request that the EMC revise the 2T rules, particularly to address disproportionate harm to communities of color from these facilities (animal operations). – SELC et. al.
2. More modifications to the 02T rules are needed in order to ensure that North Carolina's AWMS are not adversely impacting public health and North Carolina's environmental quality, particularly in low-income communities of color. ... DEQ must do more to ensure that North Carolina's AWMS are not disproportionately burdening these communities with environmental harm, such as surface water quality impairment. – Duke Env. Law et.al.
3. Concerned about the potential impact on low-income communities located near hog and poultry farms and the impact of wastewater from these systems entering the waterways and polluting drinking water. – FWWatch et.al.
4. Given the disparate impact of animal operations (especially hog farms) on vulnerable communities, the state should take additional measures to protect those at greatest risk. – Postcards
5. Need to consider the locations and impacts of animal operations on surrounding communities. – W. Hendrick
6. Lumber River Basin is racially diverse, poor economy - economically depressed. Robeson County is 45% Lumbee and very poor. – C. Ellis

Hearing Officer Response

During the writing of this report, the State of NC entered into a negotiated [settlement agreement](#) with the NC Environmental Justice Network, Rural Empowerment Association for Community Help, and Waterkeeper Alliance, Inc. An outgrowth of this settlement was the Secretary's establishment of the NC DEQ Environmental Justice and Equity Advisory Board on May 2, 2018. The Hearing Officers believe that, within the limits of DEQ's authority, it is appropriate that this Advisory Board address any environmental justice and equity issues raised during the comment period.

Revised Language for Readoption

No revisions recommended.

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15A NCAC 02T .1300

Proposed Language for Readoption

Not applicable – These are general comments about Section .1300

Public Comments – Monitoring and Reporting

1. Encourage the EMC to amend the 02T rules to require permittees to collect much needed information about the impacts of animal waste management on our water resources. – Amer. Rivers et.al.
2. The proposed regulations will likely increase the health and environmental burdens from concentrated animal feeding operations. The proposed 02T rules continue to treat industrial swine facilities as non-discharge facilities without mandating testing of water quality or air quality near these operations. Rules should require surface and groundwater monitoring to prove no discharge. Monitoring should be at industry expense, not the contract grower. – Haddix et.al.
3. Waterkeepers urge the commission to incorporate annual surface water sample collection and reporting as part of the requirements for the following: 1. being deemed permitted by regulation under 15A NCAC 02T .1303; 2. the state permitting requirements under 15A NCAC 02T .1304; 3. the NPDES permitting requirements under 15A NCAC 02T .1305; and 4. the monitoring requirements under 15A NCAC 02T .1308(d). – Duke Env. Law et.al.
4. It is essential that the 02T rules establish comprehensive and effective requirements for AWMS so as to ensure that they are in fact not discharging waste or waste nutrients into North Carolina's surface water resources, in compliance with their statutory and permit obligations. – Duke Env. Law et.al.
5. Waterkeepers recommend that the EMC implement a risk-based, compliance assurance surface water quality monitoring program applicable to those AWMS with the highest likelihood, based on location or operational characteristics, of causing a discharge into waters of the state. – Duke Env. Law et.al.
6. In light of the comprehensive monitoring and reporting requirements for animal waste residuals established in 15A NCAC 02T .1310, Waterkeepers urges the Commission to further amend the 02T rules and adopt monitoring and reporting requirements applicable to all varieties of AWMS in North Carolina, regardless of the type of animal waste managed and regardless of whether the system is deemed permitted by regulation, operating under state permits, or operating under NPDES permits. – Duke Env. Law et.al.
7. Predicate all surface water monitoring provisions on risk-based triggers. Site specific physical factors also support surface water monitoring and reporting requirements under sections .1303, .1304, .1305, and .1308 because animal operations with certain production characteristics are more likely to discharge than otherwise comparable animal operations. – Duke Env. Law et.al.
8. Incorporate a graduate schedule into surface water monitoring and reporting provisions. – Duke Env. Law et.al.
9. Waste from poultry and swine farms should be monitored and controlled. Protect against massive dumping and spraying in areas where people live. – R. Goins
10. The state department of environmental quality should require that livestock and poultry operators sample surface water, ground water, and air quality in order to protect residents. – Postcards
11. Add air, groundwater, and surface water monitoring. – W. Hendrick
12. Comprehensive surface water quality monitoring system should be required. We need monitoring to prove performance of the systems, to evaluate health benefits/impacts, and to confirm non-discharge status. – E. Meza

13. Incorporate surface water quality monitoring for compliance assurance. – D. Schwartz
14. Urge the EMC to require mandatory water quality monitoring system to obtain valuable data to ensure equitable treatment and to develop an informed policy response. – A. McCreadie

Hearing Officer Response

The purpose of this rule review and readoption is to comply with Session Law 2013-413. The modification of this rule Section to incorporate additional surface water quality monitoring and reporting requirements is beyond the scope of S.L. 2013-413. Such modifications would require a separate rule making action. However, 15A NCAC 02T .0108(c) grants the Division the authority to require surface and ground water monitoring on a case-by-case basis.

Air quality monitoring rules are in 15A NCAC 02D, not in 15A NCAC 02T.

Additionally, the proposed .1310 rule was a technical correction to an omission in the creation of the 15A NCAC 02T rules in 2006 that left the distribution of animal waste residuals (to the public) unregulated. The distribution of material directly to the public requires additional monitoring to protect public health. The requirements of .1310 are not applicable to other rules in the .1300 Section.

Revised Language for Readoption

No revisions are recommended.

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15A NCAC 02T .1300

Proposed Language for Readoption

Not applicable – These are general comments about Section .1300

Public Comments – Permit Dry Litter Poultry

1. I am deeply disturbed by the influx of poultry operations along the Catawba River Basin. A brief look at the current waste regulations - the 2T rules - shows them to be grossly inadequate and in dire need of revision and strengthening. – L. Wilson
2. Please use long-term vision with an eye to equal treatment of all communities when addressing these issues. The monetary gain from such a large influx of poultry operations is far outweighed by the long-term environmental consequences. – L. Wilson
3. The EMC has the statutory authority to bring dry litter facilities under a state general permit and should take this opportunity to amend the 02T Rules to do so. – Haddix et.al.
4. The EMC should amend the 02T Rules to bring dry litter facilities under a general permit or, at least, take interim steps to improve record-keeping and disclosure by dry litter facilities. – Yale EJ Clinic, et. al.
5. Dry litter poultry manure is a serious hazard to public health and the environment. – Yale EJ Clinic, et. al.
6. Poultry manure is the largest and fastest growing source of nutrients in North Carolina, but because facilities are "deemed permitted", we know few details about the specific sources of the problem. – Yale EJ Clinic, et. al.
7. The deemed permitted regime, under which dry litter poultry facilities are "permitted by regulation," fails to prevent the harmful effects of dry litter pollution. – Yale EJ Clinic, et. al.
8. State and federal laws ostensibly require dry litter facilities to abide by certain limited requirements, but without strong enforcement mechanisms such requirements are illusory. – Yale EJ Clinic, et. al.
9. The deemed-permitted requirements are difficult to enforce and widely flouted. Reporting requirements and inspections are crucial for DWR to uncover and correct violations of substantive permit provisions that protect public health and the environment. Because deemed-permitted status comes with no such requirements, regulated entities frequently violate the deemed-permitted conditions without repercussion. – Yale EJ Clinic, et. al.
10. North Carolina lags behind other regional states in regulation of dry litter. – Yale EJ Clinic, et. al.
11. The co-location of poultry facilities with swine facilities creates cumulative impacts that affect vulnerable populations. This creates an unfair and unjust burden not only on local, vulnerable communities, but also on municipalities, swine and cattle operators, and other industries who bear disproportionate blame for the cumulative effect of nutrient production within the state. – Yale EJ Clinic, et. al.
12. EMC can and should amend the 02T Rules to integrate dry litter poultry facilities into North Carolina's AFO permitting program. Eliminate 02T .1303(a)(2) to remove the deemed permitted allowance for dry litter facilities. Amend 02T .1304 to include dry litter facilities in addition to "animal operations". – Yale EJ Clinic, et. al.
13. EMC should take interim steps to improve transparency and disclosure among facilities deemed permitted. EMC has the authority to require the submission of documents to DWR on a regular schedule without

comprehensive amendments to the deemed-permitted regulations. The reporting requirements for dry litter poultry facilities should be added to 02T .1303(a)(2). – Yale EJ Clinic, et. al.

14. The deemed-permitted regime creates potential for liability under Title VI of the Civil Rights Act of 1964 and EPA regulations by DEQ. – Yale EJ Clinic, et. al.
15. There are 1000 poultry houses in NC Catawba watershed and only 100 in SC Catawba watershed. Waste IS discharging. This is not farming. Problems occur where headwaters cannot start clean. This is apparent based on visual observation and odor. The nutrient loading has cause algal blooms elsewhere but expect it to happen here - example of Toledo. Catawba is a bottleneck and if a bloom occurred, you could have concerns for drinking water for 1.2 million people. – Sam Perkins - Catawba River Keeper
16. Poultry has ruined the lives of people living near the poultry houses. Poultry is encroaching on the neighbors. EMC should act in the best interest of the public. – Sam Perkins - Catawba River Keeper
17. The current absence of a permitting process with regard to new poultry operations leaves the state unable to provide basic oversight and prevent irresponsible practices of these facilities. Poultry operations are the fastest growing source of agricultural pollution, and the state needs to protect its citizens from this industry. – Postcards
18. Cannot protect the environment or the citizens as dry litter poultry is not currently permitted. Based on a DWR study, poultry is the largest and fastest growing industry. Rules need to be reformed to collect necessary information about poultry. – W. Hendrick
19. There has been a proliferation of poultry operations, which are deemed permitted. There is little information on the waste use. These new farms bring a huge increase in the PAN generated. – C. Ellis
20. Didn't know about chicken farms and that they are not regulated. I'm familiar with Maryland eastern shore problems. There are issues of farmers dealing with integrators. Need to address how hard poultry farms are on neighbors. – L. Cozar
21. There's a vast loophole for dry litter poultry. We need to collect more information about them. Current regulations do not allow DEQ to know any information about facilities including the locations or number of birds. – W. Hendrick

Hearing Officer Response

Hearing officers received comment in each of the sessions concerning imposition of additional regulatory requirements on dry litter operations. G.S. 143-215.10B excludes dry litter poultry operations from the definition of “animal operation” which would be subject to permitting under G.S. 143-215.10C. Also, G.S. 150B-19.3 prohibits the adoption of certain environmental regulations.

It is the hearing officers' opinion that additional requirements for dry litter operations would be environmentally beneficial. At minimum, we believe operators of dry litter facilities handling litter from one or more poultry houses of a capacity yet to be determined should: receive comprehensive nutrient management training, develop comprehensive nutrient management plans, participate in a certification program on management of litter using sound nutrient management principles, and report management practices (including land application) to DEQ.

Revised Language for Readoption

No revisions are recommended.

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15A NCAC 02T .1300

Proposed Language for Readoption

Not applicable – These are general comments about Section .1300

Public Comments – Public Notice

1. Neighbors have a right to know in advance and provide comment on permits for disposal of all animal waste and residuals. – Haddix et.al.
2. EMC should add requirement of public notice of litter application events - suggests posting this online. The people deserve to know where the waste is to be applied. - Sam Perkins – Catawba River Keeper

Public Comments – Transparency

1. Want more transparency for poultry and swine operations. Critical information is not collected, not shared with public. Need to bolster reporting, not remove it. – C. Ellis
2. the current system is not transparent. – L. Carter
3. Information is valuable to the public even if the agency does not act on it. Currently records are kept onsite. We want to see all records of land application. – W. Hendrick

Public Comments – Setbacks

4. Setbacks provide important buffers and reduce the amount of pollution that runs off and reaches our rivers and streams. Setbacks should be mandatory regardless of the ownership of the fields where waste is disposed. – FWWatch et.al.

Hearing Officer Response

Public Notice and Transparency – All general permits are developed with public notice and input pursuant to 02T .0111. Additionally, all permits issued under 02T .1305 require separate public notice prior to issuance of each general permit certificate of coverage and each individual permit. A map indicating the location of every permitted facility is available on the Division of Water Resources website, and all permits and permit related documents are public records.

Setbacks – Setbacks found in 15A NCAC 02T .1303, .1304, and .1305 are not based on ownership. Setbacks for swine operations covered by 02T .1304 and .1305 are established by G.S. 106-803.

Revised Language for Readoption

No revisions are recommended.

15A NCAC 02T .1300

Proposed Language for Readoption

Not applicable – These are general comments about Section .1300

Public Comments – General Comments

1. The proposed changes to the 2T animal waste rules are a step in the wrong direction -- the Environmental Management Commission should consider ways to improve the regulation of factory farms, rather than weakening existing rules. – FWWatch et.al.
2. Farmers should be incentivized to grow more fruits, vegetables, and other healthy plant foods, which can be produced in a more ecologically sound way than animal products. – Postcards
3. Concerned that animal operations are permitted as non-discharge – W. Hendrick
4. Archaic rules and outdated management technologies. – W. Hendrick
5. She is a CAFO neighbor. Producers are spraying before rain, it's getting on homes, there are other crops on the fields. – L. Carter
6. There are not enough people to review these farms. There are only nine inspectors. – L. Carter
7. Permits are only input driven. – E. Meza
8. Commends the inclusion of long standing permit conditions, but this is only a half-measure. The state needs data to fully identify operations with persistent problems. The state should do more to protect public health. – D. Schwartz
9. Proposed revisions do little to improve protections; implementing current requirements doesn't increase protection. – A. McCreadie

Hearing Officer Response

The comments are appreciated and were considered but are too broad to be addressed in the rules review and readoption process.

Revised Language for Readoption

No revisions are recommended.

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15A NCAC 02T .1302(2)

Proposed Language for Readoption

“Animal Waste Residuals” means residuals that have been generated during the treatment of animal waste.

Public Comments

1. New definition of Animal Waste Residuals - Sludge application is a problem. – C. Ellis
2. The word ‘residual’ is used to define “animal waste residuals”, that is confusing. As the word ‘residual’ is defined and has specific meaning in 15A NCAC 02T .0103, it should be re-defined for this section or not be used in separate locations with different meanings. Given the generally understood meaning of ‘residuals’ applying to municipal solid waste solids recovery, using this term in association with animal waste could be confusing unless it is clearly and separately defined. – NCDA&CS

Hearing Officer Response

The term “Animal Waste Residuals” is used to distinguish these waste products from those generated by municipal or industrial facilities while best describing the general physical characteristics of the material.

Animal Waste Residuals, for the purpose of this section, is the solids/semi-solid animal waste that is treated and distributed to the public, and does not refer to the application of lagoon sludge as a part of routine animal operations.

Revised Language for Readoption

No revisions are recommended.

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15A NCAC 02T .1302(4)

Proposed Language for Readoption

~~“Bulk animal waste residuals” shall mean animal waste residuals that are transported and not sold or given away in a bag or other container for application to the land.~~

Public Comments

1. “The definition and usage of “Bulk residuals” must be retained for clarity and consistency with federal requirements (02T .1102 and other sections). NCWQA appreciates the Department’s efforts to simplify the rules applicable to residuals management. However, the NCWQA strongly renews its request that the Department retain the definition and usage of “bulk residuals.” The deletion of “bulk residuals” and reliance on the categories “Class A” and “Class B” will result in uncertainty and inconsistencies with federal law. Under the federal regulations, biosolids must comply with pollutant limits, pathogen reduction requirements, and vector attraction reduction requirements, and, depending on the treatment provided, may be required to comply with various management requirements. The manner by which biosolids are distributed (bulk or bagged) determines in part which requirements are applicable. Here’s a brief summary of federal framework...” – F. Paul Calamita, North Carolina Water Quality Association
2. “Bulk animal waste residuals” shall mean animal waste residuals that are transported for application to the land, but which are not sold or given away in a bag or other container. – NCDA&CS

Hearing Officer Response

Based upon revisions to 15A NCAC 02T .1310, the term “bulk animal waste residuals” has been eliminated.

Revised Language for Readoption

~~“Bulk animal waste residuals” shall mean animal waste residuals that are transported and not sold or given away in a bag or other container for application to the land.~~

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15A NCAC 02T .1302(5)

Proposed Language for Readoption

"Expanded animal waste management system" means ~~animal waste treatment and storage facilities which require an increase over the existing animal waste design treatment and storage capacity due to~~ an increase in the permitted steady state live weight at the feedlot.

Public Comments

1. Suggested revision: "Expanded animal waste management system" means an increase in the permitted steady state live weight associated with an existing animal waste management system. – NCDA&CS

Hearing Officer Response

Hearing Officers recommend changing the proposed rule from "at the feedlot" to "associated with the existing animal waste management system" for clarity regarding the number of animals contributing to the animal waste management system.

Revised Language for Readoption

"Expanded animal waste management system" means ~~animal waste treatment and storage facilities which require an increase over the existing animal waste design treatment and storage capacity due to~~ an increase in the permitted steady state live weight at the feedlot associated with the animal waste management system.

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15A NCAC 02T .1302(6)(H)

Proposed Language for Readoption

The inactive animal waste management system was not closed using the expenditure of public funds and was not closed pursuant to a settlement agreement, court order, cost share agreement, or grant condition.

Public Comments

1. Please clarify: Does the above mean that both “expenditure of public funds” AND one of the other conditions listed needed to have occurred, or is the “public funds” part supposed to be part of the longer list? As it currently reads, both have to have occurred, but it is a bit ambiguous. – D. Rashash

Hearing Officer Response

The language is a direct quote from the Session Law 2015-263. In reading the full section of the law, the intent is such that any of the items in .1302(6)(H) (closed using public funds OR closed pursuant to a settlement agreement, court order, cost share agreement, or grant condition) would prevent a facility that has been depopulated more than five but less than ten years from being allowed to repopulate as an existing facility.

Based on this, the Hearing Officers do not recommend any modification to the proposed rule.

Revised Language for Readoption

No revisions are recommended.

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15A NCAC 02T .1303

Proposed Language for Readoption

(a) The following systems are deemed permitted pursuant to Rule .0113 of this Subchapter provided the system meets the criteria in Rule .0113 of this Subchapter and all criteria required for the specific system in this Rule:

- (1) Systems that do not meet the criteria of an animal operation permitted under Rule .1304 or Rule .1305 of this Subchapter and all other systems not specifically mentioned in this ~~Section~~ Section if:
 - (A) ~~the waste is land applied at no greater than agronomic rates to land owned by the waste generator or under the waste generators authority; authority; agronomic rates must be met.~~
 - (B) ~~the storage and land application of waste is not closer than 100 feet of a well;~~
 - (C) ~~animal waste is not applied on land that is flooded, saturated with water, frozen, or snow covered at the time of land application; and~~
 - (D) ~~no animal waste is land applied during precipitation events.~~
- (2) Poultry operations which use a dry litter system with more than 30,000 birds and that do not meet the criteria specified in Rule .1305 of this Subchapter if:
 - (A) records are maintained for a minimum of three years which include the dates the litter was removed, the estimated amount of litter removed and the location of the sites where the litter was land applied by the poultry operation;
 - (B) the waste is applied at no greater than agronomic rates;
 - (C) ~~a vegetative buffer (separation) of at least 25 feet is maintained from a perennial stream or perennial waterbody for land application sites;~~
 - (D) ~~land application of litter is not closer than 100 feet from a well;~~
 - ~~(E)~~(E) litter is stockpiled not closer than 100 feet from a perennial ~~stream-stream, or~~ perennial ~~waterbody;~~ waterbody, or well;
 - ~~(F)~~(F) litter is not stockpiled uncovered for greater than 15 days; ~~and~~
 - (G) ~~animal waste is not applied on land that is flooded, saturated with water, frozen, or snow covered at the time of land application;~~
 - (H) ~~no animal waste is land applied during precipitation events; and~~
 - ~~(I)~~(I) if a manure hauler is used, records must be maintained of the dates the litter was removed, the estimated amount of litter removed, and name, address and phone number of the manure hauler.
- (3) Land application sites under separate ownership from the waste generator, receiving animal waste from animal waste management systems which are deemed permitted, when all the following conditions are met:
 - (A) the waste is applied at no greater than agronomic rates; ~~and~~
 - (B) ~~the storage and land application of animal waste is not closer than 100 feet from a well;~~
 - ~~(B)~~(C) a vegetative buffer (separation) of at least 25 feet is maintained from a perennial stream or perennial ~~waterbody-waterbody;~~
 - (D) ~~animal waste is not applied on land that is flooded, saturated with water, frozen, or snow covered at the time of land application; and~~
 - (E) ~~no animal waste is land applied during precipitation events.~~

(b) The Director may determine that a system should not be deemed permitted in accordance with this Rule and Rule .0113 of this Subchapter. This determination shall be made in accordance with Rule .0113(e) of this Subchapter.

Public Comments

Environmental Justice

1. Should require equity analysis before permitting. – A. Buansi

Monitoring and Reporting

2. Incorporate annual surface water quality monitoring and reporting as a condition for being deemed permitted under .1303. – Duke Env. Law el. al.

Public Notice

3. If a land application of bulk animal waste is to be permitted, neighbors must be given the same notice and opportunity for comment by DWR as is provided for the application of other bulk residuals (2T.1310). – L. Baldwin

Poultry Should Not Be Deemed

4. Dry litter poultry that is deemed permitted initially can be required to get a permit if violations occur. Permitting is needed to better determine violations. – W. Hendrick
5. Poultry farms waste has run-off after rains, and litter dust does not evaporate. It should be reclassified and monitored. – C. Troxler
6. It is unthinkable that poultry CAFOs, which are the largest and fastest growing contributor of nutrients from animal waste across the state should be considered deemed permitted with nothing other than a building permit being required to construct barns housing up to 22,000 birds per barn. These CAFOs should have setbacks, location considerations and waste management practices before a permit is issued. – L. Baldwin
7. Poultry should not be deemed permitted. DWR should consider location and waste management practices when permitting a CAFO. Permits should include cost effective surface water quality monitoring informed by the holder's compliance record. – P. Sundie
8. Poultry farm waste, pollution and the odor caused by the chickens DESTROYS the quality of the environment and the quality of home-life of other rural, non-farming residents! As the agency that COULD bring statewide public attention to this horrible abuse to the environment and to the public, please HELP stop what is ruining our one and only life on this planet caused by the greed of this industry and the failure of those elected in Raleigh to stand-up for the people and for what is right. – M. Wycoff

General Comments

9. Waterkeepers welcome the additions to these rules that codify long-standing permit conditions, as they provide clear guidance to North Carolina's AWMS operators and will help prevent waste discharge or nutrient runoff into surface and groundwater resources. – Duke Env. Law el. al.

Hearing Officer Response

Environmental Justice – See Hearing Officers' Response to [Environmental Justice comments](#) addressed for the full 15A NCAC 02T .1300 Section.

Monitoring and Reporting – See Hearing Officers' Response to [Monitoring and Reporting comments](#) addressed for the full 15A NCAC 02T .1300 Section.

Public Notice – See Hearing Officers' Response to [Public Notice and Transparency comments](#) addressed for the full 15A NCAC 02T .1300 Section.

Poultry Should Not be Deemed – See Hearing Officers' Response to [Permit Dry Litter Poultry comments](#) addressed for the full 15A NCAC 02T .1300 Section.

The Hearing Officers recommend making a technical correction to setbacks from wells to include the phrase “other than a monitoring well”

Revised Language for Readoption

(a) The following systems are deemed permitted pursuant to Rule .0113 of this Subchapter provided the system meets the criteria in Rule .0113 of this Subchapter and all criteria required for the specific system in this Rule:

- (1) Systems that do not meet the criteria of an animal operation permitted under Rule .1304 or Rule .1305 of this Subchapter and all other systems not specifically mentioned in this ~~Section~~ Section if:
 - (A) ~~the animal~~ waste is land applied at no greater than agronomic rates to land owned by the waste generator or under the waste ~~generators authority; generator's authority; agronomic rates must be met.~~
 - (B) ~~the storage and land application of animal waste is not no closer than 100 feet of from a well, other than a monitoring well;~~
 - (C) ~~animal waste is not applied on land that is flooded, saturated with water, frozen, or snow covered at the time of land application; and~~
 - (D) ~~no animal waste is land applied during precipitation events.~~
- (2) Poultry operations which use a dry litter system with more than 30,000 birds and that do not meet the criteria specified in Rule .1305 of this Subchapter if:
 - (A) records are maintained for a minimum of three years which include the dates the litter was removed, the estimated amount of litter removed and the location of the sites where the litter was land applied by the poultry operation;
 - (B) the waste is applied at no greater than agronomic rates;
 - (C) ~~a vegetative buffer (separation) of at least 25 feet is maintained from a perennial stream or perennial waterbody for land application sites;~~
 - (D) ~~land application of litter is not no closer than 100 feet from a well, other than a monitoring well;~~
 - ~~(C)(E)~~ litter is stockpiled not no closer than 100 feet from a perennial ~~stream-stream, or~~ perennial ~~waterbody; waterbody, or well, other than a monitoring well;~~
 - ~~(D)(F)~~ litter is not stockpiled uncovered for greater than 15 days; and
 - (G) ~~litter animal waste~~ is not applied on land that is flooded, saturated with water, frozen, or snow covered at the time of land application;
 - (H) ~~no animal waste litter~~ is land applied during precipitation events; and
 - ~~(E)(I)~~ if a manure hauler is used, records must be maintained of the dates the litter was removed, the estimated amount of litter removed, and name, address and phone number of the manure hauler.
- (3) Land application sites under separate ownership from the waste generator, receiving animal waste from animal waste management systems which are deemed permitted, when all the following conditions are met:
 - (A) the waste is applied at no greater than agronomic rates; and
 - (B) ~~the storage and land application of animal waste is not no closer than 100 feet from a well, other than a monitoring well;~~
 - ~~(B)(C)~~ a vegetative buffer (separation) of at least 25 feet is maintained from a perennial stream or perennial ~~waterbody-waterbody;~~
 - (D) ~~animal waste is not applied on land that is flooded, saturated with water, frozen, or snow covered at the time of land application; and~~
 - (E) ~~no animal waste is land applied during precipitation events.~~

(b) The Director may determine that a system should not be deemed permitted in accordance with this Rule and Rule .0113 of this Subchapter. This determination shall be made in accordance with Rule .0113(e) of this Subchapter.

15A NCAC 02T .1303(a)(1)

Proposed Language for Readoption

- (1) Systems that do not meet the criteria of an animal operation permitted under Rule .1304 or Rule .1305 of this Subchapter and all other systems not specifically mentioned in this ~~Section.~~ Section if:
- (A) ~~the~~ waste is land applied at no greater than agronomic rates to land owned by the waste generator or under the waste generators ~~authority,~~ authority; agronomic rates must be met.
 - (B) ~~the storage and land application of waste is not closer than 100 feet of a well;~~
 - (C) ~~animal waste is not applied on land that is flooded, saturated with water, frozen, or snow covered at the time of land application; and~~
 - (D) ~~no animal waste is land applied during precipitation events.~~

Public Comments

1. Change “generators” to “generator’s” – NCDA&CS
2. Modify deemed-permitted criteria for land application of animal waste from: "animal waste is not applied on land that is flooded, saturated with water, frozen, or snow covered at the time of land application; and no animal waste is land applied during precipitation events" to animal waste is not applied in a manner resulting in a discharge to waters of the state. The rephrasing provides small, deemed-permitted, waste system operators with management options without violating water quality standards. – NCDA&CS

Hearing Officer Response

1. The Hearing Officers agree with the editorial correction to 02T .1303(a)(1)(A) and recommend updating the language.
2. 02T .1303(a)(1)(C) codifies in rule long standing permit language. Proper operation and management practices are protective of public health and environmental quality. The Hearing Officers do not recommend further modification of this rule.

Revised Language for Readoption

- (1) Systems that do not meet the criteria of an animal operation permitted under Rule .1304 or Rule .1305 of this Subchapter and all other systems not specifically mentioned in this ~~Section.~~ Section if:
- (A) ~~the~~ waste is land applied at no greater than agronomic rates to land owned by the waste generator or under the waste ~~generators~~ generator's ~~authority,~~ authority; agronomic rates must be met.
 - (B) ~~the storage and land application of waste is not no~~ closer than 100 feet ~~of from~~ a well, other than a monitoring well;
 - (C) ~~animal waste is not applied on land that is flooded, saturated with water, frozen, or snow covered at the time of land application; and~~
 - (D) ~~no animal waste is land applied during precipitation events.~~

15A NCAC 02T .1303(a)(2)

Proposed Language for Readoption

- (2) Poultry operations which use a dry litter system with more than 30,000 birds and that do not meet the criteria specified in Rule .1305 of this Subchapter if:
- (A) records are maintained for a minimum of three years which include the dates the litter was removed, the estimated amount of litter removed and the location of the sites where the litter was land applied by the poultry operation;
 - (B) the waste is applied at no greater than agronomic rates;
 - (C) a vegetative buffer (separation) of at least 25 feet is maintained from a perennial stream or perennial waterbody for land application sites;
 - (D) land application of litter is not closer than 100 feet from a well;
 - ~~(C)~~(E) litter is stockpiled not closer than 100 feet from a perennial ~~stream-stream,-or~~ perennial ~~waterbody;~~ waterbody, or well;
 - ~~(D)~~(F) litter is not stockpiled uncovered for greater than 15 days; ~~and~~
 - (G) animal waste is not applied on land that is flooded, saturated with water, frozen, or snow covered at the time of land application;
 - (H) no animal waste is land applied during precipitation events; and
 - ~~(E)~~(I) if a manure hauler is used, records must be maintained of the dates the litter was removed, the estimated amount of litter removed, and name, address and phone number of the manure hauler.

Public Comments

1. This rule requires that litter is not stockpiled uncovered for greater than 15 days while 15A NCAC 02T .1403 (a)(2)(B) requires that animal waste is not stockpiled uncovered for greater than 15 days. It is our understanding that both rules are intended for poultry litter. The language in rule .1403 (a)(2)(B) is somewhat ambiguous. We recommend for consistency that the language in these two rules be revised to be consistent with each other.
– NCDA&CS
2. "...we are gravely concerned by the proposal to retain the "deemed permitted" status for dry litter poultry operations and urge the EMC to close the loophole through which so many contributions to water pollution currently pass." the poultry industry has expanded significantly in North Carolina, and poultry operations are now the largest and fastest growing source of nutrients from animal agriculture in North Carolina. Yet, because DWR does not require a permit, "the locations of dry litter poultry operations and the disposal of their waste are not known to environmental regulators, making it difficult to form a complete picture of possible non-point source contributions within a specific watershed. – Amer. Rivers et.al.

Hearing Officer Response

Manure Haulers are not limited to the transport and land applications of poultry litter. Manure Hauler rules apply to any animal waste product, including but not limited to dairy/cattle waste, dewatered swine sludge, and poultry litter. However, rule 15A NCAC 02T .1303(a)(2) is specific to dry litter poultry operations. The Hearing Officers do not recommend making changes to the term "litter" in this rule or to the term "animal waste" in 15A NCAC 02T Section .1400. The Hearing Officers recommend adding a definition of "litter" to Rule .0103 of this Subchapter as follows: "Litter" means the combination of bedding material, poultry excreta, feathers, spilled feed, spilled water, and soil.

Deemed Status – See Hearing Officers' Response to [Permit Dry Litter Poultry comments](#) addressed for the full 15A NCAC 02T .1300 Section.

Revised Language for Readoption

- (2) Poultry operations which use a dry litter system with more than 30,000 birds and that do not meet the criteria specified in Rule .1305 of this Subchapter if:
- (A) records are maintained for a minimum of three years which include the dates the litter was removed, the estimated amount of litter removed and the location of the sites where the litter was land applied by the poultry operation;
 - (B) the litter waste is applied at no greater than agronomic rates;
 - (C) a vegetative buffer (separation) of at least 25 feet is maintained from a perennial stream or perennial waterbody for land application sites;
 - (D) land application of animal waste litter is not no closer than 100 feet from a well, other than a monitoring well;
 - ~~(E)~~(E) litter is stockpiled not closer than 100 feet from a perennial ~~stream-stream, or~~ perennial ~~waterbody;~~ waterbody, or well, other than a monitoring well;
 - ~~(D)~~(F) litter is not stockpiled uncovered for greater than 15 days; ~~and~~
 - (G) animal waste litter is not applied on land that is flooded, saturated with water, frozen, or snow covered at the time of land application;
 - (H) no animal waste litter is land applied during precipitation events; and
 - ~~(E)~~(I) if a manure hauler is used, records must be maintained of the dates the litter was removed, the estimated amount of litter removed, and name, address and phone number of the manure hauler.

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15A NCAC 02T .1303(a)(3)

Proposed Language for Readoption

- (3) Land application sites under separate ownership from the waste generator, receiving animal waste from animal waste management systems which are deemed permitted, when all the following conditions are met:
- (A) the waste is applied at no greater than agronomic rates; ~~and~~
 - (B) the storage and land application of animal waste is not closer than 100 feet from a well;
 - ~~(B)(C)~~ (C) a vegetative buffer (separation) of at least 25 feet is maintained from a perennial stream or perennial ~~waterbody-waterbody~~;
 - (D) animal waste is not applied on land that is flooded, saturated with water, frozen, or snow covered at the time of land application; and
 - (E) no animal waste is land applied during precipitation events.

Public Comments – General Comments

1. Modify deemed-permitted criteria for land application of animal waste from: "animal waste is not applied on land that is flooded, saturated with water, frozen, or snow covered at the time of land application; and no animal waste is land applied during precipitation events" to animal waste is not applied in a manner resulting in a discharge to waters of the state. The rephrasing provides small, deemed-permitted, waste system operators with management options without violating water quality standards. – NCDA&CS
2. Proposed Language: Land application sites receiving animal waste from deemed permitted animal waste management systems under separate ownership from the waste generator when all the following conditions are met: – NCDA&CS

Hearing Officer Response

1. 02T .1303(a)(3)(D) codified in rule language that prohibition of practices that represent a high risk of discharge of waste to waters of the state. The language is consistent with long standing permit language being codified in 02T .1304 and .1305. Proper operation and management practices are protective of public health and environmental quality. The Hearing Officers do not recommend further modification of this rule.
2. Hearing Officers believe the current language is appropriate, and the proposed language change is not necessary.

Revised Language for Readoption

- (3) Land application sites under separate ownership from the waste generator, receiving animal waste from animal waste management systems which are deemed permitted, when all the following conditions are met:
- (A) the waste is applied at no greater than agronomic rates; ~~and~~
 - (B) the storage and land application of animal waste is ~~not no~~ closer than 100 feet from a well, other than a monitoring well;
 - ~~(B)(C)~~ (C) a vegetative buffer (separation) of at least 25 feet is maintained from a perennial stream or perennial ~~waterbody-waterbody~~;
 - (D) animal waste is not applied on land that is flooded, saturated with water, frozen, or snow covered at the time of land application; and
 - (E) no animal waste is land applied during precipitation events.

15A NCAC 02T .1304

Proposed Language for Readoption

- (a) This rule applies to animal waste management systems that meet the definition of an animal operation in G.S. 143-215.10B but are not subject to regulation under Rule .1305.
- (b) An animal waste management plan shall be submitted as follows:
- (1) The animal waste management practices or combination of practices which are selected to comprise a plan for a specific facility must meet NRCS standards, or the standard of practices adopted by the Soil and Water Conservation Commission pursuant to ~~15A NCAC 06F .0104, 02 NCAC 59E .0104~~, or standards for any combination of practices which provide water quality protection and are approved by one of these two agencies; and all applicable state statutes and rules at the time of development or design. NRCS standards relating to phosphorus application rates for animal waste are not incorporated as part of this rule.
 - (2) As required by G.S. 143-215.10C, plans must be approved by a technical specialist and the certificate must be submitted to the Division on Division supplied forms or forms approved by the Division as providing the same information as required by the Division's forms. The technical specialist must certify that the best management practices that comprise the plan meet the applicable standards and specifications.
 - ~~(5)(3)~~ The waste shall not be applied at greater than agronomic rates.
 - ~~(3)(4)~~ The land application and siting setbacks must meet the applicable conditions established in G.S. 106-803 and NRCS standards at the time of site construction or at the time the land application site is first put into use.
 - ~~(5)~~ Notwithstanding Rule .1304(b)(4) of this Section, land application of waste shall be no closer than 100 feet from a well and no closer than 200 feet from a dwelling not owned by the waste generator at the time the land application site is first put into use.
 - ~~(6)~~ Notwithstanding Rule .1304(b)(4) of this Section, a vegetative buffer (separation) of at least 25 feet is maintained from a perennial stream or perennial waterbody for land application sites.
 - ~~(7)~~ The waste shall not be applied on land that is flooded, saturated with water, frozen, or snow covered at the time of land application.
 - ~~(8)~~ Land application of waste is prohibited during precipitation events.
 - ~~(9)~~ All waste application equipment must be tested and calibrated at least once every two calendar years, and the results must be documented on forms supplied by or approved by the Division as providing the same information as required by the Division's forms.
 - ~~(10)~~ Highly visible waste-level gauges shall be installed and maintained to mark the level of the waste in each animal waste lagoon or storage pond that does not gravity feed through a free flowing transfer pipe into a subsequent waste storage structure. The gauge shall have readily visible permanent markings.
 - ~~(4)(11)~~ New and expanded animal waste treatment systems such as lagoons and waste storage structures shall be located at least 100 feet from a perennial stream or perennial waterbody. For new and expanding systems, this setback requirement shall also apply to areas in feedlots where an established vegetative cover will not be maintained because of the concentration of animals, with the exception of stock trails and stream crossings.
 - ~~(6)(12)~~ For animal waste management facilities desiring to increase their animal population beyond that permitted, a new individual permit or new certificate of coverage to operate under a general permit must be issued before the additional animals are stocked.
- (c) For each change of ownership of the system, the new owner must notify the Division in writing within 60 days of transfer of ownership.
- (d) New and expanding swine facilities must demonstrate compliance with Rule .1307 of this Section prior to receiving a permit from the Division.

Public Comments

Monitoring and Reporting

1. Wastewater from industrialized livestock and poultry farms goes into lakes, wetlands, rivers and other streams. They need monitoring and enforcement as surface and groundwater. – C. Troxler
2. Incorporate annual surface water quality monitoring and reporting as a permitting requirement under .1304 and .1305. Waterkeepers urges the commission to expand the permitting requirements under .1304 and .1305 to include annual surface water quality monitoring of adjacent surface water bodies as a mandatory component of an animal waste management plan and permit coverage. – Duke Env. Law el. al.
3. Cost-effective surface water quality monitoring obligations, developed as a result of, and responsive to, a permittee's compliance record, should be included in a CAFO permit. – L. Baldwin

Public Notice

4. If a land application of bulk animal waste is to be permitted, neighbors must be given the same notice and opportunity for comment by DWR as is provided for the application of other bulk residuals (2T.1310). – L. Baldwin

Environmental Justice

5. Rule should require an equity analysis as a condition of permitting to determine if an operation will disproportionately impact residents on the basis of race or ethnicity. If impacts exist, then revised rules should require that the permittee implement mitigation measures to remedy the discriminatory impact. The equity analysis should include consideration of cumulative impacts from other nearby operations, and proximity of vulnerable populations. – Haddix et.al.

General Comments

6. Add "other than a monitoring well" to the setbacks of 100 feet from a well – DWR
7. Waterkeepers welcome the additions to these rules that codify long-standing permit conditions, as they provide clear guidance to North Carolina's AWMS operators and will help prevent waste discharge or nutrient runoff into surface and groundwater resources. – Duke Env. Law el. al.

Hearing Officer Response

Monitoring and Reporting – See Hearing Officers' Response to [Monitoring and Reporting comments](#) addressed for the full 15A NCAC 02T .1300 Section.

Public Notice – See Hearing Officers' Response to [Public Notice and Transparency comments](#) addressed for the full 15A NCAC 02T .1300 Section.

Environmental Justice – See Hearing Officers' Response to [Environmental Justice comments](#) addressed for the full 15A NCAC 02T .1300 Section.

The Hearing Officers recommend making a technical correction to setbacks from wells to include the phrase "other than a monitoring well" as well as revisions due to [comments for 15A NCAC 02T .1304\(b\)\(5\) below](#).

Revised Language for Readoption

- (a) This rule applies to animal waste management systems that meet the definition of an animal operation in G.S. 143-215.10B but are not subject to regulation under Rule .1305.
- (b) An animal waste management plan shall be submitted as follows:
- (1) The animal waste management practices or combination of practices which are selected to comprise a plan for a specific facility must meet NRCS standards, or the standard of practices adopted by the Soil and Water Conservation Commission pursuant to ~~15A NCAC 06F .0104, 02 NCAC 59E .0104~~, or standards for any combination of practices which provide water quality protection and are approved by one of these two agencies; and all applicable state statutes and rules at the time of development or design. NRCS standards relating to phosphorus application rates for animal waste are not incorporated as part of this rule.
 - (2) As required by G.S. 143-215.10C, plans must be approved by a technical specialist and the certificate must be submitted to the Division on Division supplied forms or forms approved by the Division as providing the same information as required by the Division's forms. The technical specialist must certify that the best management practices that comprise the plan meet the applicable standards and specifications.
 - ~~(3)~~(3) The waste shall not be applied at greater than agronomic rates.
 - ~~(3)~~(4) The land application and siting setbacks must meet the applicable conditions established in G.S. 106-803 and NRCS standards at the time of site construction or at the time the land application site is first put into use.
 - ~~(5)~~ Notwithstanding ~~Rule .1304~~Subparagraph (b)(4) of this Section Rule, land application of waste shall be no closer than 100 feet from a well, other than a monitoring well, and no closer than 200 feet from a dwelling not owned by the waste generator at the time the land application site is first put into use. Setback waivers related to distance of land application of waste from a dwelling not owned by the waste generator shall be written, notarized, signed by all parties involved and recorded with the county Register of Deeds.
 - ~~(6)~~ Notwithstanding Rule .1304(b)(4) of this Section, a vegetative buffer (separation) of at least 25 feet is maintained from a perennial stream or perennial waterbody for land application sites.
 - ~~(7)~~ The waste shall not be applied on land that is flooded, saturated with water, frozen, or snow covered at the time of land application.
 - ~~(8)~~ Land application of waste is prohibited during precipitation events.
 - ~~(9)~~ All waste application equipment must be tested and calibrated at least once every two calendar years, and the results must be documented on forms supplied by or approved by the Division as providing the same information as required by the Division's forms.
 - ~~(10)~~ Highly visible waste-level gauges shall be installed and maintained to mark the level of the waste in each animal waste lagoon or storage pond that does not gravity feed through a free flowing transfer pipe into a subsequent waste storage structure. The gauge shall have readily visible permanent markings.
 - ~~(4)~~(11) New and expanded animal waste treatment systems such as lagoons and waste storage structures shall be located at least 100 feet from a perennial stream or perennial waterbody. For new and expanding systems, this setback requirement shall also apply to areas in feedlots where an established vegetative cover will not be maintained because of the concentration of animals, with the exception of stock trails and stream crossings.
 - ~~(6)~~(12) For animal waste management facilities desiring to increase their animal population beyond that permitted, a new individual permit or new certificate of coverage to operate under a general permit must be issued before the additional animals are stocked.
- (c) For each change of ownership of the system, the new owner must notify the Division in writing within 60 days of transfer of ownership.
- (d) New and expanding swine facilities must demonstrate compliance with Rule .1307 of this Section prior to receiving a permit from the Division.

15A NCAC 02T .1304(b)(5)

Proposed Language for Readoption

Notwithstanding Rule .1304(b)(4) of this Section, land application of waste shall be no closer than 100 feet from a well and no closer than 200 feet from a dwelling not owned by the waste generator at the time the land application site is first put into use.

Public Comments – Setbacks

1. The right to have protection from pollution from swine CAFOs waste disposal fields should not depend upon whether property is leased or owned. Setbacks must apply if the permittee leases neighboring property to another. – L. Baldwin
2. Haywood County Farm Bureau Board of Directors would like to see the current 200-foot setback rule for spreading livestock manure reduced to better accommodate livestock producers in Western North Carolina. With the size of our small fields and current population density it is difficult to find adequate disposal locations. If this rule was changed to match the distance from streams it would be appreciated by beef and dairy producers in Western North Carolina. – Haywood Co. FB
3. Many dairy operations, have smaller fields, and fewer land application options due to slope, water features, and population growth. NCFB requests that the rule be revised to allow for setback waiver from the owner of the neighbor dwelling. Setbacks waivers are currently allowed in other non-discharge programs except residuals. – Farm Bureau
4. Should allow reduction in setback from dwelling with a signed waiver from the property owner. – NCDA&CS

Hearing Officer Response

All swine operations were permitted while NC NRCS Standard 633 – Waste Utilization was in effect. Standard 633 stated, “Manure or organic waste will not be applied within 200 feet of a dwelling other than that owned by the producer. However, application within 200 feet of a dwelling is allowed if a home is constructed within 200 feet of any waste application spray field that is in a current plan.” The Hearing Officers feel that to retroactively implement additional requirements based upon tenancy could result in operational loss.

Setback waivers were established for swine barn, lagoon, and land application area setbacks in G.S. 106-803. The Hearing Officers recommend that setback waiver allowances be included in 02T .1304(b)(5) to be consistent with G.S. 106-803 and other non-discharge systems subject to 15A NCAC 02T.

Revised Language for Readoption

Notwithstanding ~~Rule .1304~~ Subparagraph (b)(4) of this ~~Section Rule~~, land application of waste shall be no closer than 100 feet from a well, other than a monitoring well, and no closer than 200 feet from a dwelling not owned by the waste generator at the time the land application site is first put into use. Setback waivers related to distance of land application of waste from a dwelling not owned by the waste generator shall be written, notarized, signed by all parties involved and recorded with the county Register of Deeds.

15A NCAC 02T .1305

Proposed Language for Readoption

- (a) This Rule applies to animal waste management systems subject to regulation under G.S. 143-215.10C and 40 CFR § 122.2340 CFR § 122.23, which is incorporated by reference including subsequent amendments and editions and shall apply throughout this Rule. 40 CFR § 122.23 can be accessed free of charge at <http://www.gpo.gov/fdsys/>. and G.S. 143-215.10C.
- (b) With the exception of dry litter poultry systems, an animal waste management plan shall be submitted as follows:
- (1) The animal waste management practices or combination of practices which are selected to comprise a plan for a specific facility must meet NRCS standards, or the standard of practices adopted by the Soil and Water Conservation Commission pursuant to ~~15A NCAC 06F .0104, 02 NCAC 59E .0104,~~ or standards for any combination of practices which provide water quality protection and are approved by one of these two agencies; and all applicable state statutes and rules and all applicable federal requirements at the time of development or design.
 - (2) As required by G.S. 143-215.10C, plans must be approved by a technical specialist and the certificate must be submitted to the Division on Division supplied forms or forms approved by the Division as providing the same information as required by the Division's forms. The technical specialist must certify that the best management practices that comprise the plan meet the applicable standards and specifications.
 - ~~(5)(3)~~ The waste shall not be applied at greater than agronomic rates.
 - ~~(3)(4)~~ The land application and siting setbacks must meet the applicable conditions established in G.S. 106-803, and NRCS standards and 40 CFR Part 412 at the time of site construction or at the time the land application site is first put into use.
 - ~~(5)~~ The land application and siting setbacks must meet the applicable conditions established in 40 CFR Part 412.
 - ~~(6)~~ Notwithstanding Subparagraph (b)(4) of this Section, land application of waste shall be no closer than 100 feet from a well and no closer than 200 feet from a dwelling not owned by the waste generator at the time the land application site is first put into use.
 - ~~(7)~~ The waste shall not be applied on land that is flooded, saturated with water, frozen, or snow covered at the time of land application.
 - ~~(8)~~ Land application of waste is prohibited during precipitation events.
 - ~~(9)~~ All waste application equipment must be tested and calibrated at least once every calendar year, and the results must be documented on forms supplied by or approved by the Division as providing the same information as required by the Division's forms.
 - ~~(10)~~ Highly visible waste-level gauges shall be installed and maintained to mark the level of the waste in each animal waste lagoon or storage pond that does not gravity feed through a free flowing transfer pipe into a subsequent waste storage structure. The gauge shall have readily visible permanent markings.
 - ~~(4)(11)~~ New and expanded animal waste treatment systems such as lagoons and waste storage structures shall be located at least 100 feet from a perennial stream or perennial waterbody. For new and expanding systems, this setback requirement shall also apply to areas in feedlots where an established vegetative cover will not be maintained because of the concentration of animals, with the exception of stock trails and stream crossings.
 - ~~(6)(12)~~ For animal waste management facilities desiring to increase their animal population beyond that permitted, a new individual permit or new certificate of coverage to operate under a general permit must be issued before the additional animals are stocked.
- (c) Dry litter poultry systems, for the purpose of this Rule and G.S. 143-215.10C, shall submit an animal waste management plan as follows:
- (1) The animal waste management practices or combination of practices which are selected to comprise a plan for a specific facility must meet NRCS standards, or the standard of practices adopted by the Soil and Water Conservation Commission, or standards for any combination of practices which provide water

quality protection and are approved by one of these two agencies; and all applicable state statutes and rules and all applicable federal requirements at the time of development or design.

- (2) The land application and siting setbacks must meet the conditions established in NRCS standards and 40 CFR Part 412 at the time of construction.
- (3) New and expanded animal waste structures such as houses and dry stacks shall be protected from the 100-year flood as determined by the Federal Emergency Management Agency.
- (4) The waste shall not be applied at greater than agronomic rates.
- ~~(5) Notwithstanding Subparagraph (c)(2) of this Section, land application of waste shall be no closer than 100 feet from a well and no closer than 200 feet from a dwelling not owned by the waste generator.~~
- ~~(6) The waste shall not be applied on land that is flooded, saturated with water, frozen, or snow covered at the time of land application.~~
- ~~(7) Land application of waste is prohibited during precipitation events.~~
- ~~(8) All waste application equipment must be tested and calibrated at least once every calendar year, and the results must be documented on forms supplied by or approved by the Division as providing the same information as required by the Division's forms.~~
- ~~(9) Highly visible waste-level gauges shall be installed and maintained to mark the level of the waste in each animal waste lagoon or storage pond that does not gravity feed through a free flowing transfer pipe into a subsequent waste storage structure. The gauge shall have readily visible permanent markings.~~
- ~~(5)(10) For animal waste management facilities desiring to increase their animal population beyond that permitted, a new individual permit or new certificate of coverage to operate under a general permit must be issued before the additional animals are stocked.~~

(d) For each change of ownership of the system, the new owner must notify the Division in writing within 60 days of transfer of ownership.

(e) Systems shall meet all applicable requirements of 40 CFR Part 122 and 40 CFR Part 412.

(f) New and expanding swine facilities must demonstrate compliance with Rule .1307 of this Section prior to receiving a permit from the Division.

Public Comments

Monitoring and Reporting

1. Incorporate annual surface water quality monitoring and reporting as a permitting requirement under .1304 and .1305. Waterkeepers urges the commission to expand the permitting requirements under .1304 and .1305 to include annual surface water quality monitoring of adjacent surface water bodies as a mandatory component of an animal waste management plan and permit coverage. – Duke Env. Law el. al.
2. Cost-effective surface water quality monitoring obligations, developed as a result of, and responsive to, a permittee's compliance record, should be included in a CAFO permit. – L. Baldwin
3. Wastewater from industrialized livestock and poultry farms goes into lakes, wetlands, rivers and other streams. They need monitoring and enforcement as surface and groundwater. – C. Troxler

Public Notice

4. If a land application of bulk animal waste is to be permitted, neighbors must be given the same notice and opportunity for comment by DWR as is provided for the application of other bulk residuals (2T.1310). – L. Baldwin
5. Add "other than a monitoring well" to the setbacks of 100 feet from a well – DWR

General Comments

6. Waterkeepers welcome the additions to these rules that codify long-standing permit conditions, as they provide clear guidance to North Carolina's AWMS operators and will help prevent waste discharge or nutrient runoff into surface and groundwater resources. – Duke Env. Law el. al.

Hearing Officer Response

Monitoring and Reporting – See Hearing Officers' Response to [Monitoring and Reporting comments](#) addressed for the full 15A NCAC 02T .1300 Section.

Public Notice – See Hearing Officers' Response to [Public Notice and Transparency comments](#) addressed for the full 15A NCAC 02T .1300 Section.

The Hearing Officers recommend making a technical correction to setbacks from wells to include the phrase “other than a monitoring well” as well as revisions due to comments for 15A NCAC 02T [.1305\(b\)\(6\)](#) and [.1305\(c\)\(5\)](#) below.

Revised Language for Readoption

- (a) This Rule applies to animal waste management systems subject to regulation under [G.S. 143-215.10C and 40 CFR § 122.234](#) ~~CFR § 122.23~~, which is incorporated by reference including subsequent amendments and editions and shall apply throughout this Rule. ~~40 CFR § 122.23 can be accessed free of charge at <http://www.gpo.gov/fdsys/>, and G.S. 143-215.10C.~~
- (b) With the exception of dry litter poultry systems, an animal waste management plan shall be submitted as follows:
- (1) The animal waste management practices or combination of practices which are selected to comprise a plan for a specific facility must meet NRCS standards, or the standard of practices adopted by the Soil and Water Conservation Commission pursuant to ~~15A NCAC 06F .0104, 02 NCAC 59E .0104~~, or standards for any combination of practices which provide water quality protection and are approved by one of these two agencies; and all applicable state statutes and rules and all applicable federal requirements at the time of development or design.
 - (2) As required by G.S. 143-215.10C, plans must be approved by a technical specialist and the certificate must be submitted to the Division on Division supplied forms or forms approved by the Division as providing the same information as required by the Division's forms. The technical specialist must certify that the best management practices that comprise the plan meet the applicable standards and specifications.
 - ~~(3)~~(3) The waste shall not be applied at greater than agronomic rates.
 - ~~(3)~~(4) The land application and siting setbacks must meet the applicable conditions established in G.S. 106-803, and NRCS standards ~~and 40 CFR Part 412~~ at the time of site construction or at the time the land application site is first put into use.
 - ~~(5)~~ The land application and siting setbacks must meet the applicable conditions established in 40 CFR Part 412.
 - ~~(6)~~ Notwithstanding Subparagraph (b)(4) of this Section-Rule, land application of waste shall be no closer than 100 feet from a well, other than a monitoring well, and no closer than 200 feet from a dwelling not owned by the waste generator at the time the land application site is first put into use. Setback waivers related to distance of land application of waste from a dwelling not owned by the waste generator shall be written, notarized, signed by all parties involved and recorded with the county Register of Deeds.
 - ~~(7)~~ The waste shall not be applied on land that is flooded, saturated with water, frozen, or snow covered at the time of land application.
 - ~~(8)~~ Land application of waste is prohibited during precipitation events.
 - ~~(9)~~ All waste application equipment must be tested and calibrated at least once every calendar year, and the results must be documented on forms supplied by or approved by the Division as providing the same information as required by the Division's forms.
 - ~~(10)~~ Highly visible waste-level gauges shall be installed and maintained to mark the level of the waste in each animal waste lagoon or storage pond that does not gravity feed through a free flowing transfer pipe into a subsequent waste storage structure. The gauge shall have readily visible permanent markings.
 - ~~(4)~~(11) New and expanded animal waste treatment systems such as lagoons and waste storage structures shall be located at least 100 feet from a perennial stream or perennial waterbody. For new and expanding systems, this setback requirement shall also apply to areas in feedlots where an established vegetative cover will not

be maintained because of the concentration of animals, with the exception of stock trails and stream crossings.

- ~~(6)~~(12) For animal waste management facilities desiring to increase their animal population beyond that permitted, a new individual permit or new certificate of coverage to operate under a general permit must be issued before the additional animals are stocked.

(c) Dry litter poultry systems, for the purpose of this Rule and G.S. 143-215.10C, shall submit an animal waste management plan as follows:

- (1) The animal waste management practices or combination of practices which are selected to comprise a plan for a specific facility must meet NRCS standards, or the standard of practices adopted by the Soil and Water Conservation Commission, or standards for any combination of practices which provide water quality protection and are approved by one of these two agencies; and all applicable state statutes and rules and all applicable federal requirements at the time of development or design.
- (2) The land application and siting setbacks must meet the conditions established in NRCS standards and 40 CFR Part 412 at the time of construction.
- (3) New and expanded animal waste structures such as houses and dry stacks shall be protected from the 100-year flood as determined by the Federal Emergency Management Agency.
- (4) The waste shall not be applied at greater than agronomic rates.
- ~~(5)~~ Notwithstanding Subparagraph (c)(2) of this Section Rule, land application of waste litter shall be no closer than 100 feet from a well, other than a monitoring well, and no closer than 200 feet from a dwelling not owned by the waste generator at the time the land application site is first put into use. Setback waivers related to distance of land application of waste from a dwelling not owned by the waste generator shall be written, notarized, signed by all parties involved and recorded with the county Register of Deeds.
- ~~(6)~~ The waste litter shall not be applied on land that is flooded, saturated with water, frozen, or snow covered at the time of land application.
- ~~(7)~~ Land application of waste litter is prohibited during precipitation events.
- ~~(8)~~ All waste application equipment must be tested and calibrated at least once every calendar year, and the results must be documented on forms supplied by or approved by the Division as providing the same information as required by the Division's forms.
- ~~(9)~~ Highly visible waste-level gauges shall be installed and maintained to mark the level of the waste in each animal waste lagoon or storage pond that does not gravity feed through a free flowing transfer pipe into a subsequent waste storage structure. The gauge shall have readily visible permanent markings.
- ~~(5)~~(10) For animal waste management facilities desiring to increase their animal population beyond that permitted, a new individual permit or new certificate of coverage to operate under a general permit must be issued before the additional animals are stocked.

(d) For each change of ownership of the system, the new owner must notify the Division in writing within 60 days of transfer of ownership.

(e) Systems shall meet all applicable requirements of 40 CFR Part 122 and 40 CFR Part 412.

(f) New and expanding swine facilities must demonstrate compliance with Rule .1307 of this Section prior to receiving a permit from the Division.

15A NCAC 02T .1305(b)(6)

Proposed Language for Readoption

Notwithstanding Subparagraph (b)(4) of this Section, land application of waste shall be no closer than 100 feet from a well and no closer than 200 feet from a dwelling not owned by the waste generator at the time the land application site is first put into use.

Public Comments

1. The right to have protection from pollution from swine CAFOs waste disposal fields should not depend upon whether property is leased or owned. Setbacks must apply if the permittee leases neighboring property to another. – L. Baldwin
2. Many dairy operations, have smaller fields, and fewer land application options due to slope, water features, and population growth. NCFB requests that the rule be revised to allow for setback waiver from the owner of the neighbor dwelling. Setbacks waivers are currently allowed in other non-discharge programs. – Farm Bureau
3. Should allow reduction in setback from dwelling with a signed waiver from the property owner. – NCDA&CS
4. Add “other than a monitoring well” to the setbacks of 100 feet from a well – DWR

Hearing Officer Response

All swine operations were permitted while NC NRCS Standard 633 – Waste Utilization was in effect. Standard 633 stated, “Manure or organic waste will not be applied within 200 feet of a dwelling other than that owned by the producer. However, application within 200 feet of a dwelling is allowed if a home is constructed within 200 feet of any waste application spray field that is in a current plan.” The Hearing Officers feel that to retroactively implement additional requirements based upon tenancy could result in operational loss.

Setback waivers were established for swine barn, lagoon, and land application area setbacks in G.S. 106-803. The Hearing Officers recommend that setback waiver allowances be included in 02T .1305(b)(6) to be consistent with G.S. 106-803 and other non-discharge systems subject to 15A NCAC 02T.

The Hearing Officers recommend making a technical correction to setbacks from wells to include the phrase “other than a monitoring well”.

Revised Language for Readoption

Notwithstanding Subparagraph (b)(4) of this ~~Section-Rule~~, land application of waste shall be no closer than 100 feet from a well, other than a monitoring well, and no closer than 200 feet from a dwelling not owned by the waste generator at the time the land application site is first put into use.

Setback waivers related to distance of land application of waste from a dwelling not owned by the waste generator shall be written, notarized, signed by all parties involved and recorded with the county Register of Deeds.

15A NCAC 02T .1305(c)(5)

Proposed Language for Readoption

Notwithstanding Subparagraph (c)(2) of this Section, land application of waste shall be no closer than 100 feet from a well and no closer than 200 feet from a dwelling not owned by the waste generator.

Public Comments – Waiver

1. Should allow reduction in setback from dwelling with a signed waiver from the property owner. – NCDA&CS
2. Add “other than a monitoring well” to the setbacks of 100 feet from a well – DWR

Hearing Officer Response

The Hearing Officers recommend that setback waiver allowances be included in 02T .1305(b)(6) to be consistent with other non-discharge systems subject to 15A NCAC 02T. The Hearing Officers also recommend making a technical correction to setbacks from wells to include the phrase “other than a monitoring well”.

Revised Language for Readoption

Notwithstanding Subparagraph (c)(2) of this **Section Rule**, land application of **waste litter** shall be no closer than 100 feet from a well, other than a monitoring well, and no closer than 200 feet from a dwelling not owned by the waste generator at the time the land application site is first put into use.
Setback waivers related to distance of land application of waste from a dwelling not owned by the waste generator shall be written, notarized, signed by all parties involved and recorded with the county Register of Deeds.

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15A NCAC 02T .1307

Proposed Language for Readoption

- (a) This Rule applies to animal waste management systems subject to regulation under ~~G.S. 143-215.10I~~ G.S. 143-215.10I and S.L. 2015-263.
- (b) An animal waste management system that serves a swine farm subject to regulation under G.S. 143-215.10I, shall meet all of the following performance standards:
- (1) Eliminate the discharge of animal waste to surface waters and groundwater through direct discharge, seepage, or runoff. To meet this standard:
 - (A) Earthen structures must be designed and constructed with synthetic liners to eliminate seepage.
 - (B) Solids storage structures shall meet applicable engineering practices and NRCS design standards.
 - (C) The Certified Animal Waste Management Plan (CAWMP) must include all components as listed in G.S. 143-215.10C(e) and meet current NRCS standards for a Comprehensive Nutrient Management Plan (CNMP) as defined by Part ~~600600, Subpart E~~ of the NRCS National Planning Procedures Handbook, which are hereby incorporated by reference, including any subsequent additions or amendments. The handbook may be downloaded at no cost from the NRCS website: http://www.nrcs.usda.gov/technical/afo/enmp_guide_index.html <http://www.nrcs.usda.gov/wps/portal/nrcs/site/national/home/>
 - (D) Swine waste treatment structures that automatically convey swine waste using pumps must have audible and visible high water alarms with an auto dialer device set to contact the farm owner or farm manager; a gravity overflow to a basin that can contain the flow rate of the largest pump in the system for the maximum amount of time that an operator will not be on-site; or a secondary containment structure designed, constructed, and operated to contain the volume of the largest animal waste treatment structure and the flow rate of the largest pump in the system for the maximum amount of time that an operator will not be on-site.
 - (E) No more than the equivalent volume of one month of design flow of untreated swine waste shall be accumulated and stored prior to the initiation of treatment.
 - (2) Substantially eliminate atmospheric emission of ammonia. To meet this standard:
 - (A) Combined ammonia emissions from swine waste treatment and storage structures may not exceed an annual average of 0.2 kg NH₃-N/wk/1,000 kg of steady-state live weight;
 - (B) Ammonia emissions from land application sites shall not exceed an annual average of 0.2 kg NH₃-N/wk/1,000 kg of steady-state live weight; and
 - (C) Ammonia emissions from the swine farm must not exceed an annual average of 0.9 kg NH₃-N/wk/1,000 kg of steady-state live weight.
 - (3) Substantially eliminate the emission of odor that is detectable beyond the boundaries of the parcel or tract of land on which the swine farm is located. To meet this standard, swine waste management systems must reduce odor levels, frequency, and duration from the whole farm, such that the requirements of 15A NCAC 02D .1808 are met at the property boundary.
 - (4) Substantially eliminate the release of disease-transmitting vectors and airborne pathogens. To meet this standard:
 - (A) Swine waste management systems shall meet the vector attraction reduction requirements in Rule .1107 of this Subchapter for the land application of separated solids and animal waste residuals.
 - (B) Swine waste management systems shall meet the pathogen reduction requirements in Rule .1106 of this Subchapter for Class A biosolids that are to be land applied pursuant to Rule .1106(a)(1) or for Class B biosolids that are to be otherwise applied to land.
 - (C) Fecal coliform concentrations in the final liquid effluent shall not exceed an annual average of 7,000 Most Probable Number/100mL.
 - (5) Substantially eliminate nutrient and heavy metal contamination of soil and groundwater. To meet this standard, swine waste management systems that land apply effluent shall:

- (A) Meet the current NRCS requirements for a Comprehensive Nutrient Management Plan (CNMP) as defined by Part ~~600, Subpart E~~ 600 of the NRCS National Planning Procedures Handbook; and
- (B) Demonstrate through predictive calculations or modeling that land application of swine waste at the proposed rate will not cause or contribute to a violation of groundwater standards under 15A NCAC 02L.

Public Comments:

1. According to email from Sam Sampath of Region 4 EPA, "Manure derived products are not covered under 40 CFR Part 503. Sewage Sludge is regulated under 503, the definition of which doesn't include animal waste." These regulations may wish to refrain from using language that mentions Class A and its standards as it should not be required to meet the performance requirements of 02T .1100 which were patterned after the 40 CFR Part 503. – R. Branch
2. In 02T .1307(b)(4), DEQ needs to specify Class A treatment standards. Per Sam Sampath, EPA Region 4, manure derived products are not subject to 40 CFR 503, so this is not applicable to animal waste rules. – R. Branch

Hearing Officer Response

Rule .1307 established the performance standard criteria that a new/expanding swine operation subject to G.S. 143-215.10I must satisfy to be permitted. This rule is not specific to animal waste residuals, and the reference to 02T .1100 Section is to eliminate repetition of language only.

Revised Language for Readoption

- (a) This Rule applies to animal waste management systems subject to regulation under ~~G.S. 143-215.10I~~ G.S. 143-215.10I and S.L. 2015-263.
- (b) An animal waste management system that serves a swine farm subject to regulation under G.S. 143-215.10I, shall meet all of the following performance standards:
 - (1) Eliminate the discharge of animal waste to surface waters and groundwater through direct discharge, seepage, or runoff. To meet this standard:
 - (A) Earthen structures must be designed and constructed with synthetic liners to eliminate seepage.
 - (B) Solids storage structures shall meet applicable engineering practices and NRCS design standards.
 - (C) The Certified Animal Waste Management Plan (CAWMP) must include all components as listed in G.S. 143-215.10C(e) and meet current North Carolina NRCS 590 Nutrient Management Conservation Practice Standard requirements standards for a and comply with the NRCS national policy for Comprehensive Nutrient Management Plans (CNMP) as defined by Part ~~600~~600, Subpart E of the NRCS General Manual, Title 190, Part 405 National Planning Procedures Handbook, which are hereby incorporated by reference, including any subsequent additions or amendments. The handbook may be downloaded at no cost from the NRCS website: http://www.nrcs.usda.gov/technical/afo/cnmp_guide_index.html <http://www.nrcs.usda.gov/wps/portal/nrcs/site/national/home/>
 - (D) Swine waste treatment structures that automatically convey swine waste using pumps must have audible and visible high water alarms with an auto dialer device set to contact the farm owner or farm manager; a gravity overflow to a basin that can contain the flow rate of the largest pump in the system for the maximum amount of time that an operator will not be on-site; or a secondary containment structure designed, constructed, and operated to contain the volume of the largest animal waste treatment structure and the flow rate of the largest pump in the system for the maximum amount of time that an operator will not be on-site.
 - (E) No more than the equivalent volume of one month of design flow of untreated swine waste shall be accumulated and stored prior to the initiation of treatment.
 - (2) Substantially eliminate atmospheric emission of ammonia. To meet this standard:

- (A) Combined ammonia emissions from swine waste treatment and storage structures **may shall** not exceed an annual average of 0.2 kg NH₃-N/wk/1,000 kg of steady-state live weight;
 - (B) Ammonia emissions from land application sites shall not exceed an annual average of 0.2 kg NH₃-N/wk/1,000 kg of steady-state live weight; and
 - (C) Ammonia emissions from the swine farm **must shall** not exceed an annual average of 0.9 kg NH₃-N/wk/1,000 kg of steady-state live weight.
- (3) Substantially eliminate the emission of odor that is detectable beyond the boundaries of the parcel or tract of land on which the swine farm is located. To meet this standard, swine waste management systems must reduce odor levels, frequency, and duration from the whole farm, such that the requirements of 15A NCAC 02D .1808 are met at the property boundary.
- (4) Substantially eliminate the release of disease-transmitting vectors and airborne pathogens. To meet this standard:
- (A) Swine waste management systems shall meet the vector attraction reduction requirements in Rule .1107 of this Subchapter for the land application of separated solids and animal waste residuals **for operations subject to this Rule.**
 - (B) Swine waste management systems shall meet the pathogen reduction requirements in Rule .1106(a) of this Subchapter for Class A biosolids that are to be **land** applied **to a lawn, home garden, or public contact use site or sold or given away in a bag or container for land application, pursuant to Rule .1106(a)(1) or meet the pathogen reduction requirements in Rule .1106(b)** for Class B biosolids that are to be otherwise applied to land.
 - (C) Fecal coliform concentrations in the final liquid effluent shall not exceed an annual average of 7,000 Most Probable Number/100mL.
- (5) Substantially eliminate nutrient and heavy metal contamination of soil and groundwater. To meet this standard, swine waste management systems that land apply effluent shall:
- (A) Meet the current **North Carolina NRCS 590 Nutrient Management Conservation Practice Standard** requirements **for a** **and comply with the NRCS national policy for** Comprehensive Nutrient Management Plans (CNMP) as defined by **Part 600, Subpart E 600 of the NRCS National Planning Procedures Handbook NRCS General Manual, Title 190, Part 405**; and
 - (B) Demonstrate through predictive calculations or modeling that land application of swine waste at the proposed rate will not cause or contribute to a violation of groundwater standards under 15A NCAC 02L

15A NCAC 02T .1308(d)

Proposed Language for Readoption

(d) **MONITORING REQUIREMENTS:** Once the newly permitted system reaches full capacity or within six months, whichever comes sooner, the permittee shall monitor system performance for two years with quarterly sampling to assure that the treatment system is meeting performance standards. If, after two years the treatment system is compliant with Rule .1307 of this Section, the permittee shall monitor for compliance with the performance standards in Rule .1307 on the following schedule:

- (1) Ammonia emissions monitoring from swine waste treatment and storage structures shall be as follows:
 - (A) Ammonia air emissions from open-air structures shall be directly sampled once per calendar year, with alternating years having sampling during the summer and winter seasons, or
 - (B) Liquid from open-air waste treatment and storage structures shall be sampled at a minimum of once per quarter.
- (2) Monitoring of odor intensity shall be on an annual basis, with alternating years having sampling during the summer and winter seasons.
- (3) Effluent monitoring shall be at a minimum of once per quarter.

Public Comments

1. Incorporate surface water quality monitoring and reporting requirements into Section .1308(d). The rule should be modified to include quarterly surface water quality monitoring from the time the new system reaches full capacity or within six months, whichever is first, and should last for two years. If after two years of quarterly monitoring, the surface water quality samples indicate that the system is compliant with section .1307(b)(1) and .1307(b)(5), then the permittees would have reduced monitoring obligations and merely be required to conduct annual surface water quality monitoring. – Duke Env. Law el. al.

Hearing Officer Response

Rule .1308(d) is the specific rule that requires monitoring and reporting of data to verify that the Swine Waste Management System Performance Standards for new and expanding swine facilities found in 15A NCAC 02T .1307 and 15A NCAC 02D .1808 are met. These requirements are specifically established by G.S. 143-215.10I.

See Hearing Officers' Response to [Monitoring and Reporting comments](#) addressed for the full 15A NCAC 02T .1300 Section.

Revised Language for Readoption

No revisions to the proposed language.

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15A NCAC 02T .1309(a)

Proposed Language for Readoption

This Rule applies to existing animal waste management systems that convert from anaerobic lagoons as the primary method of treatment to an animal waste management system that meets the requirements of Rule .1307 of this Section, and have not expanded the steady-state live weight of the swine farm.

Public Comments-editorial

1. “This Rule applies to existing swine animal waste management systems...”. – NCDA&CS

Hearing Officer Response

The Hearing Officers agree with this comment and recommend adding the word “swine” for clarity in that this rule only applies to swine operations.

Revised Language for Readoption

This Rule applies to existing **swine** animal waste management systems that convert from anaerobic lagoons as the primary method of treatment to an animal waste management system that meets the requirements of Rule .1307 of this Section, and have not expanded the steady-state live weight of the swine farm.

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15A NCAC 02T .1310

Proposed Language for Readoption

(a) This Rule applies to the treatment, storage, transportation, use, and disposal of animal waste residuals to be applied to a lawn, home garden, or public contact use site or sold or given away in a bag or other container for application to the land. Not regulated under this Rule is the treatment, storage, transportation, use, or disposal of:

- (1) animal waste residuals applied to agricultural land in accordance with Rule .1303, Rule .1304, Rule 1305, Rule .1307, or Rule .1403 of this Section;
- (2) up to four cubic yards of animal waste residuals distributed from a facility subject to regulation under Rule .1303 or Rule .1304 of this Section per visit to individuals for personal use, with a maximum of ten cubic yards per year per individual;
- (3) oil, grease, grit and screenings from wastewater treatment facilities;
- (4) septage from wastewater treatment facilities;
- (5) ash that is regulated in accordance with Section .1200 of this Subchapter;
- (6) residuals that are regulated in accordance with Section .1100 of this Subchapter;
- (7) residuals that are prepared for land application, used, or disposed of in a solid waste management facility permitted by the Division of Waste Management;
- (8) residuals that are disposed of in an incinerator permitted by the Division of Air Quality;
- (9) residuals that are transported out of state for treatment, storage, use, or disposal; and
- (10) residuals that meet the definition of a hazardous waste in accordance with 40 CFR 260.10 as adopted by reference in 15A NCAC 13A .0102(b) or that have a concentration of polychlorinated biphenyls equal to or greater than 50 milligrams per kilogram of total solids (i.e., dry weight basis).

(b) For new and modified sources of animal waste residuals, the application shall submit a permit application in writing to the Division that includes the following:

- (1) Site maps shall be provided to the Division by the applicant depicting the location of the source and demonstrate compliance with siting setbacks applicable to animal waste management systems established in G.S. 106-803, and NRCS standards at the time of construction;
- (2) A complete analysis of the animal waste residuals. The analysis may include all pollutants identified in Paragraph (c) in this Rule, nutrients and micronutrients, and proof of compliance with pathogen and vector requirements in Paragraphs (f) and (g) of this Rule if applicable;
- (3) A sampling/monitoring plan that describes how compliance with Paragraphs (c), (f), and (g) of this Rule if applicable shall be provided to the Division by the applicant;
- (4) A marketability statement detailing destinations and approximate amounts of the final product to be distributed; and
- (5) A copy of the label/information sheet that complies with Paragraph (h) of this Rule.

(c) Bulk animal waste residuals shall not be applied to a lawn, home garden, or public contact use site nor shall animal waste residuals be sold or given away in a bag or other container for application to the land if the concentration of any pollutant in that residual exceeds the ceiling concentration for that pollutant as stipulated in the following (i.e., on a dry weight basis):

<u>Pollutant</u>	<u>Ceiling Concentration</u> <u>(milligrams per kilogram)</u>
<u>Arsenic</u>	<u>75</u>
<u>Cadmium</u>	<u>85</u>
<u>Copper</u>	<u>4,300</u>
<u>Lead</u>	<u>840</u>
<u>Mercury</u>	<u>57</u>
<u>Molybdenum</u>	<u>75</u>
<u>Nickel</u>	<u>420</u>
<u>Selenium</u>	<u>100</u>

Zinc 7,500

(d) Bulk animal waste residuals shall not be applied to a lawn, home garden, or public contact use site nor shall animal waste residuals be sold or given away in a bag or other container for application to the land if the concentration of any pollutant in that residual exceeds the concentration for that pollutant as stipulated in the following (i.e., on a dry weight basis):

<u>Pollutant</u>	<u>Monthly Average Concentration</u> <u>(milligrams per kilogram)</u>
<u>Arsenic</u>	<u>41</u>
<u>Cadmium</u>	<u>39</u>
<u>Copper</u>	<u>1,500</u>
<u>Lead</u>	<u>300</u>
<u>Mercury</u>	<u>17</u>
<u>Nickel</u>	<u>420</u>
<u>Selenium</u>	<u>100</u>
<u>Zinc</u>	<u>2,800</u>

(e) The Class A pathogen requirements shall be met when bulk animal waste residuals are applied to a lawn, home garden, or public contact use site or sold or given away in a bag or other container for application to the land.

(f) For animal waste residuals to be classified as Class A with respect to pathogens, the requirements of Rule .1106(b) of this Subchapter shall be met.

(g) Animal waste residuals shall not be applied to a lawn, home garden, or public contact use site or sold or given away in a bag or other container for application to the land unless the requirements of one of the vector attraction reduction alternatives have been met. The vector attraction reduction alternatives shall be as follows:

- (1) 38-Percent Volatile Solids Reduction. The mass of the volatile solids in the animal waste residuals shall be reduced by a minimum of 38 percent between the time that the animal waste residuals enter the digestion process and the time it is land applied.
- (2) 40-Day Bench Scale Test. A portion of previously anaerobically-digested animal waste residuals shall be further anaerobically-digested in the laboratory in a bench-scale unit for 40 additional days at a temperature between 30 and 37 degrees Celsius. The volatile solids in the animal waste residuals shall be reduced by less than 17 percent as measured from the beginning to the end of the test.
- (3) 30-Day Bench Scale Test. A portion of previously aerobically-digested animal waste residuals shall be further aerobically-digested in the laboratory in a bench-scale unit for 30 additional days at a temperature of 20 degrees Celsius. The previously aerobically-digested animal waste residuals shall either have a concentration of two percent total solids or less or shall be diluted with effluent down to two percent total solids at the start of the test. The volatile solids in the animal waste residuals shall be reduced by less than 15 percent as measured from the beginning to the end of the test.
- (4) Specific Oxygen Uptake Rate Test. The specific oxygen uptake rate (SOUR) for animal waste residuals treated in an aerobic process shall be equal to or less than 1.5 milligrams of oxygen per hour per gram of total solids (i.e., dry weight basis) corrected to a temperature of 20 degrees Celsius.
- (5) 14-Day Aerobic Processes. The animal waste residuals shall be treated in an aerobic process for 14 days or longer. During that time the temperature of the animal waste residuals shall be higher than 40 degrees Celsius, and the average temperature of the animal waste residuals shall be higher than 45 degrees Celsius.
- (6) Alkaline Stabilization. The pH of the animal waste residuals shall be raised to 12 or higher by alkali addition and, without the addition of more alkali, shall remain at 12 or higher for two hours and then at 11.5 or higher for an additional 22 hours.
- (7) Drying of Stabilized Residuals. The animal waste residuals shall be dried to 75 percent total solids if the animal waste residuals contain no unstabilized solids from a primary wastewater treatment process. Mixing of the animal waste residuals with other materials shall not be used to meet this alternative.
- (8) Drying of Unstabilized Residuals. The animal waste residuals shall be dried to 90 percent total solids if the animal waste residuals contain unstabilized solids from a primary wastewater treatment process. Mixing of the animal waste residuals with other materials shall not be used to meet this alternative.

(h) For animal waste residuals that are sold or given away in a bag or other container for application to the land, either a label shall be affixed to the bag or other container or an information sheet shall be provided to the person who receives the animal waste residuals. The label/information sheet shall contain the following information:

- (1) The name and address of the person who prepared the animal waste residuals;
- (2) A statement that land application of the animal waste residuals shall be prohibited except in accordance with the instructions on the label/information sheet;
- (3) A statement that animal waste residuals shall be applied at agronomic rates and recommended rates for intended uses;
- (4) A statement that the animal waste residuals shall not be applied to any site that is flooded, frozen, or snow covered;
- (5) A statement that adequate procedures shall be provided to prevent surface runoff from carrying any disposed or stored animal waste residuals into any surface waters;
- (6) A statement which identifies that this material shall be prevented from entering any public or private water supply source (including wells), stream, lake, or river;
- (7) Pollutant concentration for pollutants listed in Paragraph (c) of this Rule; and
- (8) Nitrogen and phosphorous concentration.

(i) Monitoring and Reporting.

- (1) Animal waste residuals applied shall be monitored for pollutants as listed in Paragraph (b) of this Rule as well as Paragraph (e) of this Rule and Paragraph (f) of this Rule as applicable at the frequency as stipulated in the following for each residuals source facility:

<u>Metric Tons per 365 day period</u> <u>(Dry Weight Basis)</u>	<u>Monitoring Frequency</u>
<u>Greater than zero but less than 290</u>	<u>Once per year</u>
<u>Equal to or greater than 290 but less than 1,500</u>	<u>Once per quarter (four times per year)</u>
<u>Equal to or greater than 1,500 but less than 15,000</u>	<u>Once per 60 days (six times per year)</u>
<u>Equal to or greater than 15,000</u>	<u>Once per month (12 times per year)</u>

- (2) A report of all monitoring and reporting requirements as specified in the permit shall be submitted to the Division by the permittee annually on or before March 1st of each calendar year.
- (3) All records shall be retained for a minimum of five years.

Public Comments – General

40 CFR 503 Does Not Apply

1. According to email from Sam Sampath of Region 4 EPA, "Manure derived products are not covered under 40 CFR Part 503. Sewage Sludge is regulated under 503, the definition of which doesn't include animal waste." These regulations may wish to refrain from using language that mentions Class A and its standards as it should not be required to meet the performance requirements of 02T .1100 which were patterned after the 40 CFR Part 503. – R. Branch
2. Need to specify Class A treatment standards. Per Sam Sampath, EPA Region 4, manure derived products are not subject to 40 CFR 503, so this is not applicable to animal waste rules. – R. Branch
3. EPA 40 CFR 503 requirements are intended for the use of domestic biosolids and were not intended to regulate animal waste residuals. – Farm Bureau

Terminology

4. The EMC proposes to define "bulk animal waste residuals" to mean "animal waste residuals that are transported and not sold or given away in a bag or other container for application to land." Yet, two subsections of the proposed rule state that "bulk animal waste residuals" shall not be "sold or given way in a bag or other container for application to land" in specified circumstances. Either those subsections should apply to all animal waste residuals, or they should be amended to reduce confusion given the definition of included terms. Similarly, the proposed rule

states "The Class A pathogen requirements shall be met when bulk animal waste residuals are . . . sold or given away in a bag or other container for application to the land. "This internal inconsistency should be corrected before the rule is finalized. – Amer. Rivers et.al.

5. The term 'residual' should be more narrowly defined. 'Residual' has a historic and meaning related to municipal solid waste. Expanding its use broadly could lead to confusion. The term residual (as it relates to animal waste management systems) should be used for referring to solids or semi-solids recovered following some anaerobic treatment process, e.g. anaerobic lagoon solids separation. – NCDA&CS
6. Language as proposed is not accurate in regard to current use of "bulk" when compared to 02T 0.1100. "bulk" should be deleted to ensure consistency with 02T 0.1100. where it is being deleted. – Farm Bureau
7. In item (c) it is proposed to refer to animal waste and animal waste residuals separately for clarity. For example, 'Bulk animal waste or animal waste residuals shall not....' – NCDA&CS

General Comments

8. Proposed 15A NCAC 02T .1310 might be somewhat longer and more complex than necessary. We fear the proposed rule is excessively long and complicated. We think that greater understanding and compliance in the field would be achieved through a more streamlined approach. We would be willing to work with the agency to develop a final rule that might be easier to understand and be followed. – NCPF
9. Suggest restrictions on land application like those stated in 02T .1109(b) "if the vertical separation of the seasonal high water table and the depth of residuals application is less than one foot. – Amer. Rivers et.al.
10. Recommend inclusion of setback provisions similar to those applicable to the land application of biological residuals suggest restrictions on land application like those stated in 02T .1109(b), prohibitions of land application "if the application causes prolonged nuisance conditions;" "within the 100-year flood elevation" absent certain conditions. – Amer. Rivers et.al.
11. "...we commend the agency for closing this loophole and reasserting its regulatory authority. We also appreciate the inclusion of a requirement for permittees to annually submit a summary of their monitoring and reporting activities. – Amer. Rivers et.al.
12. Supportive of consistent permitting format, and flexibility while protecting human health. – Farm Bureau

Hearing Officer Response

40 CFR 503 Does Not Apply – Based upon EPA's review and clarification of both 40 CFR 503 and 40 CFR 122 (CAFO Rule), the proposed rule is being modified to provide protection to public health and the environment with treatment and monitoring requirements that are appropriate to the source material.

Terminology – Based upon EPA's review and clarification of both 40 CFR 503 and 40 CFR 122 (CAFO Rule), the proposed rule is being modified to provide protection to public health and the environment. Due to these modifications, the term "bulk animal waste residuals" has been eliminated. Also see Hearing Officers' Response to "[Animal Waste Residuals](#)" comments addressed for in 15A NCAC 02T .1302(2).

General Comments

Comments 9 and 10. Rule 02T .1109(b) exempts Class A residuals (similar to the animal waste residuals) that are sold or given away from the setbacks listed in 02T .1109(a) to which the commenter refers. The vertical separation and setbacks referenced are not applicable.

For clarification purposes, the Hearing Officers recommend modifying the language as shown below.

Revised Language for Readoption

(a) This Rule applies to the treatment, storage, transportation, use, and disposal of animal waste residuals to be applied to a lawn, home garden, or public contact use site or sold or given away in a bag or other container for application to the land.

Not regulated under this Rule is the treatment, storage, transportation, use, or disposal of:

- (1) animal waste residuals applied to agricultural land in accordance with Rule .1303, Rule .1304, Rule 1305, Rule .1307, or Rule .1403 of this Section;
- (2) up to four cubic yards of animal waste residuals distributed from a facility subject to regulation under Rule .1303 or Rule .1304 of this Section per visit to individuals for personal use, with a maximum of ten cubic yards per year per individual;
- (3) oil, grease, grit and screenings from wastewater treatment facilities;
- (4) septage from wastewater treatment facilities;
- (5) ash that is regulated in accordance with Section .1200 of this Subchapter;
- (6) residuals that are regulated in accordance with Section .1100 of this Subchapter;
- (7) residuals that are prepared for land application, used, or disposed of in a solid waste management facility permitted by the Division of Waste Management;
- (8) residuals that are disposed of in an incinerator permitted by the Division of Air Quality;
- (9) residuals that are transported out of state for treatment, storage, use, or disposal; and
- (10) residuals that meet the definition of a hazardous waste in accordance with 40 CFR 260.10 as adopted by reference in 15A NCAC 13A .0102(b) or that have a concentration of polychlorinated biphenyls equal to or greater than 50 milligrams per kilogram of total solids (i.e., dry weight basis) and;
- (11) animal mortality.

(b) For new and modified sources of animal waste residuals, the application shall submit a permit application in writing to the Division that includes the following:

- (1) Site maps shall be provided to the Division by the applicant depicting the location of the source and demonstrate compliance with siting setbacks applicable to animal waste management systems established in G.S. 106-803, and NRCS standards at the time of construction;
- (2) A complete analysis of the animal waste residuals. The analysis may shall include all pollutants identified in Paragraph (c) in this Rule, nutrients and micronutrients, and proof of compliance with pathogen and vector requirements in Paragraphs (f) and (g) of this Rule if applicable;:
- (3) A sampling/monitoring plan that describes how compliance with Paragraphs (c), (f), and (g) of this Rule if applicable shall be provided to the Division by the applicant;
- (4) A marketability statement detailing destinations and approximate amounts of the final product to be distributed; and
- (5) A copy of the label/information sheet that complies with Paragraph (h) of this Rule.

(c) Bulk animal waste residuals shall not be applied to a lawn, home garden, or public contact use site nor shall animal waste residuals be sold or given away in a bag or other container for application to the land if the concentration of any pollutant in that residual exceeds the ceiling concentration for that pollutant as stipulated in the following (i.e., on a dry weight basis):

<u>Pollutant</u>	<u>Ceiling Concentration</u> <u>(milligrams per kilogram)</u>
<u>Arsenic</u>	<u>75</u>
<u>Cadmium</u>	<u>85</u>
<u>Copper</u>	<u>4,300</u>
<u>Lead</u>	<u>840</u>
<u>Mercury</u>	<u>57</u>
<u>Molybdenum</u>	<u>75</u>
<u>Nickel</u>	<u>420</u>
<u>Selenium</u>	<u>100</u>
<u>Zinc</u>	<u>7,500</u>

~~(dc) - Bulk a~~Animal waste residuals shall not be applied to a lawn, home garden, or public contact use site nor shall animal waste residuals be sold or given away in a bag or other container for application to the land if the concentration of any pollutant in that residual exceeds the concentration for that pollutant as stipulated in the following (i.e., on a dry weight basis):

<u>Pollutant</u>	<u>Monthly Average Ceiling Concentration</u> (milligrams per kilogram)
<u>Arsenic</u>	<u>41</u>
<u>Cadmium</u>	<u>39</u>
<u>Copper</u>	<u>1,500</u>
<u>Lead</u>	<u>300</u>
<u>Mercury</u>	<u>17</u>
<u>Nickel</u>	<u>420</u>
<u>Selenium</u>	<u>100</u>
<u>Zinc</u>	<u>2,800</u>

~~(ed) The Class A~~ Animal waste residuals shall meet the pathogen requirements of Rule .1106(a)(2) of this Subchapter ~~shall be met when bulk animal waste residuals are to be applied to a lawn, home garden, or public contact use site or sold or given away in a bag or other container for application to the land.~~

~~(f) For animal waste residuals to be classified as Class A with respect to pathogens, the requirements of Rule .1106(b) of this Subchapter shall be met.~~

~~(g) Animal waste residuals shall not be applied to a lawn, home garden, or public contact use site or sold or given away in a bag or other container for application to the land unless the requirements of one of the vector attraction reduction alternatives have been met. The vector attraction reduction alternatives shall be as follows:~~

- ~~(1) 38 Percent Volatile Solids Reduction. The mass of the volatile solids in the animal waste residuals shall be reduced by a minimum of 38 percent between the time that the animal waste residuals enter the digestion process and the time it is land applied.~~
- ~~(2) 40-Day Bench Scale Test. A portion of previously anaerobically digested animal waste residuals shall be further anaerobically digested in the laboratory in a bench-scale unit for 40 additional days at a temperature between 30 and 37 degrees Celsius. The volatile solids in the animal waste residuals shall be reduced by less than 17 percent as measured from the beginning to the end of the test.~~
- ~~(3) 30-Day Bench Scale Test. A portion of previously aerobically digested animal waste residuals shall be further aerobically digested in the laboratory in a bench-scale unit for 30 additional days at a temperature of 20 degrees Celsius. The previously aerobically digested animal waste residuals shall either have a concentration of two percent total solids or less or shall be diluted with effluent down to two percent total solids at the start of the test. The volatile solids in the animal waste residuals shall be reduced by less than 15 percent as measured from the beginning to the end of the test.~~
- ~~(4) Specific Oxygen Uptake Rate Test. The specific oxygen uptake rate (SOUR) for animal waste residuals treated in an aerobic process shall be equal to or less than 1.5 milligrams of oxygen per hour per gram of total solids (i.e., dry weight basis) corrected to a temperature of 20 degrees Celsius.~~
- ~~(5) 14-Day Aerobic Processes. The animal waste residuals shall be treated in an aerobic process for 14 days or longer. During that time the temperature of the animal waste residuals shall be higher than 40 degrees Celsius, and the average temperature of the animal waste residuals shall be higher than 45 degrees Celsius.~~
- ~~(6) Alkaline Stabilization. The pH of the animal waste residuals shall be raised to 12 or higher by alkali addition and, without the addition of more alkali, shall remain at 12 or higher for two hours and then at 11.5 or higher for an additional 22 hours.~~
- ~~(7) Drying of Stabilized Residuals. The animal waste residuals shall be dried to 75 percent total solids if the animal waste residuals contain no unstabilized solids from a primary wastewater treatment process. Mixing of the animal waste residuals with other materials shall not be used to meet this alternative.~~
- ~~(8) Drying of Unstabilized Residuals. The animal waste residuals shall be dried to 90 percent total solids if the animal waste residuals contain unstabilized solids from a primary wastewater treatment process. Mixing of the animal waste residuals with other materials shall not be used to meet this alternative.~~

(he) For animal waste residuals that are sold or given away in a bag or other container for application to the land, either a label shall be affixed to the bag or other container or an information sheet shall be provided to the person who receives the animal waste residuals. The label/information sheet shall contain the following information:

- (1) The name and address of the person who prepared the animal waste residuals;
- (2) A statement that land application of the animal waste residuals shall be prohibited except in accordance with the instructions on the label/information sheet;
- (3) A statement that animal waste residuals shall be applied at agronomic rates and recommended rates for intended uses;
- (4) A statement that the animal waste residuals shall not be applied to any site that is flooded, frozen, or snow covered;
- (5) A statement that adequate procedures shall be provided to prevent surface runoff from carrying any disposed or stored animal waste residuals into any surface waters;
- (6) A statement which identifies that this material shall be prevented from entering any public or private water supply source (including wells), stream, lake, or river;
- (7) Pollutant concentration for pollutants listed in Paragraph (c) of this Rule; and
- (8) Nitrogen and phosphorous concentration.

(f) Monitoring and Reporting.

- (1) Animal waste residuals applied shall be monitored for pollutants as listed in Paragraph (bc) of this Rule as well as and for pathogens as described in Paragraph (ed) of this Rule and Paragraph (f) of this Rule as applicable at the frequency as stipulated in the following for each residuals source facility:

<u>Metric Tons per 365 day period</u> <u>(Dry Weight Basis)</u>	<u>Monitoring Frequency</u>
<u>Greater than zero but less than 290</u>	<u>Once per year</u>
<u>Equal to or greater than 290 but less than 1,500</u>	<u>Once per quarter (four times per year)</u>
<u>Equal to or greater than 1,500 but less than 15,000</u>	<u>Once per 60 days (six times per year)</u>
<u>Equal to or greater than 15,000</u>	<u>Once per month (12 times per year)</u>

- (2) A report of all monitoring and reporting requirements as specified in the permit shall be submitted to the Division by the permittee annually on or before March 1st of each calendar year.
- (3) All records shall be retained for a minimum of five years.

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15A NCAC 02T .1310(a)

Proposed Language for Readoption

This Rule applies to the treatment, storage, transportation, use, and disposal of animal waste residuals to be applied to a lawn, home garden, or public contact use site or sold or given away in a bag or other container for application to the land. Not regulated under this Rule is the treatment, storage, transportation, use, or disposal of:

- (1) animal waste residuals applied to agricultural land in accordance with Rule .1303, Rule .1304, Rule 1305, Rule .1307, or Rule .1403 of this Section;
- (2) up to four cubic yards of animal waste residuals distributed from a facility subject to regulation under Rule .1303 or Rule .1304 of this Section per visit to individuals for personal use, with a maximum of ten cubic yards per year per individual;
- (3) oil, grease, grit and screenings from wastewater treatment facilities;
- (4) septage from wastewater treatment facilities;
- (5) ash that is regulated in accordance with Section .1200 of this Subchapter;
- (6) residuals that are regulated in accordance with Section .1100 of this Subchapter;
- (7) residuals that are prepared for land application, used, or disposed of in a solid waste management facility permitted by the Division of Waste Management;
- (8) residuals that are disposed of in an incinerator permitted by the Division of Air Quality;
- (9) residuals that are transported out of state for treatment, storage, use, or disposal; and
- (10) residuals that meet the definition of a hazardous waste in accordance with 40 CFR 260.10 as adopted by reference in 15A NCAC 13A .0102(b) or that have a concentration of polychlorinated biphenyls equal to or greater than 50 milligrams per kilogram of total solids (i.e., dry weight basis).

Public Comments

1. In item (a) the list of items not regulated under the rule (item (1) – (10)) should be simplified. -NCDA&CS
2. It is unclear what the EMC intended when stating the rule does not apply to animal waste residuals applied to land by manure haulers. If the EMC intends to deem permitted manure haulers that are land applying hundreds of tons of animal waste residuals, those manure haulers should be subject to the same requirements as one applying “bulk animal waste residuals” under this rule. – Amer. Rivers et.al.

Hearing Officer Response

The manure hauler rules are specific to the agricultural land application of animal waste/animal waste residuals, not for distribution to the general public. Similarly, federal rules regarding municipal residuals distinguish between public contact sites and agricultural land application.

Revised Language for Readoption

No revisions to the proposed language based on these comments. One additional item .1310(a)(11) “animal mortality” has been added as a technical correction. – See Revised language shown in [15A NCAC 02T .1310](#) above.

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15A NCAC 02T .1310(d)

Proposed Language for Readoption

Bulk animal waste residuals shall not be applied to a lawn, home garden, or public contact use site nor shall animal waste residuals be sold or given away in a bag or other container for application to the land if the concentration of any pollutant in that residual exceeds the concentration for that pollutant as stipulated in the following (i.e., on a dry weight basis):

<u>Pollutant</u>	<u>Monthly Average Concentration</u> <u>(milligrams per kilogram)</u>
<u>Arsenic</u>	<u>41</u>
<u>Cadmium</u>	<u>39</u>
<u>Copper</u>	<u>1,500</u>
<u>Lead</u>	<u>300</u>
<u>Mercury</u>	<u>17</u>
<u>Nickel</u>	<u>420</u>
<u>Selenium</u>	<u>100</u>
<u>Zinc</u>	<u>2,800</u>

Public Comments

1. Given that animal waste residuals are produced periodically or intermittently, versus the ongoing and continuous operations at municipal wastewater treatment operations (or other industrial residuals generators) should only the ceiling concentration be used, i.e. 15A NCAC 02T .1310 (c)? and not 15A NCAC 02T .1310 (d)? Monthly average could be confusing for non-continuous operations. – NCDA&CS

Hearing Officer Response

The hearing officers understand the more intermittent nature of the production and processing of animal waste residuals as compared to residuals from municipal wastewater treatment operations. The Hearing Officers recommend setting one ceiling concentration rather than a ceiling concentration and monthly averages. The new ceiling concentrations for the elements of concern should be established at the same value as the prior monthly average concentration limits, as those are the values that were effectively in place prior to this rule making. Furthermore, the list of pollutants has been reduced, as discussed previously in 15A NCAC 02T .1310 Hearing Officer Response above, to only include Copper and Zinc.

Revised Language for Readoption

Bulk animal waste residuals shall not be applied to a lawn, home garden, or public contact use site nor shall animal waste residuals be sold or given away in a bag or other container for application to the land if the concentration of any pollutant in that residual exceeds the concentration for that pollutant as stipulated in the following (i.e., on a dry weight basis):

<u>Pollutant</u>	<u>Monthly Average Ceiling Concentration</u> <u>(milligrams per kilogram)</u>
<u>Arsenic</u>	<u>41</u>
<u>Cadmium</u>	<u>39</u>
<u>Copper</u>	<u>1,500</u>
<u>Lead</u>	<u>300</u>
<u>Mercury</u>	<u>17</u>
<u>Nickel</u>	<u>420</u>
<u>Selenium</u>	<u>100</u>
<u>Zinc</u>	<u>2,800</u>

15A NCAC 02T .1310(g)

Proposed Language for Readoption

Animal waste residuals shall not be applied to a lawn, home garden, or public contact use site or sold or given away in a bag or other container for application to the land unless the requirements of one of the vector attraction reduction alternatives have been met. The vector attraction reduction alternatives shall be as follows:

- (1) 38-Percent Volatile Solids Reduction. The mass of the volatile solids in the animal waste residuals shall be reduced by a minimum of 38 percent between the time that the animal waste residuals enter the digestion process and the time it is land applied.
- (2) 40-Day Bench Scale Test. A portion of previously anaerobically-digested animal waste residuals shall be further anaerobically-digested in the laboratory in a bench-scale unit for 40 additional days at a temperature between 30 and 37 degrees Celsius. The volatile solids in the animal waste residuals shall be reduced by less than 17 percent as measured from the beginning to the end of the test.
- (3) 30-Day Bench Scale Test. A portion of previously aerobically-digested animal waste residuals shall be further aerobically-digested in the laboratory in a bench-scale unit for 30 additional days at a temperature of 20 degrees Celsius. The previously aerobically-digested animal waste residuals shall either have a concentration of two percent total solids or less or shall be diluted with effluent down to two percent total solids at the start of the test. The volatile solids in the animal waste residuals shall be reduced by less than 15 percent as measured from the beginning to the end of the test.
- (4) Specific Oxygen Uptake Rate Test. The specific oxygen uptake rate (SOUR) for animal waste residuals treated in an aerobic process shall be equal to or less than 1.5 milligrams of oxygen per hour per gram of total solids (i.e., dry weight basis) corrected to a temperature of 20 degrees Celsius.
- (5) 14-Day Aerobic Processes. The animal waste residuals shall be treated in an aerobic process for 14 days or longer. During that time the temperature of the animal waste residuals shall be higher than 40 degrees Celsius, and the average temperature of the animal waste residuals shall be higher than 45 degrees Celsius.
- (6) Alkaline Stabilization. The pH of the animal waste residuals shall be raised to 12 or higher by alkali addition and, without the addition of more alkali, shall remain at 12 or higher for two hours and then at 11.5 or higher for an additional 22 hours.
- (7) Drying of Stabilized Residuals. The animal waste residuals shall be dried to 75 percent total solids if the animal waste residuals contain no unstabilized solids from a primary wastewater treatment process. Mixing of the animal waste residuals with other materials shall not be used to meet this alternative.
- (8) Drying of Unstabilized Residuals. The animal waste residuals shall be dried to 90 percent total solids if the animal waste residuals contain unstabilized solids from a primary wastewater treatment process. Mixing of the animal waste residuals with other materials shall not be used to meet this alternative.

Public Comments

1. Vector attraction reductions requirements were developed for municipal waste and not intended for use with animal waste. This is a new requirement, that would result in significant cost increase. Delete this rule and vector attraction requirements. – Farm Bureau
2. These vector attraction reduction alternatives may apply to anaerobically digested waste residuals, but are likely not applicable to other animal waste materials. Fecal coliform results are typically an indicator of sufficient heat treatment during the compost process. The vector attraction requirements from residual biosolids rules should not be applied to animal waste rules. – NCDA&CS

Hearing Officer Response

The Hearing Officers recognize that animal waste residuals are not subject to the Vector Attraction Reduction Requirements found in 40 CFR 503 and subsequently in Rule .1107 of this Subchapter. Subsequently, the Hearing Officers recommend the elimination of this Rule.

Revised Language for Redoption

~~Animal waste residuals shall not be applied to a lawn, home garden, or public contact use site or sold or given away in a bag or other container for application to the land unless the requirements of one of the vector attraction reduction alternatives have been met. The vector attraction reduction alternatives shall be as follows:~~

- ~~(1) 38 Percent Volatile Solids Reduction. The mass of the volatile solids in the animal waste residuals shall be reduced by a minimum of 38 percent between the time that the animal waste residuals enter the digestion process and the time it is land applied.~~
- ~~(2) 40 Day Bench Scale Test. A portion of previously anaerobically digested animal waste residuals shall be further anaerobically digested in the laboratory in a bench scale unit for 40 additional days at a temperature between 30 and 37 degrees Celsius. The volatile solids in the animal waste residuals shall be reduced by less than 17 percent as measured from the beginning to the end of the test.~~
- ~~(3) 30 Day Bench Scale Test. A portion of previously aerobically digested animal waste residuals shall be further aerobically digested in the laboratory in a bench scale unit for 30 additional days at a temperature of 20 degrees Celsius. The previously aerobically digested animal waste residuals shall either have a concentration of two percent total solids or less or shall be diluted with effluent down to two percent total solids at the start of the test. The volatile solids in the animal waste residuals shall be reduced by less than 15 percent as measured from the beginning to the end of the test.~~
- ~~(4) Specific Oxygen Uptake Rate Test. The specific oxygen uptake rate (SOUR) for animal waste residuals treated in an aerobic process shall be equal to or less than 1.5 milligrams of oxygen per hour per gram of total solids (i.e., dry weight basis) corrected to a temperature of 20 degrees Celsius.~~
- ~~(5) 14 Day Aerobic Processes. The animal waste residuals shall be treated in an aerobic process for 14 days or longer. During that time the temperature of the animal waste residuals shall be higher than 40 degrees Celsius, and the average temperature of the animal waste residuals shall be higher than 45 degrees Celsius.~~
- ~~(6) Alkaline Stabilization. The pH of the animal waste residuals shall be raised to 12 or higher by alkali addition and, without the addition of more alkali, shall remain at 12 or higher for two hours and then at 11.5 or higher for an additional 22 hours.~~
- ~~(7) Drying of Stabilized Residuals. The animal waste residuals shall be dried to 75 percent total solids if the animal waste residuals contain no unstabilized solids from a primary wastewater treatment process. Mixing of the animal waste residuals with other materials shall not be used to meet this alternative.~~
- ~~(8) Drying of Unstabilized Residuals. The animal waste residuals shall be dried to 90 percent total solids if the animal waste residuals contain unstabilized solids from a primary wastewater treatment process. Mixing of the animal waste residuals with other materials shall not be used to meet this alternative.~~

15A NCAC 02T .1310(h)(3)

Proposed Language for Readoption

A statement that animal waste residuals shall be applied at agronomic rates and recommended rates for intended uses;

Public Comments

1. Concerned that manure haulers, and others exempted from the animal waste residuals rule (e.g., those land applying residuals pursuant to 02T .1303, .1304, .1305, or .1307) may not evaluate the nutrient concentrations in the residuals to ensure land application does not exceed the agronomic rate unless the EMC explicitly states in their permits or governing rules that animal waste residuals, not just animal waste, must be applied at agronomic rates. – Amer. Rivers et.al.

Hearing Officer Response

Rules 02T .1303, .1304, .1305, .1307, .1310, and .1403 require that animal waste be applied at no greater than agronomic rates - this includes all animal waste materials, i.e. effluent, sludge, residuals.

Revised Language for Readoption

No revisions to the proposed language.

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15A NCAC 02T .1310(i)(1)

Proposed Language for Readoption

Animal waste residuals applied shall be monitored for pollutants as listed in Paragraph (b) of this Rule as well as Paragraph (e) of this Rule and Paragraph (f) of this Rule as applicable at the frequency as stipulated in the following for each residuals source facility:

<u>Metric Tons per 365 day period (Dry Weight Basis)</u>	<u>Monitoring Frequency</u>
<u>Greater than zero but less than 290</u>	<u>Once per year</u>
<u>Equal to or greater than 290 but less than 1,500</u>	<u>Once per quarter (four times per year)</u>
<u>Equal to or greater than 1,500 but less than 15,000</u>	<u>Once per 60 days (six times per year)</u>
<u>Equal to or greater than 15,000</u>	<u>Once per month (12 times per year)</u>

Public Comments

1. Rule reference is incorrect. "paragraph (b)" is incorrect. – Farm Bureau

Hearing Officer Response

The Hearing Officers agree that the Paragraph reference should be corrected.

Revised Language for Readoption

Animal waste residuals applied shall be monitored for pollutants as listed in Paragraph (bc) of this Rule as well as and for pathogens as described in Paragraph (ed) of this Rule and Paragraph (f) of this Rule as applicable at the frequency as stipulated in the following for each residuals source facility:

<u>Metric Tons per 365 day period (Dry Weight Basis)</u>	<u>Monitoring Frequency</u>
<u>Greater than zero but less than 290</u>	<u>Once per year</u>
<u>Equal to or greater than 290 but less than 1,500</u>	<u>Once per quarter (four times per year)</u>
<u>Equal to or greater than 1,500 but less than 15,000</u>	<u>Once per 60 days (six times per year)</u>
<u>Equal to or greater than 15,000</u>	<u>Once per month (12 times per year)</u>

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15A NCAC 02T .1400

Proposed Language for Readoption

Not applicable – These are general comments about Section .1400

Public Comments

1. In light of the statutory scheme, the NCPF contends that further regulation that can be accomplished through agency regulation is somewhat limited. Notwithstanding that position, NCPF finds that, in general, the new proposed rules are largely acceptable and in keeping with the state statutory scheme. – NCPF
2. The proposed changes to the 2T animal waste rules are a step in the wrong direction -- the Environmental Management Commission should consider ways to improve the regulation of factory farms, rather than weakening existing rules. – FWWatch et.al.
3. EMC needs to upgrade the rules, not roll them back. – Sam Perkins - Catawba River Keeper
4. This rule requires that litter is not stockpiled uncovered for greater than 15 days while 15A NCAC 02T .1403 (a)(2)(B) requires that animal waste is not stockpiled uncovered for greater than 15 days. It is our understanding that both rules are intended for poultry litter. The language in rule .1403 (a)(2)(B) is somewhat ambiguous. We recommend for consistency that the language in these two rules be revised to be consistent with each other. – NCDA&CS

Hearing Officer Response

Based on public input, the Hearing Officers recommend reinstating the record keeping and annual report requirement for manure haulers as previously written.

The proposed modifications to the 02T .1400 Manure Hauler rules regarding elimination of annual reporting have been removed to maintain transparency through public records. Other proposed rule changes have been made to provide environmental and public health protections and to comply with state law.

The Hearing Officers consider the data valuable to tracking transport of nutrients within and across the 17 North Carolina river basins and for nutrient management planning within river basins.

Manure Haulers are not limited to the transport and land applications of poultry litter. Manure Hauler rules apply to any animal waste product, including but not limited to dairy/cattle waste, dewatered swine sludge, and poultry litter. However, Rule 15A NCAC 02T .1303(a)(2) is specific to dry litter poultry operations. The Hearing Officers do not recommend making changes to the term “litter” in Rule 15A NCAC 02T .1303(a)(2) or to the term “animal waste” in 15A NCAC 02T Section .1400. The Hearing Officers recommend adding a definition of “litter” to Rule .0103 of this Subchapter as follows:

“Litter” means the combination of bedding material, poultry excreta, feathers, spilled feed, spilled water, and soil.

Revised Language for Readoption

Revisions shown in [02T .1403](#) and [.1404](#), following.

15A NCAC 02T .1403

Proposed Language for Readoption

(a) The following systems are deemed permitted pursuant to Rule .0113 of this Subchapter provided the system meets the criteria in Rule .0113 of this Subchapter and all criteria required for the specific system in this Rule:

- (1) Manure Hauler that land apply a total of 100 tons or less of animal waste per calendar year if:
 - (A) animal waste is applied at no greater than agronomic rates; and
 - (B) a ~~setback-vegetated buffer (separation)~~ of at least 25 feet is maintained from a perennial stream or perennial waterbody during land application.
- (2) Manure Hauler that land apply a total of more than 100 tons of animal waste per calendar year if:
 - (A) animal waste is applied at no greater than agronomic rates;
 - (B) animal waste is not stockpiled uncovered for greater than 15 days;
 - (C) animal waste is not stockpiled within 100 feet of a perennial stream or perennial waterbody;
 - (D) a ~~setback-vegetated buffer (separation)~~ of at least 25 feet is maintained from a perennial stream or perennial waterbody during land application;
 - (E) the Manure Hauler registers with the Division by one year from the effective date of this Rule. Manure Hauler that begin operation following the effective date of this Rule must register with the Division prior to accepting or purchasing manure.
 - (F) the Manure Hauler ~~submits an annual report, as specified in this Section, to the Division by March 1 of each year; and keeps records of land application activity including the date, location and amount of all animal waste received, and the date locations, application rate, acreage, waste analysis, and receiving crops of all animal waste land application; and~~
 - (G) the field on which animal waste is applied has had a representative Standard Soil Fertility Analysis within the last three years from a Division certified laboratory pursuant to 15A NCAC 02H .0800.

(b) The Director may determine that a system should not be deemed permitted in accordance with this Rule and Rule .0113 of this Subchapter. This determination shall be made in accordance with Rule .0113(e) of this Subchapter.

Public Comments

1. The 15-day uncovered stockpile rule should apply only to poultry litter, as in General Statute. Other stockpiles should be sited and maintained such that there is no impact to surface water. – NCDA&CS
2. The proposed revision of 15A NCAC 02T .1403 and .1404, shielding Manure Hauler Records from the public, should be rejected if DEQ's promise to improve transparency is to be fulfilled. – Haddix et.al.
3. Manure hauler records should be kept in a publicly accessible electronic database. – C. Troxler
4. For too long, the public has been unable to obtain information in regard to the waste generated by CAFO operations. Government transparency needs to be a priority for DWR. Haulers of swine, or poultry waste for that matter, travel the roads and communities of eastern NC every day. Not allowing the public to gain access to the hauler records showing where waste is disposed does not allow for the public to be educated and be properly protected from this form of pollution from CAFOs. – L. Baldwin
5. Transparency should be a priority, but instead the rule changes would actually deprive people of information. Storage of manure hauling records on farms essentially ensures the public will have very little access to information about where waste is being disposed. These records should be maintained by DEQ. – FWWatch et.al.

Hearing Officer Response

The 02T .1400 Section applies to Manure Haulers for all types of animal wastes, although the predominant waste sources have been poultry litter. For the protection of surface waters, the Hearing Officers recommend the rule regarding the covering of stockpiles apply broadly.

Historically, public demand for manure hauler records has been low. Development and maintenance of a database could require significant resources and staff. Manure Hauler records have been and continue to be available for public review.

Based on public input the Hearing Officers recommend reinstating the annual report requirement for manure haulers as previously written comments.

Revised Language for Readoption

(a) The following systems are deemed permitted pursuant to Rule .0113 of this Subchapter provided the system meets the criteria in Rule .0113 of this Subchapter and all criteria required for the specific system in this Rule:

- (1) Manure Hauler that land apply a total of 100 tons or less of animal waste per calendar year if:
 - (A) animal waste is applied at no greater than agronomic rates; and
 - (B) a ~~setback-vegetated buffer (separation)~~ of at least 25 feet is maintained from a perennial stream or perennial waterbody during land application.
- (2) Manure Hauler that land apply a total of more than 100 tons of animal waste per calendar year if:
 - (A) animal waste is applied at no greater than agronomic rates;
 - (B) animal waste is not stockpiled uncovered for greater than 15 days;
 - (C) animal waste is not stockpiled within 100 feet of a perennial stream or perennial waterbody;
 - (D) a ~~setback-vegetated buffer (separation)~~ of at least 25 feet is maintained from a perennial stream or perennial waterbody during land application;
 - (E) ~~the Manure Hauler registers with the Division by one year from the effective date of this Rule.~~ Manure Hauler ~~that begin operation following the effective date of this Rule~~ must register with the Division prior to accepting or purchasing manure;
 - (F) the Manure Hauler ~~submits an annual report, as specified in this Section, to the Division by March 1 of each year; and keeps records of land application activity including the date, location and amount of all animal waste received, and the date locations, application rate, acreage, waste analysis, and receiving crops of all animal waste land application; submits an annual report, as specified in this Section, to the Division by March 1 of each year; and~~
 - (G) the field on which animal waste is applied has had a representative Standard Soil Fertility Analysis within the last three years from a Division certified laboratory pursuant to 15A NCAC 02H .0800.

(b) The Director may determine that a system should not be deemed permitted in accordance with this Rule and Rule .0113 of this Subchapter. This determination shall be made in accordance with Rule .0113(e) of this Subchapter.

15A NCAC 02T .1404

Proposed Language for Readoption

~~(a) Manure Haulers that land apply more than 100 tons but less than 750 tons of animal waste per calendar year shall submit to the Division a report of the activities for the calendar year that includes the following:~~

- ~~(1) Name, mailing address, and phone number of the Manure Hauler;~~
- ~~(2) Date, location, and amount of all animal waste received; and~~
- ~~(3) Date, location, amount, and acreage of all animal waste land application.~~

~~(b) Manure Haulers that land apply 750 tons or more of animal waste per calendar year shall submit to the Division a report of the activities for the calendar year that includes the following:~~

- ~~(1) Name, mailing address, and phone number of the Manure Hauler;~~
- ~~(2) Dates, locations, and amounts of animal waste received; and~~
- ~~(3) Dates, locations, application rate, acreage, waste analysis, and receiving crop of all animal waste land applied.~~

~~(c) Annual reports shall be submitted by March 1 for the preceding calendar year, on Division supplied forms or forms approved by the Division as providing the same information as required by the Division's forms.~~

Public Comments- Annual Reports

1. Supports rule modification to eliminate annual report requirement. Add distinction that exists in current 02T .1404 between haulers that apply above specific thresholds. – Farm Bureau
2. NCDA&CS agrees that the reporting requirement for manure haulers should be eliminated. We do agree that haulers should maintain records of hauling and land application, as specified in 15A NCAC 02T .1403 (a)(2)(F) – NCDA&CS
3. We object to the proposal to eliminate this reporting requirement. (manure hauler annual reports) – Amer. Rivers et.al.
4. The proposed revision of 15A NCAC 02T .1403 and .1404, shielding Manure Hauler Records from the public, should be rejected if DEQ's promise to improve transparency is to be fulfilled. – Haddix et.al.
5. Opposed to the proposed repeal of 15A NCAC 02T .1404, which currently requires manure haulers to submit an annual report to DEQ explaining from where they took their manure to where they delivered it. – 803 Comments
6. DEQ's reasoning behind getting rid of these requirements is out of touch and puts my community at risk. Without these annual reports, the state will have no way to regulate and monitor where animal waste is coming from or to where it is going. – 803 Comments
7. Opposed to removing the requirement to submit annual reports for manure haulers. The information is valuable to the public even if the agency does not act on it. – W. Hendrick
8. The manure hauler records should be kept in the rule. This is critical information on the location of where waste is ending up. Let the public and organizations assist with the analysis. – W. Hendrick
9. Critical to keep manure hauler records. Need to have state maintain copies to allow public review. – W. Hendrick
10. Manure hauler records should be kept in a publicly accessible electronic database. – C. Troxler
11. Transparency should be a priority, but instead the rule changes would actually deprive people of information. Storage of manure hauling records on farms essentially ensures the public will have very little access to information about where waste is being disposed. These records should be maintained by DEQ. – FWWatch et.al.
12. For too long, the public has been unable to obtain information in regard to the waste generated by CAFO operations. Government transparency needs to be a priority for DWR. Haulers of swine, or poultry waste for that matter, travel

the roads and communities of eastern NC every day. Not allowing the public to gain access to the hauler records showing where waste is disposed does not allow for the public to be educated and be properly protected from this form of pollution from CAFOs. – L. Baldwin

Hearing Officer Response

Based on public input, the Hearing Officers recommend reinstating the record keeping and annual report requirement for manure haulers as previously written, with minor editorial revisions.

The proposed modifications to the 02T .1400 Manure Hauler rules regarding elimination of annual reporting have been removed to maintain transparency through public records. Other proposed rule changes have been made to provide environmental and public health protections and to comply with state law.

Revised Language for Readoption

~~(a) Manure Haulers that land apply more than 100 tons but less than 750 tons of animal waste per calendar year shall submit to the Division a report of the activities for the calendar year that includes the following:~~

- ~~(1) Name, mailing address, and phone number of the Manure Hauler;~~
- ~~(2) Date, location, and amount of all animal waste received; and~~
- ~~(3) Date, location, amount, and acreage of all animal waste land application.~~

~~(b) Manure Haulers that land apply 750 tons or more of animal waste per calendar year shall submit to the Division a report of the activities for the calendar year that includes the following:~~

- ~~(1) Name, mailing address, and phone number of the Manure Hauler;~~
- ~~(2) Dates, locations, and amounts of animal waste received; and~~
- ~~(3) Dates, locations, application rate, acreage, waste analysis, and receiving crop of all animal waste land applied.~~

~~(c) Annual reports shall be submitted by March 1 for the preceding calendar year, on Division supplied forms or forms approved by the Division as providing the same information as required by the Division's forms.~~

(a) Manure Haulers that land apply more than 100 tons but less than 750 tons of animal waste per calendar year shall submit to the Division a report of the activities for the calendar year that includes the following:

- (1) Name, mailing address, and phone number of the Manure Hauler;
- (2) Dates, locations, and amounts of all animal waste received; and
- (3) Dates, locations, amounts, and acreage of all animal waste land application.

(b) Manure Haulers that land apply 750 tons or more of animal waste per calendar year shall submit to the Division a report of the activities for the calendar year that includes the following:

- (1) Name, mailing address, and phone number of the Manure Hauler;
- (2) Dates, locations, and amounts of animal waste received; and
- (3) Dates, locations, application rate, acreage, waste analysis, and receiving crop of all animal waste land applied.

(c) Annual reports shall be submitted by March 1 for the preceding calendar year, on Division supplied forms or forms approved by the Division as providing the same information as required by the Division's forms.

Technical Corrections to Subchapter 02T

Rule	Revised Language
02T .0105(o)	<u>The Permittee shall retain the Division approved Division-approved plans and specifications for the life of the facility.</u>
02T .0113(a)(18)	<u>Discharges to the land surface of less than 5,000 gallons per week of backwash water from greensand filters, not including conventional filters, reverse osmosis, and ion exchange filters, at potable water wells, provided ponding or runoff does not occur and the backwash does not contain radioactive material exceed the Maximum Contaminant Level (MCL) for radionuclides or arsenic; and</u>
02T .0113(a)(19)	<u>Discharges to the land surface of less than 350 gallons per week of backwash water from reverse osmosis, ion exchange filters, greensand filters at private drinking water wells, wells serving single family residences, provided ponding or runoff does not occur.</u>
02T .0114(f)(1)(C)	<u>Owner of the collection system. A letter of agreement from the owner or an official, meeting the criteria of Rule .0106 of this Subchapter, Section, of the receiving collection system or treatment works accepting the wastewater and agreeing with the adjusted design rate.</u>
02T .0120(b)(5)	<u>The Applicant applicant or any parent, subsidiary, or other affiliate of the Applicant affiliation has not paid an annual fee in accordance with Rule .0105(e)(2). Rule .0105 (e)(2) of this Section.</u>
02T .0120(c)	<u>Permits for renewing facilities shall not be granted if the Applicant or any affiliation has not paid an annual fee in accordance with Rule .0105(e)(2). Rule .0105(e)(2) of this Section.</u>
02T .0203(a)(1)(B)	<u>The wastewater does not contain any human waste. Waste; and waste; and</u>
02T .0302(a)(6)	<u>"Pressure sewer system" means an interdependent system of grinder pump stations, typically for residences, serving individual wastewater connections for single buildings that share a common and typically a small diameter pressure pipe (1.5 inches through 6 inches). Duplex or greater pump stations connected to a common pressure pipe that can operate both independently and simultaneously with other pump stations while maintaining operation of the system within the operating constraints are not considered shall be exclude excluded from the definition of a pressure sewer system.</u>
02T .0303(a)(1)	<u>A building sewer documented by the local building inspector to be in compliance with the North Carolina State Plumbing Code, which Code and that serves a single building with the sole purpose of conveying wastewater from that building into a gravity sewer that extends onto or is adjacent to the building's property. A building sewer that contribute more than five percent of the existing wastewater treatment facility's design capacity or 50,000 gallons per day of flow as calculated using the wastewater design flow rates in Rule .0114 of this Subchapter shall not commence operations until after it receives approval form from the regional office.</u>
02T .0504(b)	<u>Soils report. Report. A soil evaluation of the disposal site shall be provided to the Division by the Applicant applicant in a report that includes the following. If required by G.S. 89F, a soil scientist shall prepare this evaluation: [Note: The North Carolina Board for Licensing of Soil Scientists has determined, via letter dated December 1, 2005, that preparation of soils reports pursuant to this Paragraph constitutes practicing soil science under G.S. 89F.]</u>

Rule	Revised Language												
02T .0506(b)	<p>The setbacks for treatment and storage units shall be as follows:</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;"></td> <td style="text-align: right; vertical-align: bottom;">(feet)</td> </tr> <tr> <td>Any habitable residence or place of public assembly under separate ownership or not to be maintained as part of the project site</td> <td style="text-align: right; vertical-align: bottom;">100</td> </tr> <tr> <td>Any private or public water supply source</td> <td style="text-align: right; vertical-align: bottom;">100</td> </tr> <tr> <td>Surface waters (streams – intermittent and perennial, perennial waterbodies, and wetlands)</td> <td style="text-align: right; vertical-align: bottom;">50</td> </tr> <tr> <td>Any well with exception of monitoring wells</td> <td style="text-align: right; vertical-align: bottom;">100</td> </tr> <tr> <td>Any property line</td> <td style="text-align: right; vertical-align: bottom;">50</td> </tr> </table>		(feet)	Any habitable residence or place of public assembly under separate ownership or not to be maintained as part of the project site	100	Any private or public water supply source	100	Surface waters (streams – intermittent and perennial, perennial waterbodies, and wetlands)	50	Any well with exception of monitoring wells	100	Any property line	50
	(feet)												
Any habitable residence or place of public assembly under separate ownership or not to be maintained as part of the project site	100												
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Surface waters (streams – intermittent and perennial, perennial waterbodies, and wetlands)	50												
Any well with exception of monitoring wells	100												
Any property line	50												
02T .0506(f)	<p><u>Habitable residences or places of public assembly under separate ownership constructed after the non-discharge facilities were originally permitted or subsequently modified, are exempt from the setback requirements in Paragraphs (a) and (b) of this Rule.</u></p>												
02T .0507(e)	<p><u>Vehicles Automobiles and heavy machinery shall not be allowed on the irrigation area, except during installation or maintenance activities.</u></p>												
02T .0604(b)	<p>Soils report. Report. A soil evaluation of the disposal site shall be provided to the Division by the <u>Applicant applicant</u> in a report that includes the following. If required by G.S. 89F, a soil scientist shall prepare this evaluation:</p> <p>[Note: The North Carolina Board for Licensing of Soil Scientists has determined, via letter dated December 1, 2005, that preparation of soils reports pursuant to this Paragraph constitutes practicing soil science under G.S. 89F.]</p>												
02T .0604(d)(3)	<p>setbacks as required by Rule .0606 of this Subchapter; Section; and</p>												
02T .0606(a)	<p>The setbacks for irrigation Irrigation sites shall be as follows:</p>												
02T .0606(e)	<p><u>Habitable residences or places of public assembly under separate ownership constructed after the non-discharge facilities were originally permitted or subsequently modified, are exempt from the setback requirements in Paragraphs (a) and (b) of this Rule.</u></p>												
02T .0608(d)	<p><u>Vehicles Automobiles and heavy machinery shall not be allowed on the irrigation area, except during installation or maintenance activities.</u></p>												
02T .0702	<p>A sAs used in this Section, "High-rate infiltration" shall <u>mean any application rate that exceeds 1.75 inches of wastewater effluent per week or 0.156 gallons per day per square foot of land, mean:</u></p>												
02T .0704(b)	<p>Soils report. Report. A soil evaluation of the disposal site shall be provided to the Division by the <u>Applicant applicant</u> in a report that includes the following. If required by G.S. 89F, a soil scientist shall prepare this evaluation:</p> <p>[Note: The North Carolina Board for Licensing of Soil Scientists has determined, via letter dated December 1, 2005, that preparation of soils reports pursuant to this Paragraph constitutes practicing soil science under G.S. 89F.]</p>												

Rule	Revised Language
02T .0705(x)	Facilities with an average daily flow greater than 10,000 GPD shall be provided with a flow meter to measure <u>the volume of treated wastewater applied to each infiltration site.</u>
02T .0706(a)	The setbacks for infiltration sites <u>Infiltration Units</u> shall be as follows:
02T .0706(g)	<u>Habitable residences or places of public assembly under separate ownership constructed after the non-discharge facilities were originally permitted or subsequently modified, are exempt from the setback requirements in Paragraphs (a) and (d) of this Rule.</u>
02T .0707(e)	<u>Vehicles Automobiles</u> and heavy machinery shall not be allowed on the infiltration area, except during <u>installation or maintenance activities.</u>
02T .0806	Setbacks shall be the same as those listed in 15A NCAC 02T .0506, except infiltration basins; which shall meet the setbacks listed in 15A NCAC 02T .0706. .0706 for infiltration units.
02T .1101(3)	ash that is regulated in accordance with Section .1200; Section .1200 <u>Section .1200 of this Subchapter;</u>
02T .1104(a)(2)	<u>[Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via letter dated December 1, 2005, December 1, 2005, that preparation of engineering design documents pursuant to this Paragraph constitutes practicing engineering pursuant to G.S. 89C.]</u>
02T .1104(c)(2)	Soils report. Report. A soil evaluation of the land application site shall be provided to the Division by the <u>Applicant applicant.</u> This evaluation shall be presented in a report that includes the following. If required by G.S. 89F, a soil scientist shall prepare this evaluation: [Note: The North Carolina Board for Licensing of Soil Scientists has determined, via letter dated December 1, 2005, that preparation of soils reports pursuant to this Paragraph constitutes practicing soil science under G.S. 89F.]
02T .1104(d)(3)	Soils report. Report. A soil evaluation of the land application site shall be provided. This evaluation shall be presented to the Division by the <u>Applicant applicant</u> in a report that includes the following. If required by G.S. 89F, a soil scientist shall prepare this evaluation: [Note: The North Carolina Board for Licensing of Soil Scientists has determined, via letter dated December 1, 2005, that preparation of soils reports pursuant to this Paragraph constitutes practicing soil science under G.S. 89F.]
02T .1104(e)(3)	Soils report. Report. A soil evaluation of the surface disposal unit site shall be provided to the Division by the <u>Applicant applicant</u> in a report that includes the following. If required by G.S. 89F, a soil scientist shall prepare this evaluation: [Note: The North Carolina Board for Licensing of Soil Scientists has determined, via letter dated December 1, 2005, that preparation of soils reports pursuant to this Paragraph constitutes practicing soil science under G.S. 89F.]
02T .1105(b)(1)(B)	<u>for land on which land application events of residuals has not occurred or for which the data required in Rule .1105(b) Paragraph (b) of this Rule is incomplete, by determining background concentrations through representative soil sampling.</u>

Rule	Revised Language
02T .1108(a)	<p>For residuals treatment and storage facilities, the following minimum setbacks <u>in feet (i.e., in feet)</u> shall be <u>as follows: adhered to:</u></p> <p><u>Any habitable residence</u> Habitable residences or <u>place places</u> of <u>public</u> assembly under separate ownership or not to be maintained as part of the project site 100 <u>Any private</u> Private or public water supply <u>source sources</u> 100 Surface waters (streams – intermittent and perennial, <u>lakes,</u> perennial waterbodies, and wetlands) 50 <u>Any well</u> Wells with exception of <u>to</u> monitoring wells 100 <u>Any property line</u> Property lines 50</p>
02T .1108(d)	<p>For the construction and operation of surface disposal units, the following minimum setbacks <u>in feet (i.e., in feet)</u> shall be <u>as follows: adhered to:</u></p> <p><u>Any habitable residence</u> Habitable residences or <u>place places</u> of <u>public</u> assembly under separate ownership or not to be maintained as part of the project site 400 <u>Any property line</u> Property lines 50 Public <u>right</u> rights of way 50 <u>Any private</u> Private or public water supply <u>source sources</u> 100 Surface waters (streams - intermittent and perennial, perennial waterbodies, and wetlands) 100 Surface water diversions (ephemeral streams, waterways, ditches) 25 Groundwater lowering ditches (where the bottom of the ditch intersects the SHWT) 100 Subsurface groundwater lowering drainage systems 100 <u>Any well</u> Wells with exception of <u>to</u> monitoring wells 100 <u>Any water line</u> Water lines 10 <u>Swimming pools</u> 400</p>
02T .1108(g)	<p><u>Habitable residences or places of public assembly under separate ownership constructed after the non-discharge facilities were originally permitted or subsequently modified, are exempt from the setback requirements in Paragraphs (a) and (d) of this Rule.</u></p>
02T .1203(b)	<p>Unless otherwise specified in <u>Rule .1203(a) of this Section, Paragraph (a) of this Rule,</u> CCPs that are used for the activities deemed permitted in this Rule are not subject to the pollutant limits in Rule .1205 of this Section.</p>
02T .1208	<p><u>(a)</u> An Operation and Maintenance Plan shall be maintained for all CCPs management programs. The plan shall:</p> <ol style="list-style-type: none"> (1) describe the operation of the program and any associated wastewater treatment systems and equipment in sufficient detail to show what operations are necessary for the program to function and by whom the functions are to be conducted; (2) describe anticipated maintenance of wastewater treatment systems and equipment that are associated with the program; (3) include provisions for safety measures <u>measures</u>, including restriction of access to the site and equipment, as appropriate; (4) include spill control provisions <u>provisions</u>, including: <ol style="list-style-type: none"> (a) response to spills <u>spills</u>, including control, containment, and remediation <u>remediation</u>; and (b) contact information for program personnel, emergency responders, and regulatory agencies; <u>agencies;</u> and (5) describe the sampling and analysis protocol used to ensure that the program complies with this Section and any <u>all</u> issued permits.

Rule	Revised Language
02T .1302	The definitions used for the purpose of this Section shall be as defined in G.S. 143-215.10B, <u>in Rule .0103 of this Subchapter, of in Rule .1102 in this Subchapter,</u> and as follows:
02T .1303(a)(2)	Poultry operations which use a dry litter system with more than 30,000 birds and that do not meet the criteria specified in Rule .1305 of this Subchapter <u>Section</u> if:
02T .1304(a)	This rule applies to animal waste management systems that meet the definition of an animal operation in G.S. 143-215.10B but are not subject to regulation under Rule .1305- <u>Rule .1305 of this Section.</u>
02T .1305(c)(5)	<u>Notwithstanding Subparagraph (c)(2) of this Section, of this Rule</u> land application of waste shall be no closer than 100 feet from a well and no closer than 200 feet from a dwelling not owned by the waste generator.

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15A NCAC 02U .0103 (4)

Proposed Language for Readoption

~~“Dedicated system” means a system where the reclaimed water utilization is necessary to meet the wastewater disposal needs of the facility and where other wastewater utilization or disposal methods to accommodate the entire wastewater flow generated at the facility are not available.~~

Public Comments

1. “As drafted, the definition of dedicated system is both ambiguous and likely unnecessarily restrictive. By specifying that these systems exist only where “reclaimed water utilization is necessary” and other wastewater utilization or disposal methods “are not available” the Department is limiting voluntary use of reclaimed water. This is contrary to public policy. If anything, water reclamation should be encouraged. Accordingly, the definition should be revised as follows (proposed deletions in strikeout and new language underlined): ““Dedicated system” means a system where ~~the~~ reclaimed water utilization is utilized necessary to meet the wastewater disposal needs of the facility or to support community water reuse goals and ~~where other wastewater utilization or disposal methods to accommodate the entire wastewater flow generated at the facility are not available.~~”” – F. Paul Calamita, North Carolina Water Quality Association

Hearing Officer Response

1. The 02U Reclaimed Water rules allow for two types of utilization systems: conjunctive and dedicated. A conjunctive system is the voluntary use of reclaimed water on an as-needed basis, and there is a permitted disposal option (e.g., NPDES, non-discharge, etc.) for all the generated effluent in the event the conjunctive use is not utilized. A dedicated system is when there is no alternative disposal option, and all generated reclaimed water must be disposed on a non-discharge permitted site. Therefore, having both conjunctive and dedicated options does not make the program restrictive, and encourages the public policy of promoting reclaimed water, especially through the conjunctive system program.

Revised Language for Readoption

No revisions to the proposed language for readoption have been made.

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15A NCAC 02U .0109

Proposed Language for Readoption

Requests for permit renewals shall be submitted to the Director at least 180 days prior to expiration unless the permit has been revoked by the Director in accordance with Rule .0110 of this Section or a request has been made to rescind the permit. Renewal requests shall be made in accordance with Rule .0105 and Rule .0106 of this Section.

Public Comments

1. "This section requires that permit renewal applications be submitted at least 180 days prior to the expiration of the permit. As explained above, federal regulations allow the permitting authority to grant permission to apply at a later date although applications may not be submitted later than the expiration date of the existing permit. *See* 40 C.F.R. § 122.21(d). DWR should reserve the discretion to extend the renewal application deadline if circumstances warrant it. Accordingly, NCWQA suggests that the first sentence of this section be amended as follows:

Permit renewal requests shall be submitted to the Director at least 180 days prior to expiration unless the permit has been revoked by the Director in accordance with Rule .0110, or a request has been made to rescind the permit, or the Director extends such deadline, but in no case later than the expiration date of the existing permit." – F. Paul Calamita, North Carolina Water Quality Association

Hearing Officer Response

1. Facilities permitted pursuant to Subchapter 02U are done so through a state permitting program that is independent of federal regulations.

Revised Language for Readoption

No revisions to the proposed language for readoption have been made.

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15A NCAC 02U .0113(a)

Proposed Language for Readoption

The following utilizations of reclaimed water ~~and closed-loop recycle activities are~~ **shall be** deemed to be permitted pursuant to ~~G.S. 143-215.1(b)~~ **G.S. 143-215.1(b)**, and it is not necessary for the Division to issue individual permits or coverage under a general permit for construction or operation of the following utilization systems provided the system does not result in any violations of surface water or groundwater standards, there is no unpermitted direct discharge to surface waters, and all criteria required for the specific system ~~is~~ **are** met:

Public Comments

1. "In specifying conditions applicable to permitted uses by regulation, .0113(a) states that such uses cannot result in violations of water quality standards or result in unpermitted discharges. These requirements are redundant. It is a violation for an unpermitted discharge to reach surface waters. That is enough liability. A party should not be in violation of duplicative requirements if the unpermitted discharge also violates water quality standards, although any alleged water quality standards exceedance could in any event be a consideration in the nature or level of any penalty. Whether the discharge meets standards or not is legally unimportant as the discharge to surface waters itself is in any event a violation. Accordingly, the following phrase should be stricken from the section: "the system does not result in any violations of surface water or groundwater standards.'" – F. Paul Calamita, North Carolina Water Quality Association

Hearing Officer Response

1. "Unpermitted discharges" and "violations of water quality standards" are two separate matters pertaining to the same event. An unpermitted discharge may or may not result in the violation of water quality standards depending upon the quality of water discharged. Accordingly, "the system does not result in any violations of surface water or groundwater standards" should remain in the proposed rule as it helps to define the severity of the unpermitted discharge.

Revised Language for Readoption

No revisions to the proposed language for readoption have been made.

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15A NCAC 02U .0113(a)(4)

Proposed Language for Readoption

Incidental discharge to a municipal separate storm sewer system (MS4) that occurs as a result of reclaimed water utilization activities provided ~~the use~~ such activity is approved in a reclaimed water utilization permit issued by the Division, and the discharge does not violate water quality standards. This does not exempt the reclaimed water user from complying with any applicable local ordinances that may prohibit such discharges;

Public Comments

1. “Incidental discharge is not defined. Does incidental discharge to MS4 include reclaimed water blow-off releases?”
– Cory Larsen, PE, Wake County Environmental Services

Hearing Officer Response

1. Incidental discharge of reclaimed water blow-off releases to a municipal separate storm sewer system (MS4) are deemed permitted if the blow-off releases are an approved activity in an individual reclaimed water utilization permit. Otherwise, pursuant to 15A NCCA 02U .0113(6), flushing and hydrostatic testing water discharges associated with reclaimed water distribution systems are deemed permitted provided no water quality standards are violated.

Revised Language for Readoption

No revisions to the proposed language for readoption have been made.

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15A NCAC 02U .0113(a)(10)

Proposed Language for Readoption

Drip irrigation sites supplied with reclaimed water as part of a conjunctive ~~use~~ reclaimed water system generated from an onsite wastewater treatment facility meeting the criteria of this Subchapter and ~~where~~ the conjunctive system has been approved by the Department and is permitted under 18A .1900;

Public Comments

1. "Change needed, since we are not in the same Department. For example, Change "approved the the Department" to "approved by the Department of Health and Human Services"" – Steven Berkowitz, PE, On-Site Water Protection Branch, NC Department of Health and Human Services

Hearing Officer Response

1. Thank you for providing this clarification. The proposed rule should be revised.

Revised Language for Readoption

Drip irrigation sites supplied with reclaimed water as part of a conjunctive ~~use~~ reclaimed water system generated from an onsite wastewater treatment facility meeting the criteria of this Subchapter and ~~where~~ the conjunctive system has been approved by the Department **of Health and Human Services** and is permitted under 18A .1900;

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15A NCAC 02U .0113(a)(11)

Proposed Language for Readoption

Toilet and urinal flushing systems supplied by reclaimed water as part of a conjunctive reclaimed water system meeting the applicable requirements of Rules .0301, .0401, .0403, .0501, and .0701 of this Subchapter; Chapter 89G of the General Statutes; approved by the local building inspection department; and installed by a North Carolina Licensed Plumbing Contractor pursuant to G.S. 89;

Public Comments

1. “Strongly support inclusion of toilet and urinal flushing as deemed permitted uses of reclaimed water. Recommend some clarification that this use is not limited to conjunctive systems – it could still be permitted on a dedicated residential system provided that met applicable 02U, G.S. and building/plumbing code requirements, correct?” – Cory Larsen, PE, Wake County Environmental Services

Hearing Officer Response

1. Thank you for your support of including toilet and urinal flushing as a deemed permitted use of reclaimed water. It is the intent of the rule to only limit this deemed permitted use to conjunctive systems. Dedicated systems require an individual permit because the “reclaimed water utilization is necessary to meet the wastewater disposal needs of the facility and where other wastewater utilization or disposal methods to accommodate the entire wastewater flow generated at the facility are not available.”

Revised Language for Readoption

No revisions to the proposed language for readoption have been made.

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15A NCAC 02U .0201(d)

Proposed Language for Readoption

Site plans. If required by G.S. 89C, a professional land surveyor shall provide location information on boundaries and physical features not under the purview of other licensed professions. The ~~Applicant~~ ~~applicant~~ shall provide site plans or maps for treatment and storage facilities and where the reclaimed water is applied to the land surface or otherwise used in a ground absorption manner, except where reclaimed water is utilized for irrigation to single-family residential lots, showing the location, orientation and relationship of facility components including:

- (1) a scaled map of the site showing all facility-related structures and fences within 500 feet of the treatment, storage, and utilization areas;
- (2) for land application sites and other ground absorption uses, the site map shall include topography; ~~and~~
- (3) to the extent needed to determine compliance with setbacks, the location of all features included in Rule .0701 of this ~~Subchapter. Subchapter; and~~
- (4) setbacks as required by Rule .0701 of this Subchapter and delineation of the review and compliance boundaries.

[Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via letter dated December 1, 2005, that locating boundaries and physical features, not under the purview of other licensed professions, on maps pursuant to this Paragraph constitutes practicing surveying ~~under~~ pursuant to G.S. 89C.]

Public Comments

1. ““with topographic contour intervals not exceeding 10 feet or 25 percent of total site relief” is not included in 02U .0201, and probably was intended to be?” – Steven Berkowitz, PE, On-Site Water Protection Branch, NC Department of Health and Human Services
2. ““site property boundaries win 500 feet’ is not included in 02U .0201” – Steven Berkowitz, PE, On-Site Water Protection Branch, NC Department of Health and Human Services

Hearing Officer Response

1. Thank you for noticing this oversight. The language to be deleted from 15A NCAC 02U .0202(d)(1) should be moved to 15A NCAC 02U .0201(d)(1).
2. Thank you for noticing this oversight. The language to be deleted from 15A NCAC 02U .0202(d)(4) should be moved to 15A NCAC 02U .0201(d)(5).

Revised Language for Readoption

Site plans. If required by G.S. 89C, a professional land surveyor shall provide location information on boundaries and physical features not under the purview of other licensed professions. The ~~Applicant~~ ~~applicant~~ shall provide site plans or maps for treatment and storage facilities and where the reclaimed water is applied to the land surface or otherwise used in a ground absorption manner, except where reclaimed water is utilized for irrigation to single-family residential lots, showing the location, orientation and relationship of facility components including:

- (1) a scaled map of the ~~site site, with topographic contour intervals not exceeding 10 feet or 25 percent of total site relief and~~ showing all facility-related structures and fences within ~~500 feet of~~ the treatment, storage, and utilization ~~areas; areas, soil mapping units shown on all utilization sites;~~
- (2) for land application sites and other ground absorption uses, the site map shall include topography; ~~and~~
- (3) to the extent needed to determine compliance with setbacks, the location of all features included in Rule .0701 of this ~~Subchapter. Subchapter;~~
- (4) ~~setbacks as required by Rule .0701 of this Subchapter and delineation of the review and compliance boundaries; and~~
- (5) ~~site property boundaries within 500 feet of all waste treatment, storage, and utilization sites.~~

[Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via letter dated December 1, 2005, that locating boundaries and physical features, not under the purview of other licensed professions, on maps pursuant to this Paragraph constitutes practicing surveying ~~under~~ ~~pursuant to~~ G.S. 89C.]

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15A NCAC 02U .0202(c)

Proposed Language for Readoption

Hydrogeologic report. A hydrogeologic description of the subsurface, prepared by a Licensed Geologist, Licensed Soil Scientist, or Professional Engineer if required by Chapters 89E, 89F, or ~~89C89C, respectively~~ respectively, ~~of the subsurface to a depth of 20 feet or bedrock, whichever is less,~~ shall be provided to the Division by the Applicant ~~applicant~~ for ~~systems treating industrial waste and any system reclaimed water land application sites~~ with a design flow ~~of~~ over 25,000 gallons per day. ~~Industrial facilities generating less than 25,000 gallons per day of wastewater, and can demonstrate that the effluent will be of quality similar to domestic wastewater, including effluent requirements established in 15A NCAC 02U .0301(b), shall, upon request, be exempted from this requirement. A greater depth of investigation is required if the respective depth is used in predictive calculations. This evaluation shall be based on borings for which the numbers, locations, and depths are sufficient to define the components of the hydrogeologic evaluation. In addition to borings, other techniques may be used to investigate the subsurface conditions at the site. These techniques may include geophysical well logs, surface geophysical surveys, and tracer studies.~~ This evaluation shall be presented in a report that includes a mounding analysis to predict the level of the seasonal high water table after reclaimed water application, if the seasonal high water table is within six feet of the surface. The report shall also consider ~~that includes~~ the following components:

- (1) ~~a description of~~ the regional and local geology and hydrogeology based on research of literature for the area;
- (2) ~~a description, based on~~ field observations of the site, ~~of the site~~ topographic setting, streams, springs and other groundwater discharge features, drainage features, existing and abandoned wells, rock outcrops, and other features that may affect the movement of the reclaimed water; contaminant plume and treated wastewater;
- (3) changes in the lithology underlying the site;
- (4) the depth to bedrock and the occurrence of any rock outcrops;
- (5) the hydraulic conductivity and transmissivity of the affected aquifer(s); aquifer;
- (6) the depth to the seasonal high water table;
- (7) ~~a discussion of the~~ relationship between the affected aquifers of the site to local and regional geologic and hydrogeologic features; and
- (8) ~~a discussion of the~~ groundwater flow regime of the site prior to the operation of the proposed facility and the post operation of the proposed facility focusing on the relationship of the system to groundwater receptors, groundwater discharge features, and groundwater flow media; and media.
- ~~(9) —if the SHWT is within six feet of the surface, a mounding analysis to predict the level of the SHWT after wastewater reclaimed water application.~~

[Note: The North Carolina Board for Licensing of Geologists, via letter dated April 6, 2006, North Carolina Board for Licensing of Soil Scientists, via letter dated December 1, 2005, and North Carolina Board of Examiners for Engineers and Surveyors, via letter dated December 1, 2005, have determined that preparation of hydrogeologic description documents pursuant to this Paragraph constitutes practicing geology under pursuant to G.S. 89E, soil science under pursuant to G.S. 89F, or engineering under pursuant to G.S. 89C.]

Public Comments

1. “As referenced in the remainder of this paragraph, and to be consistent with other comparable rules, deletion of "systems treating industrial waste and any system" appears to be un-intentional.” – Steven Berkowitz, PE, On-Site Water Protection Branch, NC Department of Health and Human Services

Hearing Officer Response

1. The deletion of "systems treating industrial waste" is inherently covered under the "reclaimed water land application sites with a design flow over 25,000 gallons per day.", which would include all types of wastewater (i.e., domestic, commercial, industrial, etc.).

Revised Language for Readoption

No revisions to the proposed language for readoption have been made.

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15A NCAC 02U .0301(a)

Proposed Language for Readoption

Reclaimed water treatment processes classified as Type 2 by the rules in this Subchapter shall produce an effluent quality a tertiary quality effluent (filtered or equivalent) prior to storage, distribution, or utilization that meets the parameter limits listed below:

- (1) monthly average BOD₅ of less than or equal to 5 ~~mg/l~~ mg/L and a daily maximum BOD₅ of less than or equal to 10 ~~mg/l~~ mg/L;
- (2) monthly average TSS of less than or equal to 5 ~~mg/l~~ mg/L and a daily maximum TSS of less than or equal to 10 ~~mg/l~~ mg/L;
- (3) monthly average ~~NH₃~~ NH₃-N of less than or equal to 1 ~~mg/l~~ mg/L and a daily maximum ~~NH₃~~ NH₃-N of less than or equal to 2 ~~mg/l~~ mg/L;
- (4) monthly geometric mean Escherichia coli (E. coli) or fecal coliform level of less than or equal to 3/100 ~~ml~~ mL and a daily maximum E. coli or fecal coliform level of less than or equal to 25/100 ~~ml~~ mL;
- (5) monthly geometric mean Coliphage level of less than or equal to 5/100 ~~ml~~ mL and a daily maximum Coliphage level of less than or equal to 25/100 ~~ml~~ mL;
- (6) monthly geometric mean Clostridium perfringens level of less than or equal to 5/100 ~~ml~~ mL and a daily maximum Clostridium perfringens level of less than or equal to 25/100 ~~ml~~ mL; and
- (7) maximum Turbidity of 5 Nephelometric Turbidity Units (NTUs).

Public Comments

1. "Recommend that term "tertiary" remain in reclaimed water effluent standards as final polishing/filtration is commonplace in reclaimed water facilities and necessary to consistently achieve reclaimed water effluent limits."
– Cory Larsen, PE, Wake County Environmental Services

Hearing Officer Response

1. In order to be classified as Type 2 reclaimed water, the effluent shall meet the standards required in 15A NCAC 02U .0301(a) regardless of the term "tertiary."

Revised Language for Readoption

No revisions to the proposed language for readoption have been made.

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15A NCAC 02U .0301(b)

Proposed Language for Readoption

Reclaimed water treatment processes classified as Type 1 by the rules in this Subchapter shall produce an effluent quality a tertiary quality effluent (filtered or equivalent) prior to storage, distribution, or utilization that meets the parameter limits listed below:

- (1) monthly average BOD₅ of less than or equal to 10 ~~mg/l~~ mg/L and a daily maximum BOD₅ of less than or equal to 15 ~~mg/l~~ mg/L;
- (2) monthly average TSS of less than or equal to 5 ~~mg/l~~ mg/L and a daily maximum TSS of less than or equal to 10 ~~mg/l~~ mg/L;
- (3) monthly average ~~NH₃~~ NH₃-N of less than or equal to 4 ~~mg/l~~ mg/L and a daily maximum ~~NH₃~~ NH₃-N of less than or equal to 6 ~~mg/l~~ mg/L;
- (4) monthly geometric mean E. coli or fecal coliform level of less than or equal to 14/100 ~~ml~~ mL and a daily maximum E. coli or fecal coliform level of less than or equal to 25/100 ~~ml~~ mL; and
- (5) maximum Turbidity of 10 NTUs.

Public Comments

1. "Recommend that term "tertiary" remain in reclaimed water effluent standards as final polishing/filtration is commonplace in reclaimed water facilities and necessary to consistently achieve reclaimed water effluent limits."
– Cory Larsen, PE, Wake County Environmental Services

Hearing Officer Response

1. In order to be classified as Type 1 reclaimed water, the effluent shall meet the standards required in 15A NCAC 02U .0301(b) regardless of the term "tertiary."

Revised Language for Readoption

No revisions to the proposed language for readoption have been made.

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15A NCAC 02U .0401(d)

Proposed Language for Readoption

An automatically activated standby power source or other means to prevent improperly treated wastewater from entering the storage, distribution or utilization system shall be provided.

Public Comments

1. "For SFR reuse the requirement for automatically activated standby power should not be waived for systems on municipal or community water. If the house is served by a private well and the home has backup generator then the wastewater treatment system but also be powered by the generator or another dedicated power supply." – Cory Larsen, PE, Wake County Environmental Services

Hearing Officer Response

1. The proposed language in 15A NCAC 02T .0601 states that "One building single-family residences generating and utilizing reclaimed water shall meet requirements established in 15A NCAC 02U." Accordingly, there is no proposed language to exempt single-family residence reclaimed water systems from the requirements in 15A NCAC 02U .0401(d), unless approved by the Director pursuant to the requirements in 15A NCAC 02T .0105(n).

Revised Language for Readoption

No revisions to the proposed language for readoption have been made.

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15A NCAC 02U .0401(h)

Proposed Language for Readoption

All open-atmosphere treatment lagoons and ponds, and open-atmosphere storage units shall have at least two feet of freeboard.

Public Comments

1. “While it may be appropriate in most cases to require at least two feet of freeboard on open-atmosphere treatment lagoons and ponds, there may be instances where it is unnecessary. Accordingly, .0401(h) should be revised to provide the Division with the discretion to approve a lesser freeboard requirement.” – F. Paul Calamita, North Carolina Water Quality Association

Hearing Officer Response

1. 15A NCAC 02T .0105(n) allows the Director to approve alternative Design Criteria in cases where the Applicant demonstrates that the alternative provides (1) equal or better treatment of waste; (2) equal or better protection of the waters of the state; and (3) no increased potential for nuisance conditions from noise, odor, or vermin. Accordingly, no revision to 15A NCAC 02U .0401(h) is necessary.

Revised Language for Readoption

No revisions to the proposed language for readoption have been made.

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15A NCAC 02U .0402(e)

Proposed Language for Readoption

~~There shall be no public access to the wastewater treatment facility or the five-day side-stream detention pond. unit. The five-day side-stream detention pond shall have either a liner of natural material at least one foot in thickness and having a hydraulic conductivity of no greater than 1×10^{-6} centimeters per second when compacted, or a synthetic liner of sufficient thickness to exhibit structural integrity and an effective hydraulic conductivity no greater than that required of the natural material liner. Liner requirements of the five-day side-stream detention pond or separation distances between the bottom of the five-day side-stream detention pond and the groundwater table may be reduced if it can be demonstrated by predictive calculations or modeling methods that satisfy the Director, that construction and use of the five-day side-stream detention pond will not result in contravention of assigned groundwater standards at the compliance boundary.~~

Public Comments

1. By virtue of the “there shall be no public access...” wording, both .0402(e) and .0404(b)(1) could be read as improper and contrary to North Carolina law by imposing strict liability if a person from the public gained unlawful access to a facility (e.g., by ignoring warning signs or by scaling a fence). To prevent this unfair liability, NCWQA proposes revising these sections to require that “reasonable measures be taken to restrict public access at all times.”
– F. Paul Calamita, North Carolina Water Quality Association

Hearing Officer Response

1. It is agreed that the wording “there shall be no public access...” is not appropriate for the proposed rule, and should be changed to “the public shall be prohibited access...”

Revised Language for Readoption

~~The There shall be no public shall be prohibited access to the wastewater treatment facility or the five-day side-stream detention pond. unit. ~~The five-day side-stream detention pond shall have either a liner of natural material at least one foot in thickness and having a hydraulic conductivity of no greater than 1×10^{-6} centimeters per second when compacted, or a synthetic liner of sufficient thickness to exhibit structural integrity and an effective hydraulic conductivity no greater than that required of the natural material liner. Liner requirements of the five-day side-stream detention pond or separation distances between the bottom of the five-day side-stream detention pond and the groundwater table may be reduced if it can be demonstrated by predictive calculations or modeling methods that satisfy the Director, that construction and use of the five-day side-stream detention pond will not result in contravention of assigned groundwater standards at the compliance boundary.~~~~

15A NCAC 02U .0402(m)

Proposed Language for Readoption

Domestic, commercial, or industrial dedicated reclaimed water systems, including single-family residence facilities, with flow less than 1,000 gallons per day (gpd), are exempt from meeting Paragraphs (c) and (h) of this Rule, if repair or replacement of essential treatment units can be completed within five days.

Public Comments

1. "Support proposed rule change to exempt small reuse systems from duality and multiple pump design criteria. However, a method to certify that repair or replacement of essential treatment units within 5 days should be required. Recommend signed statement from engineer, installer, and permittee or executed contract with installer attesting to replacement within 5 days to allow this exemption." – Cory Larsen, PE, Wake County Environmental Services

Hearing Officer Response

1. It is agreed that the Permittee, Professional Engineer, or installer should provide a certification that repair or replacement of essential treatment units can be completed within five days. However, this certification would be best suited as an application requirement, and is covered under 15A NCAC 02U .0116.

Revised Language for Readoption

No revisions to the proposed language for readoption have been made.

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15A NCAC 02U .0403(h)

Proposed Language for Readoption

Reclaimed water distribution lines shall be located ~~10~~ at least 2 feet horizontally from and 18 inches below any water line ~~where if~~ practicable. ~~Where If~~ these separation distances cannot be met, the piping and integrity testing procedures shall meet water main standards in accordance with 15A NCAC 18C.

Public Comments

1. "This reduction in horizontal setback does not appear sufficiently protective, and likely to result in an increased potential for inadvertent cross connections. Nor does it appear consistent with 15A NCAC 18C .0906 requirements. Reduction from 10 to 5 feet for reclaimed water lines would be considered more appropriate (retaining the alternative for reduced setbacks pursuant to Rule .0906, but only when the greater horizontal setback is not "practicable")." – Steven Berkowitz, PE, On-Site Water Protection Branch, NC Department of Health and Human Services

Hearing Officer Response

1. It is recommended to change the proposed setback from 2 feet to 5 feet in order to match the requirements established in 15A NCAC 18C .0906.

Revised Language for Readoption

Reclaimed water distribution lines shall be located ~~10~~ at least 5 feet horizontally from and 18 inches below any water line ~~where if~~ practicable. ~~Where If~~ these separation distances cannot be met, the piping and integrity testing procedures shall meet water main standards in accordance with 15A NCAC 18C.

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15A NCAC 02U .0404(b)(1)

Proposed Language for Readoption

There shall be no public access to the wastewater treatment equipment, wastewater storage structures, or to the wastewater within a closed-loop recycle facility.

Public Comments

1. By virtue of the “there shall be no public access...” wording, both .0402(e) and .0404(b)(1) could be read as improper and contrary to North Carolina law by imposing strict liability if a person from the public gained unlawful access to a facility (e.g., by ignoring warning signs or by scaling a fence). To prevent this unfair liability, NCWQA proposes revising these sections to require that “reasonable measures be taken to restrict public access at all times.”
– F. Paul Calamita, North Carolina Water Quality Association

Hearing Officer Response

1. It is agreed that the wording “there shall be no public access...” is not appropriate for the proposed rule, and should be changed to “the public shall be prohibited access...”

Revised Language for Readoption

The ~~There shall be no~~ public ~~shall be prohibited~~ access to the wastewater treatment equipment, wastewater storage structures, or to the wastewater within a closed-loop recycle facility.

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15A NCAC 02U .0501(e)

Proposed Language for Readoption

~~Reclaimed water shall not be used for direct reuse as a raw potable water supply.~~

Public Comments

1. "Prohibition of direct reuse in potable water supply should remain. At minimum, amend the statement with, "unless approved by the Department under [PWS rule section]." – Cory Larsen, PE, Wake County Environmental Services

Hearing Officer Response

1. The proposed rule change is in response to [G.S. 143-355.5\(a2\)](#), which states that "an approved wastewater reuse program can provide water for the beneficial purpose of supplementing the water supply source for potable water in a way that is both environmentally acceptable and protective of public health." It should also be noted that 15A NCAC 02U .0501 still states that "reclaimed water is not intended for drinking." This language is protective of public health, and still allows for the proper regulatory agency to approve the use of reclaimed water as a supplemental source as allowed in [G.S. 143-355.5\(a2\)](#).

Revised Language for Readoption

No revisions to the proposed language for readoption have been made.

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15A NCAC 02U .0701(h)

Proposed Language for Readoption

Setbacks to property lines established in Paragraph (b) of this Rule shall not be applicable when the Permittee, or the entity from which the Permittee is leasing, owns both parcels creating said property line.

Public Comments

1. “While it is important that setbacks be clearly defined, it is just as important that they serve their intended purpose of ensuring permitted activity is not conducted in problematic locations. For instance, typically, rules state the required setback between permitted activity and “any property line” to minimize impacts of permitted activity on adjacent parcels.⁴³ However, in the proposed rules, setbacks to property lines “shall not be applicable when the Permittee, or the entity from which the Permittee is leasing, owns both parcels creating said property line.”⁴⁴

At first blush, this may seem reasonable. If a permittee wishes to conduct permitted activity next to his own property, perhaps he should be allowed to assume the risk of impacting his own property by essentially waiving the protection otherwise afforded by a setback. However, this justification fails to consider the potential that the adjacent property is occupied by the permittee’s tenant. After all, the impacts of permitted activity can affect people, not just land.

According to the U.S. Census Bureau, between 2011 and 2015, only 65.1% of housing units in North Carolina were owner-occupied.⁴⁵ Yet, under the proposed rule, whether or not one owns his residence could directly impact the degree of protection afforded under the 02T and 02U rules. Not only does this unfairly burden tenants, it threatens to invite violations of well-established principles of landlord/tenant law. “North Carolina law provides that a lease, in the absence of a provision to the contrary, carries with it an implied covenant that the tenant will have the quiet and peaceable possession of the leased premises during the term of the lease.”⁴⁶ The EMC should not adopt rules that allow an absentee landlord to breach this implied covenant of quiet enjoyment by waiving setback requirements.

Of course, if a permittee does not lease the property adjacent to the parcel on which the permitted activity is conducted, this concern would be mitigated. We encourage the EMC to consider adding this caveat to prevent landlords from waiving protections or violating legal rights designed to benefit tenants. Alternatively, the EMC should consider removing this setback exception and analyzing on a case-by-case basis whether or not a variance from the setback would provide equal or better treatment of waste, equal or better protection of the waters of the state, and no increased potential for nuisance conditions from noise, odor, or vermin.⁴⁷ – American Rivers, Et. Al

2. “In order to inform and protect future owners if one of the adjoining parcels were to be sold separately in the future, there should be an easement created if the system crosses the property line, as allowed for under GS 39-6.4. We required this for off-site systems (system on separate lot from the house/facility lot).” – Steven Berkowitz, PE, On-Site Water Protection Branch, NC Department of Health and Human Services

Hearing Officer Response

1. The proposed rule language only exempts the Permittee from complying with property line setbacks when the Permittee owns or is leasing the parcels that create the property line. The Permittee is still responsible for ensuring that treatment and storage facilities maintain a 100 foot setback to any habitable residence or place of public assembly under separate ownership. As noted in existing rule language, there are no setback requirements for reclaimed water utilization to habitable residences or places of public assembly under separate ownership, or owned by the Permittee. Please note that it is proposed to amend the rule language to state that the proposed rule also applies to those setbacks established in Paragraph (a).

In addition, the Hearing Officers solicited comment from the North Carolina Department of Justice's Environmental Division. Special Deputy Attorney General Phillip T. Reynolds stated, "After reviewing the history of the rule and the supporting statutes, it seems to me that the proposed language...is simply an extension of the statutory mandate contained in N.C. Gen. Stat. § 143-215.1(i), which states in relevant part: "Multiple contiguous properties under common ownership and permitted for use as a disposal system shall be treated as a single property with regard to determination of a compliance boundary and setbacks to property lines." Because the authority to adopt the rule is predicated on the statute and because the statute clearly requires that "multiple continuous properties ... shall be treated as a single property," it does not appear that the principles of landlord/tenant law are relevant for the purposes of the specific rule."

2. The rationale in amending [G.S. 143-215.1\(i\)](#) and this proposed rule language was twofold. First, it was determined unreasonable to require Permittees to maintain setbacks to their own internal property lines because it created buffered spaces within their application area that could not be applied upon, even though they were suitable for the land application of treated wastes. Second, it was also determined to be a financial and regulatory impediment for Permittees to execute and record reciprocating setback waivers to themselves in order to apply within these artificially created buffered spaces. To the Division's knowledge, all of these instances have been for government (i.e., municipal, county, state, and federal) and industrial facilities. To require an easement be executed for each of these parcels reimposes the regulatory hurdle that is proposed to be removed in anticipation of the unlikely event that a government or industrial facility sells a portion of their land containing their permitted treatment and disposal system.

Revised Language for Readoption

Setbacks to property lines established in Paragraphs (a) and (b) of this Rule shall not be applicable when the Permittee, or the entity from which the Permittee is leasing, owns both parcels creating said property line.

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15A NCAC 02U .0801(b)

Proposed Language for Readoption

Irrigation areas shall have a year-round vegetative cover.

Public Comments

1. "There is no reason to have this requirement and, with the climate in North Carolina, bare ground at some point in the year may not be preventable (e.g., in the winter or extreme heat in the summer). Also, it is not clear what would constitute sufficient "vegetative cover." Accordingly, proposed .0801(b) should be deleted." – F. Paul Calamita, North Carolina Water Quality Association

Hearing Officer Response

1. The intent of this proposed rule language is to ensure that reclaimed water irrigation is being done "in a beneficial manner and for the purpose of conservation of the State's water resources by reducing the use of potable water, surface water, and groundwater" pursuant to 15A NCAC 02U .0101(a). It is recognized that bare ground conditions may occur due to weather, or seeding for cover crop establishment or repair; however, in order to meet the intent of the 02U Subchapter, if reclaimed water is being irrigated, it shall be to an established or emerging vegetative cover.

Revised Language for Readoption

No revisions to the proposed language for readoption have been made.

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Technical Corrections to Subchapter 02U

Rule	Revised Language
02U .0101(a)	The rules in this Subchapter shall apply to reclaimed water systems. This includes the generation and utilization of <u>reclaimed water</u> tertiary treated wastewater effluent meeting the standards in Rule .0301 of this Subchapter, used in a beneficial manner and for the purpose of conservation of the State's water resources by reducing the use of a <u>potable water</u> water, surface water, and groundwater. resource (potable water, surface water, groundwater).
02U .0101(b)	The disposal of treated wastewater effluent that does not serve in place of the use of a water resource is covered <u>governed</u> by Subchapter 02T of this Chapter. <u>Chapter 02 of Title 15A.</u>
02U .0101(g)	The rules in this subchapter set forth the requirements and procedures for application and issuance of permits for the following reclaimed water systems: (1) <u>generation systems;</u> treatment works; (2) utilization systems; <u>(3) distribution systems;</u> <u>(4)(3)</u> bulk distribution programs; and <u>(5)(4)</u> local program approval.
02U .0102	The rules in this Subchapter shall apply to all persons proposing to construct, alter, extend, or operate any reclaimed water treatment works <u>generation, distribution,</u> or utilization system. The rules in this Section are general requirements that apply to all program rules (found in individual sections) in this Subchapter.
02U .0109	<u>Permit renewals shall be in accordance with 15A NCAC 02T .0109. Requests for permit renewals shall be submitted at least 180 days prior to expiration unless the permit has been revoked by the Director in accordance with Rule .0110 of this Section or a request has been made to rescind the permit. Renewal requests shall be made in accordance with Rule .0105 and Rule .0106 of this Section.</u>
02U .0201(c)(2)	specifications describing materials to be used, methods of construction, and means for ensuring quality and integrity of the finished product <u>product,</u> including leakage testing; and
02U .0201(c)(3)	engineering calculations <u>calculations,</u> including hydraulic and pollutant loading for each treatment unit, treatment unit sizing criteria, hydraulic profile of the treatment system, total dynamic head and system curve analysis for each pump, buoyancy calculations, and irrigation design. <u>design; and</u>
02U .0202(b)	Soils report. <u>Report.</u> A soil evaluation of the utilization site shall be provided to the Division by the <u>Applicant.</u> applicant. If required by G.S. 89F, a soil scientist shall prepare this evaluation. This evaluation shall be presented in a report that includes the following:
02U .0402(n)	<u>Facilities shall be provided with a flow meter to measure the volume of treated reclaimed water applied to each field.</u>

Rule	Revised Language								
02U .0701(c)	<p>The setbacks for utilization sites areas where reclaimed water is land applied discharged to the ground shall be as follows:</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%; padding-left: 40px;">Surface waters (streams – intermittent and perennial, perennial waterbodies, and wetlands) not classified SA</td> <td style="text-align: right; vertical-align: bottom;">feet 25</td> </tr> <tr> <td style="width: 80%; padding-left: 40px;"><u>Surface waters (streams – intermittent and perennial, perennial waterbodies, and wetlands) not classified SA, provided that the reclaimed water to be utilized contains no more than 10 mg/L of Total Nitrogen and no more than 2 mg/L of Total Phosphorus in addition to applicable requirements of Section .0300 of this Subchapter</u></td> <td style="text-align: right; vertical-align: bottom;">0</td> </tr> <tr> <td style="width: 80%; padding-left: 40px;">Surface waters (streams – intermittent and perennial, perennial waterbodies, and wetlands) classified SA</td> <td style="text-align: right; vertical-align: bottom;">100</td> </tr> <tr> <td style="width: 80%; padding-left: 40px;">Any well with exception of to monitoring wells</td> <td style="text-align: right; vertical-align: bottom;">100</td> </tr> </table>	Surface waters (streams – intermittent and perennial, perennial waterbodies, and wetlands) not classified SA	feet 25	<u>Surface waters (streams – intermittent and perennial, perennial waterbodies, and wetlands) not classified SA, provided that the reclaimed water to be utilized contains no more than 10 mg/L of Total Nitrogen and no more than 2 mg/L of Total Phosphorus in addition to applicable requirements of Section .0300 of this Subchapter</u>	0	Surface waters (streams – intermittent and perennial, perennial waterbodies, and wetlands) classified SA	100	Any well with exception of to monitoring wells	100
Surface waters (streams – intermittent and perennial, perennial waterbodies, and wetlands) not classified SA	feet 25								
<u>Surface waters (streams – intermittent and perennial, perennial waterbodies, and wetlands) not classified SA, provided that the reclaimed water to be utilized contains no more than 10 mg/L of Total Nitrogen and no more than 2 mg/L of Total Phosphorus in addition to applicable requirements of Section .0300 of this Subchapter</u>	0								
Surface waters (streams – intermittent and perennial, perennial waterbodies, and wetlands) classified SA	100								
Any well with exception of to monitoring wells	100								
02U .0701(i)	<p>(i) <u>Habitable residences or places of public assembly under separate ownership constructed after the non-discharge facilities were originally permitted or subsequently modified, are exempt from the setback requirements in Paragraph (a) of this Rule.</u></p>								
02U .0801(e)	<p>Vehicles Automobiles <u>and heavy machinery shall not be allowed on the irrigation area, except during installation or maintenance activities.</u></p>								

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PART IV – REVISED 15A NCAC SUBCHAPTERS 02T AND 02U FOR READOPTION

For Rule Amendments:

~~Text~~ = deleted text

Text = added text

~~Text~~ = existing text in what was published in the *North Carolina Register* (NCR) that proposed to be deleted following the comment period

Text = text proposed to be added to what was published in the NCR following the comment period

Text = text initially proposed in the NCR to be deleted that is restored following the comment period

~~Text~~ = text proposed in the NCR to be added that is deleted following the comment period

Note: For new rules proposed for adoption, all text is initially underlined. If there are changes to the proposed new rule following publication in the NCR, the underlining is removed, deleted text is struck through, added text is underlined, and there is no highlighting.

1 15A NCAC 02T .0101 is readopted as published in 32:06 NCR 524-525 as follows:

2

3

CHAPTER 02 - ENVIRONMENTAL MANAGEMENT

4

5

SUBCHAPTER 02T – WASTE NOT DISCHARGED TO SURFACE WATERS

6

7

SECTION .0100 – GENERAL REQUIREMENTS

8

9

15A NCAC 02T .0101 PURPOSE

10 The rules in this Subchapter ~~set forth the requirements and procedures for application and issuance of permits~~ shall
11 govern application for and issuance of permits for the following systems ~~which~~ that do not discharge to surface waters
12 of the state:

13

(1) sewer systems;

14

(2) disposal systems;

15

(3) treatment works;

16

(4) residual and residue disposal/utilization systems;

17

(5) animal waste management systems;

18

(6) treatment of contaminated soils; and

19

(7) stormwater management systems pursuant to 15A NCAC ~~2H 02H~~ .1000.

20

21

History Note: Authority G.S. 143-215.1; 143-215.3(a)(1);

22

Eff. September 1, ~~2006~~ 2006;

23

Readopted Eff. September 1, 2018.

1 15A NCAC 02T .0102 is readopted as published in 32:06 NCR 525 as follows:

2

3 **15A NCAC 02T .0102 SCOPE**

4 The rules in this Subchapter shall apply to all persons proposing to construct, alter, extend, or operate any sewer
5 system, treatment works, disposal system, ~~contaminates~~ contaminated soil treatment system, animal waste
6 management system, stormwater management system or residual disposal/utilization ~~system which~~ system, that does
7 not discharge to surface waters of the ~~state, state, including systems which discharge waste onto or below land surface.~~

8 However, these Rules ~~do~~ shall not apply to sanitary sewage systems or solid waste management facilities ~~which~~ that
9 are permitted under the authority of the Commission for Public Health. The provisions for stormwater NPDES systems
10 that discharge to waters of the State are codified ~~management systems can be found~~ in 15A NCAC 02H .1000. The
11 rules in this Section are general requirements that shall apply to all program rules (~~found in individual sections~~) in this
12 Subchapter.

13

14 *History Note: Authority G.S. 130A-335; 143-215.1; 143-215.3(a)(1);*

15 *Eff. September 1, ~~2006-2006~~;*

16 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .0103 is readopted with changes as published in 32:06 NCR 525-527 as follows:

2

3 **15A NCAC 02T .0103 DEFINITIONS**

4 The terms used in this Subchapter ~~shall be as defined~~ shall have the meanings set forth in G.S. 143-212 and 143-213
5 G.S. 143-213, in this Rule, and except as provided in this Rule and in definitions provided in program-specific program
6 specific rules in this Subchapter: Subchapter and as follows:

7 (1) "Agronomic rate" is defined as the amount of waste and other materials applied to soil to meet the
8 nitrogen needs of the crop, but does not overload the soil with nutrients or other constituents that
9 cause or contribute to a contravention of surface water or groundwater standards, limit crop growth,
10 or adversely impact soil quality. Nitrogen needs of the crop shall be based on realistic yield
11 expectations (RYE) established for a soil series through published Cooperative Extension Service
12 bulletins, Natural Resources Conservation Service publications, county soil surveys, or site specific
13 agronomist reports.

14 (2) "Animal waste" means livestock or poultry excreta or a mixture of excreta with feed, bedding, litter
15 or other materials generated at a feedlot.

16 (3) "Bedrock" is ~~as~~ defined in 15A NCAC 02L .0102.

17 (4) "Buffer" means a natural or vegetated area as defined in 15A NCAC 02B .0202.

18 (5) "CFR" means Code of Federal Regulations. ~~All CFRs cited herein may be obtained at Government~~
19 ~~Institutes, Inc., 4 Research Place, Suite 200, Rockville, Md, 20850-1714 for a cost of thirty six~~
20 ~~dollars (\$36.00) each plus four dollars (\$4.00) shipping and handling or at~~
21 ~~<http://www.gpoaccess.gov/cfr/>. Copies are also available for review at 512 North Salisbury Street,~~
22 ~~Raleigh, North Carolina 27604.~~

23 (6) "Commission" ~~as is~~ defined in G.S. 143-212 or their delegate.

24 (7) "Compliance boundary" is ~~as~~ defined in 15A NCAC 02L .0102.

25 (8) "Deemed permitted" means that a facility is considered ~~as having to have~~ to be a needed permit and ~~being~~
26 to be compliant with the permitting requirements of G.S. ~~143-215.1(a), 143-215.1(a)~~ even though it
27 has not received an individual permit for its construction or operation.

28 (9) "Department" ~~as is~~ defined in G.S. 143-212.

29 (10) "Director" means the Director of the Division or its delegate.

30 (11) "Division" means the Division of Water Quality Resources in the Department. ~~All rules cited in this~~
31 ~~Section under the authority of the Division may be obtained at 512 North Salisbury Street, Raleigh,~~
32 ~~North Carolina 27604 or at the Division's web page at www.newaterquality.org at no charge.~~

33 (12) "Effluent" means wastewater discharged ~~following all treatment processes~~ following all treatment processes or from other point source whether treated or
34 untreated.
35

- 1 (13) "Engineer" ~~is~~ means an individual who is currently licensed by the North Carolina Board of
2 Examiners For Engineers and Land Surveyors or is authorized to practice under G.S. 89C as an
3 engineer.
- 4 (14) "EPA" means the United States Environmental Protection Agency.
- 5 (15) "Ephemeral (stormwater) stream" ~~means a stream as~~ is defined in 15A NCAC 02B .0233.
- 6 (16) "Essential treatment unit" means any unit associated with the wastewater treatment process whose
7 loss would likely render the facility incapable of meeting the required performance ~~criteria~~ criteria,
8 including aeration units or other main treatment units, clarification equipment, filters, disinfection
9 equipment, pumps and blowers.
- 10 (17) "General Permit" means a permit issued ~~under~~ pursuant to G.S. 143-215.1(b)(3), 143-215.1(b)(4) or
11 143-215.10C.
- 12 (18) "Groundwaters" ~~means those waters in the saturated zone of the earth as~~ is defined in 15A NCAC
13 02L .0102.
- 14 (19) "Groundwater standards" means groundwater standards as established in 15A NCAC 02L .0200.
- 15 (20) "Industrial wastewater" means all wastewater other than sewage or animal ~~waste~~ waste, and
16 includes:
- 17 (a) wastewater resulting from any process of industry or manufacture, or from the development
18 of any natural resource;
- 19 (b) wastewater resulting from processes of trade or business, including wastewater from
20 laundromats and ~~vehicle/equipment~~ vehicle or equipment washes, but ~~not~~ excluding
21 wastewater from restaurants;
- 22 (c) stormwater that is contaminated with an industrial wastewater;
- 23 (d) any combination of sewage and industrial wastewater;
- 24 (e) municipal ~~wastewater~~ wastewater, unless it can be demonstrated ~~to the satisfaction of the~~
25 ~~Division~~ that the wastewater contains no industrial wastewater;
- 26 (f) contaminated groundwater extracted as part of an approved groundwater remediation
27 system approved by the Division in accordance with 15A NCAC 02L .0100.
- 28 (21) "Intermittent stream" ~~means a stream as~~ is defined in 15A NCAC 02B .0233.
- 29 (22) "NPDES" means National Pollutant Discharge Elimination System.
- 30 (23) "Perennial stream" ~~means a stream as~~ is defined in 15A NCAC 02B .0233.
- 31 (24) "Perennial waterbody" ~~means a waterbody as~~ is defined in 15A NCAC 02B .0233.
- 32 (25) "Pollutant" means waste as defined in G.S. 143-213.
- 33 (26) "Potable waters" ~~means water as~~ is defined in 15A NCAC 02L .0102.
- 34 (27) "Private well" means any potable or irrigation well not directly controlled by a public authority or a
35 public utility authorized by the North Carolina Public Utilities Commission. This may include a
36 private individual or community well as defined in the public water supply rules ~~contained~~ codified
37 in 15A NCAC 18C.

- 1 (28) "Professional engineer" means a person who is presently registered and licensed as a professional
2 engineer by the North Carolina Board of Examiners For Engineers and Land Surveyors.
- 3 (29) "Public or community sewage system" means a single system of sewage collection, treatment, or
4 disposal owned and operated by a sanitary district, a metropolitan sewage district, a water and sewer
5 authority, a county, a municipality or a public utility authorized to operate by the North Carolina
6 Utilities Commission.
- 7 (30) "Residuals" means any solid, semisolid, or liquid waste, other than effluent or residues from
8 agricultural products and processing, generated from a wastewater treatment facility, water supply
9 treatment facility or air pollution control facility permitted under the authority of the Commission.
- 10 (31) "Residues from agricultural products and processing" means solids, semi-solids or liquid residues
11 from food and beverage processing and ~~handling; silviculture; agriculture; handling, silviculture,~~
12 ~~agriculture,~~ and aquaculture operations permitted under the authority of the Commission that are
13 non-toxic, non-hazardous and contain no domestic wastewater.
- 14 (32) "Restrictive horizon" is the layer in a soil profile that is capable of reducing the downward water
15 movement to the minimum rate, as evidenced by lowest saturated hydraulic conductivity among all
16 the soil layers. Restrictive horizon is often capable of perching ground water or wastewater effluent
17 and is characterized by accumulation of finer soil particles (such as aluminum, clay, iron, silica,
18 organic matter, or other compounds) or compaction due to heavy ~~equipments,~~ equipment.
- 19 (33) "Review boundary" is ~~as~~ defined in 15A NCAC 02L .0102.
- 20 (34) "Seasonal High Water Table" or "SHWT" is the highest level to which the soil is saturated, as may
21 be determined through the identification of redoximorphic features in the soil ~~profile~~ profile,
22 including low chroma mottling. This does not include temporary perched conditions. Alternatively,
23 the SHWT can also be determined from water level measurements or via soil/groundwater
24 modeling.
- 25 (35) "Secretary" ~~as is~~ defined in G.S. 143-212 ~~or its delegate,~~ and includes the Secretary's delegate.
- 26 (36) "Setback" means the ~~minimum~~ separation in linear feet, measured on a horizontal plane, required
27 between a treatment works, disposal system, or utilization system and ~~includes,~~ physical features
28 such as ~~building~~ buildings, roads, property lines, or water bodies.
- 29 (37) "Sewage" means the liquid and solid human ~~waste,~~ waste and liquid waste generated by domestic
30 water-using fixtures and ~~appliances,~~ appliances from any residence, place of business, or place of
31 public assembly. Sewage does not include wastewater that is totally or partially industrial
32 ~~wastewater,~~ wastewater or any other wastewater not considered to be domestic waste.
- 33 (38) "Soil scientist" means an individual who is currently licensed or authorized to practice soil science
34 ~~under~~ pursuant to G.S. 89F by the North Carolina Board for Licensing of Soil Scientists.
- 35 (39) "Staff" means the staff of the Division.
- 36 (40) "Surface waters" means all waters as defined in G.S. 143-212 except underground waters.
- 37 (41) "Surface water standards" means surface water standards ~~as~~ established in 15A NCAC 02B .0200.

- 1 (42) "Technical specialist" means an individual designated by the Soil and Water Conservation
2 Commission, pursuant to rules adopted by that Commission, to certify animal waste management
3 plans or specific parts of a certified animal waste management plan. Commission to certify that the
4 planning, design and implementation of Best Management Practices, including all or part of an
5 animal waste management plan, meet the standards and specifications of the Soil and Water
6 Conservation Commission or the U.S. Department of Agriculture, Natural Resources Conservation
7 Service.
- 8 (43) "Toxicity test" means a test for toxicity conducted using the procedures contained in 40 CFR 261,
9 40 CFR 261.24 Appendix H [H,] which is hereby incorporated by reference including any
10 subsequent amendments and editions.
- 11 (44) "Treatment works or disposal system ~~which~~ that does not discharge to surface waters" means any
12 treatment works, facility, utilization system, or disposal system which is designed to:
13 (a) operate as closed system with no discharge to waters of the ~~state~~, state; or
14 (b) ~~dispose/utilize of~~ dispose of or use wastes, including residuals, residues, contaminated soils
15 and animal waste, ~~to on~~ on the surface of the ~~land~~, land; or
16 (c) dispose of wastes through a subsurface disposal system pursuant to ~~G.S. 143-~~
17 215.1(b)(4).143-215.1(a4).
- 18 (45) "Waste oil" means any used nonhazardous petroleum product other than crankcase oil. Crankcase
19 oil mixed with other used nonhazardous petroleum products shall be considered as waste oil.
- 20 (46) "Wetlands" are "waters" as defined in G.S. 143-212 and are areas that are inundated or saturated by
21 an accumulation of surface or ground water as defined in 15A NCAC 02B .0202.

22

23 *History Note:* Authority G.S. 130A-335; 143-213; 143-215.3(a)(1);
24 Eff. September 1, ~~2006-2006~~;
25 Readopted Eff. September 1, 2018.

1 15A NCAC 02T .0104 is repealed as published in 32:06 NCR 527 as follows:

2

3 **15A NCAC 02T .0104 ACTIVITIES WHICH REQUIRE A PERMIT**

4

5 *History Note: Authority G.S. 130A-335; 143-215.1; 143-215.3(a)(1);*

6 *Eff. September 1, ~~2006~~2006;*

7 *Repealed Eff. September 1, 2018.*

1 15A NCAC 02T .0105 is readopted with changes as published in 32:06 NCR 527-529 as follows:

2

3 **15A NCAC 02T .0105 GENERAL REQUIREMENTS**

4 (a) Jurisdiction. Applications for permits from the Division shall be made in accordance with this Rule. Applications
5 for permits under the jurisdiction of a local program shall be made in accordance with the requirements of the ~~Division~~
6 ~~approved~~ Division-approved program.

7 (b) Applications. Application for a permit ~~must shall~~ be made on ~~Division~~ Division-approved forms completely filled
8 out, where applicable, and fully executed in the manner set forth in Rule .0106 of this Section. A processing fee as
9 described in G.S. 143-215.3D ~~must shall~~ be submitted with each application in the form of a check or money order
10 made payable to the Department. Applications shall be returned if incomplete. ~~Sewer~~ Permits for sewer line extensions
11 shall be applied for separately from treatment, utilization, and disposal systems. The Applicant ~~applicant~~ shall provide
12 adequate documentation to the Division to ensure that the proposed system will meet all design and performance
13 criteria as required under this Subchapter and other applicable rules, be operated as a non-discharge system, and protect
14 surface water and groundwater standards. Variances to this Subchapter or adopted design criteria ~~must shall~~ be
15 specifically requested in the application and, if approved pursuant to Paragraph (n) of this Rule, incorporated into the
16 permit. The Division may accept certification from a licensed or certified professional (e.g. Professional Engineers,
17 Licensed Soil Scientist, Licensed Geologist, Technical Specialist) that the design meets or exceeds minimum design
18 criteria applicable to the project. ~~Division acceptance of certifications by the applicant or by licensed or certified~~
19 ~~professionals preparing reports for the application shall not constitute approval of a variance to this Subchapter or~~
20 ~~applicable minimum design and performance criteria unless specifically requested in the application and approved in~~
21 ~~the permit. Division acceptance of certifications that were specifically requested by the Division to be provided with~~
22 ~~the application from the Applicant or from licensed or certified professionals preparing reports for the application and~~
23 ~~that were approved in the permit shall constitute approval of a variance to this Subchapter or to applicable minimum~~
24 ~~design and performance criteria.~~

25 (c) Application packages for new and expanding facilities shall include the following items:

26 (1) The number of executed copies shall include the number necessary for each review office and one
27 additional copy. Additional copies shall be required if needed for federal and state grant and loan
28 projects.

29 (2) Reports, engineering plans, specifications, and calculations as required by the applicable rules of
30 this Subchapter. If prepared by licensed or certified professionals these reports shall be submitted
31 in accordance with the respective statutes and rules governing that profession.

32 (3) Operational agreements as required by Rule .0115 of this Section.

33 (4) For projects that require environmental documentation pursuant to the North Carolina
34 Environmental Policy Act, a final environmental document (Finding of No Significant Impact or
35 Record of Decision).

- 1 (5) A general scaled location map, showing orientation of the facility with reference to at least two
2 geographic references ~~(e.g. numbered roads, named streams/rivers)~~. (e.g. numbered roads, named
3 streams or rivers).
- 4 (6) ~~Documentation that other directly related (i.e. needed to properly construct and operate the facilities~~
5 ~~permitted under this Subchapter) environmental permit or certification applications are being~~
6 ~~prepared, have been applied for, or have been obtained (e.g. 401 certifications, erosion and~~
7 ~~sedimentation control plans, stormwater management plans)~~. Documentation that other
8 environmental permit or certification applications that are needed to properly construct and operate
9 the facilities permitted under this Subchapter are being prepared, have been applied for, or have
10 been obtained (e.g. 401 certifications, erosion and sedimentation control plans, and stormwater
11 management plans). The Division shall consider the application incomplete or issue the permit
12 contingent on issuance of the dependent permits if issuance of other permits or certifications impact
13 the system permitted under this Subchapter.
- 14 (7) A description of the project including the origin, type and flow of waste to be treated. For industrial
15 processing facilities, a waste analysis extensive enough to allow a complete evaluation of the
16 system's capability to treat the waste and any potential impacts on the waters of the state shall be
17 included.
- 18 (8) Documentation of compliance with Article 21 Part 6 (Floodway Regulations) of Chapter 143 of the
19 General Statutes.
- 20 (9) Documentation as required by other applicable ~~rule(s)~~ rules in this Subchapter.
- 21 (10) Documentation of the presence or absence of threatened or endangered aquatic species utilizing
22 information provided by the Natural Heritage Program of the Department. This shall only apply to
23 the area whose boundary is encompassed ~~by~~ by, and for the purpose ~~of of, the~~ installation, operation,
24 and maintenance of facilities permitted herein (wastewater collection, treatment, storage, utilization,
25 or disposal). This documentation shall provide information on the need for permit conditions
26 pursuant to Paragraph (i) of this Rule. ~~The Natural Heritage Program can be contacted at~~
27 ~~http://www.nenh.org or write to Natural Heritage Program, 1601 Mail Service Center, Raleigh,~~
28 ~~NC 27699 1601.~~
- 29 (d) Application packages for renewals shall include updated site ~~plans, (if required as part of original submittal)~~.
30 plans, if required as part of the original submittal.
- 31 (e) Application and annual Fees.
- 32 (1) Application Fee. For every application for a new or major modification of a permit under this
33 Section, a nonrefundable application processing fee in the amount provided in G.S. 143-215.3D
34 shall be submitted to the Division by the Applicant ~~applicant~~ at the time of application. For a facility
35 with multiple treatment units under a single permit, the application fee shall be set by the total design
36 treatment capacity. Modification fees shall be based on the projected annual fee for the facility.

1 (2) Annual Fees. An annual fee for administering and compliance monitoring shall be charged in each
2 year of the term of every renewable permit according to the schedule in G.S. 143-215.3D(a). Annual
3 fees ~~must~~ shall be paid for any facility operating on an expired permit that has not been rescinded
4 or revoked by the Division. Permittees shall be billed annually by the Division. A change in the
5 facility which changes the annual fee shall result in the revised annual fee being billed effective with
6 the next anniversary date.

7 (3) Failure to pay an annual fee within 30 days after being billed shall be cause for the Division to
8 revoke the permit.

9 (f) Designs for facilities permitted under this Section shall use the practicable waste treatment and disposal alternative
10 with the least adverse impact on the environment in accordance with G.S. 143-215.1(b)(2).

11 (g) ~~In order to protect Publicly Owned Treatment Works, the~~ The Division shall incorporate pretreatment
12 requirements under 15A NCAC ~~2H 02H~~ .0900 into the permit.

13 (h) Setbacks and required separation distances shall be provided as required by ~~individual~~ rules in this Subchapter.
14 Setbacks to ~~streams (perennial and intermittent),~~ perennial and intermittent streams, perennial waterbodies, and
15 wetlands shall be determined using the methodology set forth in 15A NCAC 02B .0233(4)(a). Setbacks to wells ~~are~~
16 ~~for~~ shall apply to those wells outside the compliance boundary. ~~Where~~ If wells and subsurface groundwater lowering
17 drainage systems would otherwise be inside the compliance boundary as established in 15A NCAC 02L .0107, the
18 Applicant applicant may request the compliance boundary be established closer to the waste disposal area and this
19 shall be granted provided the groundwater standards can be met at the newly established compliance boundary.

20 (i) Permits ~~may~~ shall provide specific conditions to address the protection of threatened or endangered aquatic species
21 as provided in plans developed pursuant in 15A NCAC 02B .0110 if the construction and operation of the facility
22 directly impacts such species.

23 (j) ~~The~~ Except as otherwise required by Rule .1306 in this Subchapter, the Permittee ~~permittee~~ shall ~~keep permits~~
24 ~~active~~ comply with all permit conditions and requirements until the waste treatment systems authorized by the permit
25 are properly closed or subsequently permitted under another permit issued by the appropriate permitting authority for
26 that activity.

27 (k) Monitoring of waste and surface waters shall be in accordance with 15A NCAC 02B .0505 except as otherwise
28 provided by ~~specific~~ applicable rules in this Subchapter.

29 (l) Reporting shall be in accordance with 15A NCAC 02B .0506 except as otherwise provided by ~~specific~~ applicable
30 rules in this Subchapter.

31 (m) Monitoring of groundwater shall be in accordance with Sections 15A NCAC 02L .0100 and 15A NCAC 02C
32 .0100 except as otherwise provided by ~~specific~~ applicable rules in this Subchapter.

33 (n) The Director shall approve alternative Design Criteria and Application Submittal requirements in cases where the
34 Applicant applicant can demonstrate that the alternative ~~design criteria~~ will ~~provide the following:~~ provide:

- 35 (1) equal or better treatment of the waste;
- 36 (2) equal or better protection of the waters of the state; and
- 37 (3) no increased potential for nuisance conditions from noise, odor or vermin.

1 (o) The Permittee shall retain the ~~Division-approved~~ **Division-approved** plans and specifications for the life of the
2 facility.

3

4 *History Note: Authority G.S. 143-215.1; 143-215.3(a);*

5 *Eff. September 1, ~~2006~~2006;*

6 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .0106 is readopted as published in 32:06 NCR 529 as follows:

2

3 **15A NCAC 02T .0106 SUBMISSION OF PERMIT APPLICATIONS**

4 (a) Permit applications, supporting information, and processing fee for permits issued by the Division shall be filed
5 with the Division. Applications for permits from a ~~Division-approved~~ Division-approved local permitting program
6 shall be submitted ~~directly~~ to the local program director. Division permit processing fees ~~are not~~ shall not be required
7 for permits issued by delegated local permitting programs.

8 (b) Permit applications shall be signed as follows:

9 (1) in the case of corporations, by a principal executive officer of at least the level of ~~vice-president,~~
10 vice-president or his authorized representative;

11 (2) in the case of a partnership or a limited partnership, by a general partner;

12 (3) in the case of a sole proprietorship, by the proprietor;

13 (4) in the case of a municipal, state, or other public ~~entity~~ entity, by either an executive officer, elected
14 official in the highest level of elected office, or other authorized employee.

15 (c) Delegation of authority to sign permit applications to other authorized employees or any employee in a specific
16 position (~~i.e. signing officials~~) shall be provided in ~~letter format~~ writing to the Division and signed by an authorized
17 person pursuant to Paragraph (b) of this Rule. The delegation may be for a specific permit application or more general
18 for certain or all types of water quality permits. The letter shall identify the extent of delegation.

19

20 *History Note: Authority G.S. 143-215.3(a)(1); 143-215.1;*

21 *Eff. September 1, 2006-2006;*

22 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .0107 is readopted as published in 32:06 NCR 529 as follows:

2

3 **15A NCAC 02T .0107 STAFF REVIEW AND PERMIT PREPARATION**

4 (a) The staff of the Division shall conduct a review of plans, specifications and other project data accompanying the
5 application and shall determine if the application and required information are complete. The staff shall acknowledge
6 receipt of a complete application except for fast-track sewer applications. The local government unit or units having
7 jurisdiction over specific residential projects shall be notified of permit applications in accordance with G.S.
8 143-215.1(d1).

9 (b) If the application ~~is not complete with~~ does not include all required information and the application fee, the
10 application shall be returned to the Applicant. ~~applicant~~. The staff shall advise the ~~applicant by mail:~~ Applicant:

11 (1) how the application or accompanying supporting information may be modified to make it acceptable
12 ~~or complete;~~ for review; and

13 (2) that the 90 day processing period required in G.S. 143-215.1 and Rule .0108 of this Section begins
14 upon receipt of a corrected ~~or complete~~ application with required supporting information.

15 (c) ~~Pursuant to G.S. 143-215.67(a), the staff of the Division shall determine for sewer system construction or sewer~~
16 ~~system extensions, whether the treatment works or the sewer system to which the proposed system will discharge is~~
17 ~~adequate to receive waste which will be discharged from the proposed system.~~ In reviewing a permit application for
18 sewer system construction or sewer system extensions, the staff of the Division shall determine whether the treatment
19 works or the sewer system to which the proposed system will discharge is adequate to receive waste which will be
20 discharged from the proposed system, pursuant to G.S. 143-215.67(a).

21 (d) In reviewing a permit application for ~~For~~ new and expanding treatment works and disposal systems, the staff shall
22 make a site-specific evaluation to determine the potential impacts of the proposed project on surface and ground water
23 quality. The Applicant shall ~~applicant must~~ make the site accessible to the Division.

24 (e) If an application is accepted and later found to be incomplete, the Applicant ~~applicant~~ shall be advised how the
25 application or accompanying supporting information may be modified to make it ~~acceptable or~~ complete. The staff
26 shall advise the ~~applicant by mail:~~ Applicant:

27 (1) that the 90 day processing period required in G.S. 143-215.1(d) and Rule .0108 of this Section
28 begins on the date the additional information is received; and

29 (2) that if all required information is not submitted within 30 days, the project will be returned as
30 incomplete. Any resubmittal of a returned application ~~must~~ shall be accompanied with a new
31 application fee.

32

33 *History Note: Authority G.S. 143-215.1(b); 143-215.1(d); 143-215.3(a)(1); 143-215.3(a)(4);*
34 *Eff. September 1, 2006-2006;*
35 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .0108 is readopted with changes as published in 32:06 NCR 529-530 as follows:

2

3 **15A NCAC 02T .0108 FINAL ACTION ON PERMIT APPLICATIONS TO THE DIVISION**

4 (a) The Director shall take final action on all applications not later than 90 days following receipt of a complete
5 application ~~and with~~ together with all required information. All ~~permits or permits,~~ renewals of ~~permits~~ permits, and
6 decisions denying permits or renewals shall be in writing.

7 (b) The Director ~~may:~~ shall:

8 (1) issue a ~~permit~~ permit:

9 (A) containing such conditions as are necessary to effectuate the purposes of Article 21,
10 Chapter 143 of the General Statutes; and

11 ~~(2)(B)~~ (B) issue a ~~permit~~ containing time schedules for achieving compliance with applicable effluent
12 standards and limitations, surface water or groundwater standards and other legally
13 applicable requirements;

14 ~~(2)(3)~~ deny a permit application ~~where~~ if necessary to effectuate:

15 (A) the purposes of Article 21, Chapter 143;

16 (B) the purposes of G.S. 143-215.67(a); or

17 ~~(C)~~ rules on coastal waste treatment, disposal, found in Section 15A NCAC 02H .0400;

18 ~~(C)(D)~~ rules on groundwater quality standards found in Subchapter 02L of this Chapter. ~~Chapter;~~
19 or

20 ~~(3)(4)~~ hold public meetings when necessary to obtain additional information needed to complete the review
21 of the application. The application shall be considered as incomplete until the close of the meeting
22 record.

23 (c) The Division may require any monitoring and reporting requirements, including groundwater, surface water or
24 wetlands, waste, wastewater, ~~sludge,~~ residuals, soil, treatment process, lagoon/storage pond, and plant tissue,
25 necessary to determine the source, quantity and quality of the waste and its effect upon the surface water, ground
26 waters or wetlands. All reports ~~must~~ shall be submitted on ~~Division-supplied~~ Division-supplied forms or forms
27 approved by the Division as providing the same information as required by the Division's forms.

28 (d) If a permit is denied, the letter of denial shall state the ~~reason(s)~~ reason for denial and any reasonable measures
29 which the Applicant ~~applicant~~ may take to make the application approvable.

30 (e) All permits requiring an annual fee shall be issued for a time period not to exceed five eight years-years, except
31 for those permits subject to Sections .1300 and .1400 of this Subchapter, which shall not exceed five years.

32

33 *History Note:* Authority G.S. 143-215.1(a); 143-215.1(b); 143-215.1(d); 143-215.3(a)(1);

34 *Eff. September 1, 2006-2006;*

35 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .0109 is readopted as published in 32:06 NCR 530 as follows

2

3 **15A NCAC 02T .0109 PERMIT RENEWALS**

4 Requests for permit renewals shall be submitted to the Director at least 180 days prior to expiration unless the permit
5 has been revoked by the Director in accordance with Rule .0110 of this Section or a request has been made to rescind
6 the permit. Renewal requests shall be made in accordance with Rule .0105 and Rule .0106 of this Section.

7

8 *History Note: Authority G.S. 143-215.3(a)(1);*

9 *Eff. September 1, ~~2006~~ 2006;*

10 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .0110 is readopted as published in 32:06 NCR 530 as follows:

2

3 **15A NCAC 02T .0110 MODIFICATION AND REVOCATION OF PERMITS**

4 ~~Any~~ A permit issued by the Division pursuant to this Subchapter is subject to revocation , or modification upon 60
5 days notice by the Director in whole or part ~~for~~ the following reasons:

- 6 (1) violation of any terms or conditions of the ~~permit;~~ permit or this Subchapter;
7 (2) obtaining a permit by misrepresentation or failure to disclose ~~fully~~ all relevant facts;
8 (3) refusal of the Permittee ~~permittee~~ to allow authorized employees of the Department upon
9 presentation of credentials:
10 (a) to enter upon Permittee's ~~permittee's~~ premises on which a system is located in which any
11 records are required to be kept under terms and conditions of the permit;
12 (b) to have access to any documents and records required to be kept under terms and conditions
13 of the permit;
14 (c) to inspect any monitoring equipment or method required in the permit; or
15 (d) to sample any ~~pollutants;~~ pollutants;
16 (4) failure to pay the annual fee for administering and compliance ~~monitoring;~~ monitoring; or
17 (5) a determination by the Division that the conditions of the permit are in conflict with Administrative
18 Code or Statute.

19

20 *History Note:* Authority G.S. 143-215.1(b)(2.); 143-215.3(a)(1);
21 Eff. September 1, 2006-2006;
22 Readopted Eff. September 1, 2018.

1 15A NCAC 02T .0111 is readopted with changes as published in 32:06 NCR 530-531 as follows:

2

3 **15A NCAC 02T .0111 CONDITIONS FOR ISSUING GENERAL PERMITS**

- 4 (a) ~~In accordance with the provisions of G.S. 143-215.1(b), (c) and (d), general permits may be developed by the~~
5 ~~Division and issued by the Director for categories of activities covered by this Subchapter. General permits may be~~
6 ~~written for categories of activities that involve the same or substantially similar operations, have similar treated waste~~
7 ~~characteristics, require the same limitations or operating conditions, and require the same or similar monitoring. After~~
8 ~~issuance of a general permit by the Director, persons operating facilities described by the general permit may request~~
9 ~~coverage under it, and the Director or his designee may grant appropriate certification. All individual operations which~~
10 ~~receive a "Certificate of Coverage" under a general permit are permitted under the specific general permit for which~~
11 ~~the coverage was issued. A Certificate of Coverage shall mean that approval is given to facilities that meet the~~
12 ~~requirements of coverage under the general permit. Persons operating facilities covered under general permits~~
13 ~~developed in accordance with this Rule shall be subject to the same limits, conditions, management practices,~~
14 ~~enforcement authorities, and rights and privileges as specified in the general permit. After issuance of a general permit~~
15 ~~by the Director pursuant to G.S. 143-215.1(b), (c) or (d), persons operating facilities described by the general permit~~
16 ~~may request coverage under it. An operation that receives a "Certificate of Coverage" under a general permit shall be~~
17 ~~permitted under the general permit for which the coverage was issued. A Certificate of Coverage shall mean that~~
18 ~~approval is given to facilities that meet the requirements of coverage under the general permit. Persons operating~~
19 ~~facilities covered under general permits developed in accordance with this Rule shall be subject to the same limits,~~
20 ~~conditions, management practices, enforcement authorities, and rights and privileges specified in the general permit.~~
21 (b) ~~Upon development of a draft general permit, the Director shall publicly notice under G.S. 143-215.4 (b)(1) and~~
22 ~~(2), at least 30 days prior to final action, an intent to issue the general permit. Upon development of a draft general~~
23 ~~permit, the Director shall publicly notice an intent to issue the general permit, pursuant to G.S. 143-215.4 (b)(1) and~~
24 ~~(2), at least 30 days prior to final action. A one-time publication of the notice in a newspaper having general circulation~~
25 ~~in the geographic areas affected by the proposed permit shall be required. The notice shall provide the name, address~~
26 ~~and phone number of the Division, a brief description of the intended action, and a brief description of the procedures~~
27 ~~for the formulation of final determinations, including a 30-day comment period and other means by which interested~~
28 ~~persons may comment upon the determinations.~~
29 (c) No provisions in any general permit issued under this Rule shall be interpreted ~~as allowing~~ to allow the Permittee
30 ~~permittee~~ to violate state surface water standards, groundwater standards outside a Compliance Boundary established
31 in accordance with 15A NCAC 02L .0107, or other applicable environmental Rules. Construction of new water supply
32 wells for human consumption shall be prohibited within Compliance Boundaries for facilities covered under general
33 permits issued under this Section. General permits issued pursuant to this Rule shall be considered individual permits
34 for purposes of Compliance Boundaries established under 15A NCAC 02L .0107.
35 (d) To obtain ~~an individual~~ a Certificate of Coverage, a Notice of Intent to be covered by the general permit ~~must~~
36 ~~shall~~ be given by the Applicant ~~applicant~~ to the Division using ~~forms provided by the Division. Division-approved~~
37 ~~forms.~~ Coverage under the general permit shall be granted unless the Director makes a determination under Paragraph

1 (h) of this Rule that an individual permit is required. If all requirements of Paragraph (h) are not met, an individual
2 permit application and full application review procedure shall be required.

3 (e) ~~General permits~~ A general permit shall be effective for a term not to exceed ~~five years~~ eight years, at the end of
4 which the Division may renew ~~them~~ it. The Division shall satisfy public notice requirements specified in Paragraph
5 (b) of this Rule prior to renewal of a general permit. ~~permits~~. If the Division does not renew a general permit, all
6 operations covered under that general permit shall be notified to submit applications for individual permits.

7 (f) Anyone engaged in activities covered by the general permit ~~rules~~ rules, but not permitted in accordance with this
8 Subchapter shall be in violation of G.S. 143-215.1.

9 (g) Any individual covered or considering coverage under a general permit may choose to pursue an individual permit
10 for any operation covered by this Rule.

11 (h) The Director may require any person, otherwise eligible for coverage under a general permit, to apply for an
12 individual permit by notifying that person that an application is required. Notification shall consist of a written
13 description of the ~~reason(s)~~ reason for the decision, appropriate permit application forms and application instructions,
14 a statement establishing the required date for submission of the application, and a statement informing the person that
15 coverage by the general permit shall automatically terminate upon issuance of the individual permit. Reasons for
16 requiring application for an individual permit include:

- 17 (1) the operation is a significant contributor of pollutants to the waters of the state;
- 18 (2) conditions at the permitted site change, altering the constituents or characteristics of the wastewater
19 such that the operation no longer qualifies for coverage under a general permit;
- 20 (3) noncompliance with the general permit;
- 21 (4) noncompliance with the Commission rules in this Chapter;
- 22 (5) a change has occurred in the availability of demonstrated technology or practices for the control or
23 abatement of pollutants applicable to the operation;
- 24 (6) a determination by the Division that there has been or is the potential to have a direct discharge of
25 ~~wastewater, sludge~~ wastewater or residuals to waters of the state; or
- 26 (7) the system has been allowed to deteriorate or leak such that it poses an immediate threat to the
27 environment.

28 (i) General permits or individual Certificate of Coverages may be modified, terminated, or revoked and reissued in
29 accordance with the authority and requirements of rules of this Subchapter.

30

31 *History Note:* Authority G.S. 143-215.1; 143-215.3(a)(1); 143-215.10C;

32 Eff. September 1, ~~2006-2006~~;

33 Readopted Eff. September 1, 2018.

1 15A NCAC 02T .0112 is readopted as published in 32:06 NCR 531 as follows:

2

3 **15A NCAC 02T .0112 DELEGATION OF AUTHORITY**

4 For permits issued by the Division, the Director is authorized to delegate any or all of the functions contained in the
5 rules of this Subchapter except the following:

6 (1) denial of a permit application;

7 (2) revocation of a permit not requested by the ~~permittee~~; Permittee; and

8 (3) modification of a permit not requested by the ~~permittee~~; Permittee.

9

10 *History Note: Authority G.S. 143-215.3(a)(1); 143-215.3(a)(4);*

11 *Eff. September 1, ~~2006~~ 2006;*

12 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .0113 is readopted with changes as published in 32:06 531-533 as follows:

2

3 **15A NCAC 02T .0113 PERMITTING BY REGULATION**

4 (a) The following disposal systems as well as those in Permitting By Regulation rules in this Subchapter (i.e., Rules
5 .0203, .0303, .0403, ~~.1003~~, .1103, .1203, .1303, .1403, and .1503) ~~are~~ shall be deemed to be permitted pursuant to G.S.
6 ~~143-215.1(b)~~ 143-215.1(b), and it shall not be necessary for the Division to issue individual permits or coverage under
7 a general permit for construction or operation of the following disposal systems provided the system does not result
8 in any violations of surface water or groundwater standards, there is no direct discharge to surface waters, and all
9 criteria required for the specific system ~~is~~ are met:

10 (1) Swimming pool and spa filter backwash and drainage, filter backwash from aesthetic fountains, and
11 filter backwash from commercial or residential water features such as garden ponds or fish ~~ponds~~
12 ponds, that is discharged to the land surface;

13 (2) Backwash from raw water intake screening devices that is discharged to the land surface;

14 (3) Condensate from residential or commercial air conditioning units that is discharged to the land
15 surface;

16 (4) Discharges to the land surface from individual non-commercial car washing operations;

17 (5) Discharges to the land surface from flushing and hydrostatic testing water associated with utility
18 distribution systems, new sewer extensions or new reclaimed water distribution lines;

19 (6) Street wash water that is discharged to the land surface;

20 (7) Discharges to the land surface from firefighting ~~fire-fighting~~ activities;

21 (8) Discharges to the land surface associated with emergency removal and treatment activities for
22 spilled oil authorized by the federal or state on-scene coordinator when such removals are
23 undertaken to minimize overall environmental damage due to an oil spill;

24 (9) Discharges to the land surface associated with biological or chemical decontamination activities
25 performed as a result of an emergency declared by the Governor or the Director of the Division of
26 Emergency Management and that are conducted by or under the direct supervision of the federal or
27 state on-scene coordinator and that meet the following criteria:

28 (A) the volume produced by the decontamination activity is too large to be contained onsite;

29 (B) the Division is informed prior to commencement of the decontamination activity; and

30 (C) the wastewater is not radiologically contaminated or classified as hazardous waste;

31 (10) Drilling muds, cuttings and well water from the development of wells or from other construction
32 ~~activities~~ activities, including directional boring, except such wastes generated in the construction
33 and development of oil and gas wells regulated by Article 27 of G.S. 113;

34 (11) Purge water from groundwater monitoring wells;

35 (12) Composting facilities for ~~dead animals~~, animals, animal mortality if the construction and operation
36 of the facilities is approved by the North Carolina Department of Agriculture and Consumer
37 Services; the facilities are constructed on an impervious, weight-bearing foundation, operated under

1 a roof; and the facilities are approved by the State Veterinarian pursuant to G.S. ~~106-403~~;106-403.

2 In the event of an imminent threat of a contagious animal disease, any emergency measure or
3 procedure related to composting of animal mortality pursuant to G.S. 106-399.4(a):

4 (13) Overflow from elevated potable water storage facilities;

5 (14) Mobile carwashes if:

6 (A) all detergents used are biodegradable;

7 (B) no steam cleaning, engine or parts cleaning is being conducted;

8 (C) notification is made prior to operation by the owner to the municipality or if not in a
9 municipality then the county where the cleaning service is being provided; and

10 (D) ~~all~~ non-recyclable washwater is collected and discharged into a sanitary sewer or
11 wastewater treatment ~~facility~~ facility, upon approval of the facility's ~~owner~~; owner, such
12 that no ponding or runoff of the washwater occurs;

13 (15) Mine tailings ~~where~~ if no chemicals are used in the mining process;

14 (16) Mine dewatering ~~where~~ if no chemicals are used in the mining process; ~~and~~

15 (17) Wastewater created from the washing of produce, with no further processing on-site, on farms where
16 the wastewater is irrigated onto fields so as not to create runoff or cause a ~~discharge~~; discharge; ~~and~~

17 (18) Discharges to the land surface of less than 5,000 gallons per week of backwash water from
18 greensand filters, not including conventional filters, reverse osmosis, and ion exchange filters, at
19 potable water wells, provided ponding or runoff does not occur and the backwash does not ~~contain~~
20 radioactive material, exceed the Maximum Contaminant Level (MCL) for radionuclides or arsenic;
21 and

22 (19) Discharges to the land surface of less than 350 gallons per week of backwash water from reverse
23 osmosis, ion exchange filters, greensand filters at private drinking water wells, [wells serving single
24 family residences,] provided ponding or runoff does not occur.

25 (b) Nothing in this Rule shall be deemed to allow the violation of any ~~assigned~~ surface water, groundwater, or air
26 quality standards, and in addition any such violation shall be considered a violation of a condition of a permit. Further,
27 nothing in this Rule shall be deemed to apply to or permit disposal systems for which a state National Pollutant
28 Discharge Elimination System permit is otherwise required.

29 (c) Any violation of this Rule or any discharge to surface waters from the disposal systems listed in Paragraph (a) of
30 this Rule or the activities listed in other Permitted By Regulation rules in this Subchapter shall be reported in
31 accordance with 15A NCAC 02B .0506.

32 (d) Disposal systems deemed permitted under this Subchapter shall remain deemed permitted, notwithstanding any
33 violations of surface water or groundwater standards or violations of this Rule or other Permitted By Regulation rules
34 in this Subchapter, until such time as the Director determines that they shall not be deemed permitted in accordance
35 with the criteria established in this Rule.

36 (e) The Director may determine that a disposal system ~~should~~ shall not be deemed to be permitted in accordance with
37 this Rule or other Permitted By Regulation rules in this Subchapter and require the disposal system to obtain an

1 individual permit or a certificate of coverage under a general permit. This determination shall be made based on
2 existing or projected environmental impacts, compliance with the provisions of this Rule or other Permitted By
3 Regulation rules in this Subchapter, and the compliance history of the facility owner.

4

5 *History Note: Authority G.S. 130A-300; 143-215.1(a)(1); 143-215.1(b)(4)(e); 143-215.3(a);*
6 *Eff. September 1, 2006;*
7 *Amended Eff. March 19, 2015; June 18, ~~2011-2011~~;*
8 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .0114 is readopted with changes as published in 32:06 NCR 533-535 as follows:

2

3 **15A NCAC 02T .0114 WASTEWATER DESIGN FLOW RATES**

4 (a) This Rule shall be used to determine wastewater flow rates for all systems ~~covered~~ governed by this Subchapter
5 unless alternate criteria are provided by a ~~program specific~~ program-specific rule ~~and~~ or for flow used for the purposes
6 of 15A NCAC 02H .0105. These are ~~minimum~~ design daily flow rates for normal use and occupancy situations. Higher
7 flow rates may be required where usage and occupancy are atypical, ~~including,~~ including those in Paragraph (e) of
8 this Rule. Wastewater flow calculations ~~must~~ shall take hours of operation and anticipated maximum
9 ~~occupancies/usage~~ occupancies and usage into account when calculating peak flows for design.

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

16 (c) The following table shall be used to determine the minimum allowable design daily flow of wastewater facilities.
17 Design flow rates for establishments not identified below shall be determined using available flow data, water-using
18 fixtures, occupancy or operation patterns, and other measured data.

19

20 Type of Establishments	Daily Flow For Design
21 Barber and beauty shops	
22 Barber Shops	50 gal/chair
23 Beauty Shops	125 gal/booth or bowl
24 Businesses, offices and factories	
25 General business and office facilities	25 gal/employee/shift
26 Factories, excluding industrial waste	25 gal/employee/shift
27 Factories or businesses with showers or food preparation	35 gal/employee/shift
28 Warehouse	100 gal/loading bay
29 Warehouse – self storage (not including caretaker residence)	1 gal/unit
30 Churches	
31 Churches without kitchens, day care or camps	3 gal/seat
32 Churches with kitchen	5 gal/seat
33 Churches providing day care or camps	25 gal/person (child & employee)
34 Fire, rescue and emergency response facilities	
35 Fire or rescue stations without on site staff	25 gal/person
36 Fire or rescue stations with on-site staff	50 gal/person/shift
37 Food and drink facilities	

1	Banquet, dining hall	30 gal/seat
2	Bars, cocktail lounges	20 gal/seat
3	Caterers	50 gal/100 sq ft floor space
4	Restaurant, full Service	40 gal/seat
5	Restaurant, single service articles	20 gal/seat
6	Restaurant, drive-in	50 gal/car space
7	Restaurant, carry out only	50 gal/100 sq ft floor space
8	Institutions, dining halls	5 gal/meal
9	Deli	40 gal/100 sq ft floor space
10	Bakery	10 gal/100 sq ft floor space
11	Meat department, butcher shop or fish market	75 gal/100 sq ft floor space
12	Specialty food stand or kiosk	50 gal/100 sq ft floor space
13	Hotels and Motels	
14	Hotels, motels and bed & breakfast facilities, without in-room cooking facilities	120 gal/room
16	Hotels and motels, with in-room cooking facilities	175 gal/room
17	Resort hotels	200 gal/room
18	Cottages, cabins	200 gal/unit
19	Self service laundry facilities	500 gal/machine
20	Medical, dental, veterinary facilities	
21	Medical or dental offices	250 gal/practitioner/shift
22	Veterinary offices (not including boarding)	250 gal/practitioner/shift
23	Veterinary hospitals, kennels, animal boarding facilities	20 gal/pen, cage, kennel or stall
24	Hospitals, medical	300 gal/bed
25	Hospitals, mental	150 gal/bed
26	Convalescent, nursing, rest homes without laundry facilities	60 gal/bed
27	Convalescent, nursing, rest homes with laundry facilities	120 gal/bed
28	Residential care facilities	60 gal/person
29	Parks, recreation, camp grounds, R-V parks and other outdoor activity facilities	
30	Campgrounds with comfort station, without water or sewer hookups	75 gal/campsite
32	Campgrounds with water and sewer hookups	100 gal/campsite
33	Campground dump station facility	50 gal/space
34	Construction, hunting or work camps with flush toilets	60 gal/person
35	Construction, hunting or work camps with chemical or portable toilets	40 gal/person
37	Parks with restroom facilities	250 gal/plumbing fixture

1	Summer camps without food preparation or laundry facilities	30 gal/person
2	Summer camps with food preparation and laundry facilities	60 gal/person
3	Swimming pools, bathhouses and spas	10 gal/person
4	Public access restrooms	325 gal/plumbing fixture
5	Schools, preschools and day care	
6	Day care and preschool facilities	25 gal/person (child & employee)
7	Schools with cafeteria, gym and showers	15 gal/student
8	Schools with cafeteria	12 gal/student
9	Schools without cafeteria, gym or showers	10 gal/student
10	Boarding schools	60 gal/person (student & employee)
11	Service stations, car wash facilities	
12	Service stations, gas stations	250 gal/plumbing fixture
13	Car wash facilities (if recycling water see Rule .0235)	1200 gal/bay
14	Sports centers	
15	Bowling center	50 gal/lane
16	Fitness, exercise, karate or dance center	50 gal/100 sq ft
17	Tennis, racquet ball	50 gal/court
18	Gymnasium	50 gal/100 sq ft
19	Golf course with only minimal food service	250 gal/plumbing fixture
20	Country clubs	60 gal/member or patron
21	Mini golf, putt-putt	250 gal/plumbing fixture
22	Go-kart, motocross	250 gal/plumbing fixture
23	Batting cages, driving ranges	250 gal/plumbing fixture
24	Marinas without bathhouse	10 gal/slip
25	Marinas with bathhouse	30 gal/slip
26	Video game arcades, pool halls	250 gal/plumbing fixture
27	Stadiums, auditoriums, theaters, community centers	5 gal/seat
28	Stores, shopping centers, malls and flea markets	
29	Auto, boat, recreational vehicle dealerships/showrooms	
30	with restrooms	125 gal/plumbing fixture
31	Convenience stores, with food preparation	60 gal/100 sq ft
32	Convenience stores, without food preparation	250 gal/plumbing fixture
33	Flea markets	30 gal/stall
34	Shopping centers and malls with food service	130 gal/1000 sq ft
35	Stores and shopping centers without food service	100 gal/1000 sq ft
36	Transportation terminals – air, bus, train, ferry, port and dock	5 gal/passenger

1 (d) Design daily flow rates for proposed non-residential developments where the types of use and occupancy are not
2 known shall be designed for a minimum of 880 gallons per ~~acre~~ acre, or the Applicant ~~applicant~~ shall specify an
3 anticipated flow based upon anticipated or potential uses.

4 ~~(e) Conditions applicable to the use of the above design daily flow rates:~~

5 (1) ~~For restaurants, convenience stores, service stations and public access restroom facilities, higher~~
6 ~~design daily flow rates shall be required based on higher expected usage where use is increased~~
7 ~~because of its proximity to highways, malls, beaches, or other similar high use areas.~~

8 ~~(e)(2)~~ Residential property on barrier islands and similar communities located south or east of the Atlantic Intracoastal
9 Waterway and used as vacation rental as defined in G.S. 42A-4 shall use 120 gallons per day per habitable room.
10 Habitable room shall mean a room or enclosed floor space used or intended to be used for living or sleeping, excluding
11 kitchens and dining areas, bathrooms, shower rooms, water closet compartments, laundries, pantries, foyers,
12 connecting corridors, closets, and storage spaces.

13 (f) An adjusted daily sewage flow design rate shall be granted for permitted but not yet tributary connections and
14 future connections tributary to the system upon showing that the capacity of a sewage system is adequate to meet
15 actual daily wastewater flows from a facility included in Paragraph (b) or (c) of this Rule without causing flow
16 violations at the receiving wastewater treatment plant or ~~capacity-related~~ capacity-related sanitary sewer overflows
17 within the collection system as follows:

18 (1) Documented, representative data from that facility or a comparable facility shall be submitted by an
19 authorized signing official in accordance with Rule .0106 of this Section to the Division ~~as follows~~
20 for all flow reduction ~~request~~ requests, as follows:

21 (A) Dates of flow meter calibrations during the time frame evaluated and indication if any
22 adjustments were necessary.

23 (B) A breakdown of the type of connections (e.g. two bedroom units, three bedroom units) and
24 number of customers for each month of submitted data as applicable. Identification of any
25 non-residential connections including subdivision ~~clubhouses/pools~~, clubhouses and pools,
26 restaurants, schools, churches and businesses. For each non-residential connection,
27 information ~~as~~ identified in Paragraph (c) of this Rule (e.g. 200 seat church, 40 seat
28 restaurant, 35 person pool bathhouse).

29 (C) ~~Owner of the collection system.~~ A letter of agreement from the owner or an official,
30 meeting the criteria of Rule .0106 of this [Subchapter,] Section of the receiving collection
31 system or treatment works accepting the wastewater and agreeing with the adjusted design
32 rate.

33 (D) Age of the collection system.

34 (E) Analysis of inflow and infiltration within the collection system or receiving treatment plant,
35 as applicable.

36 (F) ~~Where~~ If a dedicated wastewater treatment plant serves the specific area and is
37 representative of the residential wastewater usage, at least the 12 most recent consecutive

1 monthly average wastewater flow readings and the daily total wastewater flow readings for
2 the highest average wastewater flow month per ~~customers~~ customers, as reported to the
3 Division.

4 (G) ~~Where~~ If daily data from a wastewater treatment plant cannot be ~~utilized~~ used or is not
5 representative of the project area: ~~at least~~ 12 months worth of monthly average wastewater
6 flows from the receiving treatment plant shall be evaluated to determine the peak sewage
7 month. Daily wastewater flows shall then be taken from a flow meter installed at the most
8 downstream point of the collection area for the peak month selected that is representative
9 of the project area. Justification for the selected placement of the flow meter shall also be
10 provided.

11 (H) An estimated ~~minimum~~ design daily sewage flow rate shall be ~~taken~~ determined by
12 calculating the numerical average of the top three daily readings for the highest average
13 flow month. The calculations shall also account for seasonal variations, excessive inflow
14 and infiltration, age and suspected meter ~~reading/recording~~ reading and recording errors.

15 (2) The Division shall evaluate all data submitted but shall also consider other factors in granting, with
16 or without adjustment, or denying a flow reduction request including: applicable weather conditions
17 during the data period (i.e. rainy or drought), other historical monitoring data for the particular
18 facility or other similar facilities available to the Division, the general accuracy of monitoring
19 reports and flow meter readings, and facility usage (i.e., resort area).

20 (3) Flow increases shall be required if the calculations in Subparagraph (f)(1) of this Rule yield design
21 flows higher than that specified in Paragraphs (b) or (c) of this Rule.

22 (4) The Permittee ~~applicant/owner~~ shall retain the letter of any approved adjusted daily design flow rate
23 for the life of the facility and shall transfer such letter to any future Permittee, ~~new system owner~~.

24
25 *History Note:* Authority G.S. 143-215.1; 143-215.3(a)(1);
26 Eff. September 1, 2006-2006;
27 Readopted Eff. September 1, 2018.

1 15A NCAC 02T .0115 is readopted as published in 32:06 NCR 535-536 as follows:

2

3 **15A NCAC 02T .0115 OPERATIONAL AGREEMENTS**

4 (a) Prior to issuance or reissuance of a permit pursuant to this Subchapter for a wastewater facility or sewer extension
5 as specified in G.S. 143-215.1(d1), a private applicant shall provide evidence with the permit application: Applicant
6 shall:

7 (1) ~~To show~~ Demonstrate that the Applicant ~~applicant~~ has been designated as a public utility by the
8 North Carolina Utilities Commission and is authorized to provide service to the specific project area.
9 This may be a Certificate of Public Convenience and Necessity or letter from the Public Staff; or

10 (2) Enter into and submit an executed Operational Agreement pursuant to G.S. 143-215.1(d1) with the
11 Division.

12 (b) ~~Where~~ If the Applicant ~~applicant is not a Homeowner's or Property Owner's Association,~~ developer of lots to be
13 sold, an executed Operational Agreement ~~must~~ shall be submitted with the permit application. A copy of the Articles
14 of Incorporation, Declarations and By-laws shall be submitted to the ~~Division~~ Division, as required by 15A NCAC
15 02T .0116, with the engineer's certification ~~as required by 15A NCAC 02T .0116~~ and prior to operation of the
16 permitted facilities.

17 (c) ~~For permit applications where~~ If the Applicant ~~applicant~~ is a legally formed Homeowners' or Property Owner's
18 Association, an executed Operational Agreement and a copy of the Articles of Incorporation, Declarations and By-
19 laws shall be submitted to the Division with the permit application.

20 (d) ~~An Operational Agreement is required prior to donation to a public utility or municipality unless the applicant is~~
21 ~~the respective municipality or public utility. The Operational Agreement shall become void upon transferring the~~
22 ~~permit to the public utility or municipality via a change of ownership request to the Division and permit issuance into~~
23 ~~the new owner name.~~

24

25 *History Note: Authority G.S. 143-215.1(d1);*

26 *Eff. September 1, 2006-2006;*

27 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .0116 is readopted as published in 32:06 NCR 536 as follows:

2

3 **15A NCAC 02T .0116 CERTIFICATION OF COMPLETION**

4 (a) Prior to the operation of any sewer system, treatment works, utilization system, or disposal system for which an
5 individual permit has been issued in accordance with this Subchapter and the application prepared by licensed
6 professional, a certification ~~must~~ shall be received by the Division from a professional certifying that the sewer system,
7 treatment works, utilization system, or disposal system has been installed in accordance with the rules, any minimum
8 design criteria except as noted, and approved plans and specifications. The professional certification ~~must~~ shall be on
9 official forms completely filled out, where applicable, and submitted to the Division. For facilities with phased
10 construction or where there is a need to operate certain equipment under actual operating conditions prior to
11 certification, additional certification may be needed as follow-ups to the initial, pre-operation certification. The
12 Division may not acknowledge receipt of engineering certifications. The Permittee and the professional shall track the
13 submittal of certifications.

14 (b) For sewer extensions ~~involving developer donated projects where the developer is the original Permittee, where a~~
15 transfer of ownership is desired, a change of ownership request shall be submitted ~~to the Division on Division on~~
16 Division-approved forms upon certifying completion of the project.

17 (c) All deeds, easements and encroachment agreements necessary for installation and operation and maintenance of
18 the system shall be obtained prior to operation of the system.

19 (d) The Permittee shall maintain a copy of the individual permit and a set of final record drawings for the life of the
20 facility.

21

22 *History Note: Authority G.S. 143-215.1;*

23 *Eff. September 1, ~~2006-2006~~;*

24 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .0117 is readopted as published in 32:06 NCR 536 as follows:

2

3 **15A NCAC 02T .0117 TREATMENT FACILITY OPERATION AND MAINTENANCE**

4 (a) For facilities permitted under this Subchapter, the ~~permittee must~~ Permittee shall designate an Operator in
5 Responsible Charge and a back-up operator as required by the Water Pollution Control System Operators Certification
6 Commission ~~as established in pursuant to 15A NCAC 08F .0200 and 15A NCAC 08G .0200. Copies of this Rule are~~
7 ~~available from the Division, Archdale Building, 512 N. Salisbury Street, Raleigh, North Carolina 27604 at no charge.~~

8 (b) In order to insure the proper operation and maintenance of facilities permitted under this Section, the Operator in
9 Responsible ~~Charge,~~ Charge or a back-up operator when appropriate ~~must~~ shall operate and visit the facility as
10 required by the Water Pollution Control System Operators Certification Commission ~~as established in pursuant to 15A~~
11 ~~NCAC 08F .0200 and 15A NCAC 08G .0200. Copies of this Rule are available from the Division, Archdale Building,~~
12 ~~512 N. Salisbury Street, Raleigh, North Carolina 27604 at no charge.~~

13

14 *History Note: Authority G.S. 143-215.3;*

15 *Eff. September 1, ~~2006-2006~~;*

16 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .0118 is readopted as published in 32:06 NCR 536-537 as follows:

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15A NCAC 02T .0118 DEMONSTRATION OF FUTURE WASTEWATER TREATMENT CAPACITIES

~~In order to insure that treatment, utilization, or disposal systems do not exceed their hydraulic treatment capacities, no~~
No permits for sewer line extensions shall be issued to wastewater treatment systems owned or operated by municipalities, counties, sanitary districts or public utilities unless they meet the following requirements:

- (1) Prior to exceeding 80 percent of the ~~wastewater treatment system's~~ permitted hydraulic capacity (based on the average flow ~~of~~ during the last calendar year), the ~~permittee must~~ Permittee shall submit an ~~approvable~~ engineering evaluation of their future wastewater treatment, utilization, and disposal needs. This evaluation ~~must~~ shall outline ~~specific~~ plans for meeting future wastewater treatment, utilization, or disposal needs by either expansion of the existing system, elimination or reduction of extraneous flows, or water conservation and ~~must shall~~ include the ~~source(s)~~ source of funding for the improvements. If expansion is not proposed or is proposed for a later date, a ~~detailed~~ justification ~~must shall~~ be made ~~to the satisfaction of the Director~~ that wastewater treatment needs will be met based on past growth records and future growth projections and, as appropriate, shall include conservation plans or other ~~specific~~ measures to achieve waste flow reductions.
- (2) Prior to exceeding 90 percent of the ~~wastewater treatment, utilization, or disposal systems~~ permitted hydraulic ~~capacity,~~ capacity (based on the average flow during the last calendar year), the ~~permittee must~~ Permittee shall obtain all permits needed for the expansion of the wastewater treatment, utilization, or disposal system and, if construction is needed, submit ~~approvable~~ final plans and specifications for ~~expansion~~ expansion, including a construction schedule. If expansion is not proposed or is proposed for a later date, a ~~detailed~~ justification ~~must shall~~ be made ~~to the satisfaction of the Director~~ that wastewater treatment needs will be met based on past growth records and future growth projections and, as appropriate, shall include conservation plans or other specific measures to achieve waste flow reductions.
- (3) The Director shall allow permits to be issued to facilities that are exceeding the 80 percent or 90 percent ~~loading rates~~ disposal capacity if the additional flow is not projected to result in the facility exceeding its permitted hydraulic capacity, the facility is in compliance with all other permit limitations and requirements, and ~~it is demonstrated to the satisfaction of the Director~~ that adequate progress is being made in developing the needed engineering evaluations or plans and specifications. In determining the adequacy of the progress, the Director shall consider the projected flows, the complexity and scope of the work to be ~~completed~~ completed, and any projected environmental impacts.

*History Note: Authority G.S. 143-215.3;
Eff. September 1, 2006-2006;
Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .0120 is readopted with changes as published in 32:06 NCR 537 as follows:

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3 **15A NCAC 02T .0120 HISTORICAL CONSIDERATION IN PERMIT APPROVAL**

4 (a) The Division shall consider an Applicant's ~~applicant's~~ compliance history in accordance with G.S. 143-
5 215.1(b)(4)b.2. and with the requirements contained ~~within in~~ this Rule for environmental permits and certifications
6 issued under Article 21. Paragraph (b) of this Rule is a partial set of criteria for routine consideration under G.S. 143-
7 215.1(b)(4)b.2. The Director may also consider other compliance information in determining compliance history.

8 (b) When any of the following apply, permits for new and expanding facilities shall not be granted, unless the Division
9 determines that the permit is specifically and solely needed for the construction of facilities to resolve non-compliance
10 with any environmental statute or rule:

11 (1) The Applicant ~~applicant~~ or any parent, subsidiary, or other affiliate of the Applicant ~~applicant or~~
12 ~~parent~~ has been convicted of environmental crimes under G.S. 143-215.6B or under Federal law
13 that would otherwise be prosecuted under G.S. 143-215.6B ~~where all appeals~~ and all appeals of this
14 conviction have been abandoned or exhausted.

15 (2) The Applicant ~~applicant~~ or any parent, subsidiary, or other affiliate of the Applicant ~~affiliation~~ has
16 previously abandoned a wastewater treatment facility without properly closing the facility in
17 accordance with the permit or this Subchapter.

18 (3) The Applicant ~~applicant~~ or any parent, subsidiary, or other affiliate of the Applicant ~~affiliation~~ has
19 not paid a civil penalty ~~where all appeals~~ and all appeals of this penalty have been abandoned or
20 exhausted.

21 (4) The Applicant ~~applicant~~ or any parent, subsidiary, or other affiliate of the Applicant ~~affiliation~~ is
22 currently not compliant with any compliance schedule in a permit, settlement agreement or order.

23 (5) The Applicant ~~applicant~~ or any parent, subsidiary, or other affiliate of the Applicant ~~affiliation~~ has
24 not paid an annual fee in accordance with Rule ~~.0105(e)(2).~~ .0105(e)(2) of this Section.

25 (c) Permits for renewing facilities shall not be granted if the Applicant or any affiliation has not paid an annual fee in
26 accordance with Rule ~~.0105(e)(2).~~ .0105(e)(2) of this Section.

27 (d)(e) Any variance to this Rule shall be approved by the Director and shall be based on the current compliance status
28 of the Permittee's ~~permittee's~~ facilities and the magnitude of previous violations. Variance approval shall not be
29 delegated to subordinate staff.

30

31 *History Note:* Authority G.S. 143-215.1(b); 143-215.3(a);

32 *Eff. September 1, 2006- 2006;*

33 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .0201 is readopted as published in 32:06 NCR 537 as follows:

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SECTION .0200 – WASTEWATER PUMP AND HAUL SYSTEMS

4

15A NCAC 02T .0201 SCOPE

6 This Section applies to all pump and haul activities of wastewater under the authority of the Division. This Section
7 does not apply to the transport of animal waste from animal waste management systems permitted under Section .1300
8 of this Subchapter and Section .1400 of this Subchapter. In addition, this Section does not apply to the transport of
9 wastewater residuals or biosolids permitted under Section .1100 of this Subchapter or Section .1200 of this Subchapter.

10

11 *History Note: Authority G.S. 143-215.1; 143-215.3(a);*

12 *Eff. September 1, ~~2006~~2006;*

13 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .0203 is readopted with changes as published in 32:06 NCR 537 as follows:

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3 **15A NCAC 02T .0203 PERMITTING BY REGULATION**

4 (a) The following systems ~~are~~ shall be deemed permitted pursuant to Rule .0113 of this Subchapter ~~provided~~ if the
5 system meets the criteria in Rule .0113 of this Subchapter and all criteria required for ~~the specific~~ that system in this
6 Rule:

7 (1) Wastewater from single-beverage kiosks and similar operations not regulated under the authority of
8 the Division of ~~Environmental~~ Public Health if the following criteria are met:

9 (A) The facility notifies the appropriate Division regional office in writing advising of the type
10 of operation, type and quantity of wastewater generated, and the receiving wastewater
11 treatment facility. A letter from the facility that is accepting the wastewater (type and
12 quantity) ~~specifically~~ agreeing to accept wastewater from the applicant shall be ~~included.~~
13 included;

14 (B) The wastewater does not contain any human waste. ~~Waste; and}waste; and~~

15 (C) The waste is collected and discharged into a sewer or treatment system designed and
16 permitted to accept the type of wastewater being pumped and hauled.

17 (2) Industrial wastewater if the following criteria are met:

18 (A) The facility notifies the appropriate Division regional office in writing advising of the type
19 of operation, type and quantity of wastewater generated, ~~location,~~ location of wastewater
20 generation, and the receiving wastewater treatment facility. A letter from the facility
21 accepting the wastewater (type and quantity) ~~specifically~~ agreeing to accept wastewater
22 from the applicant shall be ~~included.~~ included;

23 (B) The wastewater does not contain any human waste. waste;

24 (C) The waste is collected and discharged into a sewer or treatment system designed and
25 permitted to accept the type of wastewater being pumped and ~~hauled.~~ hauled;

26 (D) The pump and haul activity is not to alleviate a failing wastewater ~~system.~~ system; and

27 (E) The Division regional office concurs in writing that the activity meets the criteria in this
28 Rule.

29 (3) ~~Pump~~ Pumping and hauling of waste from sewer cleaning activities.

30 (b) The Director may determine that a system ~~should~~ shall not be deemed permitted in accordance with this Rule and
31 Rule .0113 of this Subchapter. This determination shall be made in accordance with Rule .0113(e) of this Subchapter.

32

33 *History Note:* Authority G.S. 143-215.1; 143-215.3(a);

34 Eff. September 1, ~~2006-2006;~~

35 Readopted Eff. September 1, 2018.

1 15A NCAC 02T .0204 is readopted as published in 32:06 NCR 538 as follows:

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3 **15A NCAC 02T .0204 PERMITTING**

4 (a) ~~Pump and haul permits are not acceptable long term domestic wastewater treatment alternatives.~~ Permits for
5 domestic wastewater shall only be issued in cases of environmental emergencies, nuisance conditions (e.g. odors,
6 vectors), health problems, or for unavoidable delays in construction of systems previously permitted under this
7 Section. Applications for pump and haul permits to for unavoidable construction delays must include documentation
8 demonstrating the delay could not be avoided. Failure to complete construction prior to the expiration of a pump and
9 haul permit due to unavoidable construction delays may subject the Permittee to enforcement action by the Division
10 if the delay could have been avoided by payment of additional costs. The permits shall be issued for a period of no
11 more than six months unless the Director determines that conditions are such that the final waste management options
12 cannot be implemented within six months.

13 (b) Applications shall include a letter from the facility accepting the wastewater ~~specifically~~ agreeing to accept
14 wastewater (type and quantity) from the applicant for the proposed activity.

15 (c) Pump and haul facilities shall include at a minimum 24 hours storage equipped with high-water alarms.

16 (d) Permitted pump and haul facilities or activities under this rule shall be inspected at least daily by the permittee or
17 its representative.

18

19 *History Note: Authority G.S. 143-215.1; 143-215.3(a.);*
20 *Eff. September 1, ~~2006~~2006;*
21 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .0301 is readopted as published in 32:06 NCR 538 as follows:

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SECTION .0300 - SEWER EXTENSIONS

4

15A NCAC 02T .0301 SCOPE

6 The rules in this Section set forth the requirements and procedures for application and issuance of permits for sewers
7 as required by G.S. 143-215.1(a) and permitting delegation of local sewer programs allowable by G.S. 143-215.1(f).

8 The rules in this Section apply to all sewer extensions including gravity sewers, pump stations, force mains, vacuum
9 sewers, pressure sewers (including Septic Tank Effluent Pump (STEP) systems) or alternative sewer systems that
10 discharge to another sewer system and requirements for local delegated sewer extension permitting programs.

11

12 *History Note: Authority G.S. 143-215.1; 143-215.3(a);*

13 *Eff. September 1, ~~2006~~-2006;*

14 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .0302 is readopted with changes as published in 32:06 NCR 538-539 as follows:

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3 **15A NCAC 02T .0302 DEFINITIONS**

4 (a) The following definitions are used in this Section:

5 (1) "Alternative sewer system" means any sewer system (collection system) other than a gravity system
6 or standard pump station and force main. These include pressure sewer systems, septic ~~tank/effluent~~
7 tank with effluent pump (STEP) sewer systems, vacuum sewer system, and small diameter variable
8 grade gravity sewers.

9 (2) "Building" means any structure occupied or intended for supporting or sheltering any occupancy.

10 (3) "Building drain" means that part of the lowest piping of a drainage system that receives the discharge
11 from soil, waste and other drainage pipes that extends 10 feet beyond the walls of the building and
12 conveys the drainage to the building sewer.

13 (4) "Building sewer" means that part of the drainage system that extends from the end of the building
14 drain and conveys the discharge from a single building to a public gravity sewer, private gravity
15 sewer, individual sewage disposal system or other point of disposal.

16 (5) "Fast-track" means a permitting process whereby a professional engineer certifies that a sewer
17 design and associated construction documents conform to all applicable sewer related rules and
18 design ~~criteria, thereby forgoing an upfront technical review by the Division.~~ criteria.

19 (6) "Pressure sewer system" means an interdependent system of grinder pump stations, typically for
20 residences, serving individual wastewater connections for single buildings that share a common and
21 typically a small diameter pressure pipe (1.5 inches through 6 inches). Duplex or greater pump
22 stations connected to a common pressure pipe that can operate both independently and
23 simultaneously with other pump stations while maintaining operation of the system within the
24 operating constraints ~~are not considered~~ shall be ~~exclude~~excluded from the definition of a pressure
25 sewer system.

26 (7) "Private sewer" means any part of a sewer system ~~which~~ that collects wastewater from one building
27 and crosses another property or travels along a street right of way or from more than one building
28 and is not considered a public sewer.

29 (8) "Public sewer" means a sewer located in a dedicated public street, roadway, or dedicated public
30 right-of-way or easement ~~which~~ that is owned or operated by any municipality, county, water or
31 sewer district, or any other political subdivision of the state authorized to construct or operate a
32 sewer system.

33 (9) "Sewer system" means pipelines or conduits, pumping ~~stations,~~ stations including lift stations and
34 grinder stations, alternative ~~systems,~~ systems and ~~appliances appurtenant thereto,~~ appurtenant
35 appliances used for conducting wastewater to a point of ultimate treatment and disposal.

36 (10) "Small diameter, variable grade gravity sewer system" means a system of wastewater collection
37 utilizing an interceptor tank to remove solids and grease from the waste ~~stream,~~ thereby allowing

1 ~~smaller diameter pipes and shallower grades to be used.~~ stream. Flow is transferred to the central
2 gravity system in the public right-of-way by gravity or effluent pumps. With venting and design,
3 inflective grades (up-gradients) may also be accommodated.

4 (11) "Septic ~~tank/effluent~~ tank with effluent pump (STEP) system" means ~~the same type of system as a~~
5 "~~pressure sewer system~~" ~~except that~~ a pressure sewer system in which the individual grinder pump
6 is replaced with a septic tank with an effluent pump either in the second chamber of the septic tank
7 or in a separate pump tank that follows the septic tank.

8 (12) "Vacuum sewer system" means a mechanized system of wastewater collection ~~utilizing~~ using
9 differential air pressure to move the wastewater. Centralized stations provide the vacuum with valve
10 pits providing the collection point from the source and also the inlet air required to move the
11 wastewater. In conjunction with the vacuum pumps, a standard (non vacuum) pump station and
12 force main is used to transport the wastewater from the vacuum tanks to a gravity sewer or ultimate
13 point of treatment and disposal.

14
15 *History Note:* *Authority G.S. 143-215.1; 143-215.3(a);*
16 *Eff. September 1, ~~2006-2006~~;*
17 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .0303 is readopted with changes as published in 32:06 NCR 539-540 as follows:

2

3 **15A NCAC 02T .0303 PERMITTING BY REGULATION**

4 (a) The following systems ~~are~~ shall be deemed permitted pursuant to Rule .0113 of this Subchapter ~~provided~~ if the
5 system meets the criteria in Rule .0113 of this Subchapter and all criteria required for ~~the specific~~ that system in this
6 Rule:

7 (1) A building sewer documented by the local building inspector to be in compliance with the North
8 Carolina State Plumbing ~~Code, which Code and that~~ Code and that serves a single building with the sole purpose
9 of conveying wastewater from that building into a gravity sewer that extends onto or is adjacent to
10 the building's property. A building sewer that contribute more than five percent of the existing
11 wastewater treatment facility's design capacity or 50,000 gallons per day of flow as calculated using
12 the wastewater design flow rates in Rule .0114 of this Subchapter shall not commence operations
13 until after it receives approval ~~{form}~~ from the regional office.

14 (2) A gravity sewer serving a single building with less than 600 gallons per day of flow as calculated
15 using rates in 15A NCAC 02T .0114 that crosses another property or parallels a ~~right-of-way~~ right-
16 of-way, provided that:

17 (A) an easement for crossing another property is obtained, a map is created and both are
18 recorded at the Register of Deeds office in the county of residence for both property owners
19 and runs with the ~~land, land~~ land or, in the case of a building sewer traveling along a right-of-
20 way, documented permission from the dedicated right-of-way owner to use such right-of-
21 way;

22 (B) the building inspector certifies the sewer to the point of connection to the existing sewer is
23 in accordance with state or local plumbing code; and

24 (C) no other connections are made to the sewer without prior approval from the Division.

25 (3) ~~New pump stations or sewage ejectors and force mains if all of the following criteria are met:~~ A
26 pump station and force main serving a single building with less than 600 gallons per day of flow as
27 calculated using the wastewater design flow rates in Rule .0114 of this Subchapter provided that:

28 (A) ~~the pump station serves a single building,~~

29 (B) ~~the force main does not traverse other property or parallel a street right of way,~~

30 (A) an easement for crossing another property is obtained, a map is created and both are
31 recorded at the Register of Deeds office in the county of residence for both property owners
32 and runs with the land or, in the case of a force main traveling along a right-of-way,
33 documented permission form the dedicated right-of-way owner to use such right-of-way;

34 (C)(B) ~~the force main ties~~ if a force main is used, it ties into a non-pressurized
35 pipe/manhole/wetwell pipe, manhole or wetwell; (i.e. is not part of an alternative sewer
36 system);

1 ~~(D)~~(C) the system is approved by the local building inspector as being in complete compliance
2 with the North Carolina Plumbing Code to the point of connection to the existing sewer,
3 and

4 ~~(E)~~(D) no other connections are made to the sewer without prior approval from the Division.

5 (4) The following sewer ~~operations~~ operations, provided that the work conforms to all rules, setbacks
6 and design standards; record drawings of the completed project are kept for the life of the project;
7 and new sources of wastewater flow, immediate or future, are not planned to be connected to the
8 sewer other than previously permitted but not yet tributary:

9 (A) rehabilitation or replacement of sewers ~~in-kind (i.e., size)~~ of the same size and with the
10 same horizontal and vertical alignment;

11 (B) rehabilitation or replacement of public 6-inch sewers with 8-inch ~~sewers~~, sewers, provided
12 that the rehabilitation or replacement is to correct deficiencies and bring the sewer up to
13 current ~~minimum~~ standards;

14 (C) line relocations of the same pipe size and within the same right-of-way or easement;

15 (D) parallel line installations of the same size and within the right-of-way or easement where
16 the existing line will be abandoned;

17 (E) point repairs; and

18 (F) ~~in-place in-place~~ pump station ~~repairs/upgrades and maintaining~~ repairs or upgrades that
19 maintain permitted capacity to within five percent of the original permitted capacity for
20 pump replacement.

21 (b) The Director may determine that a system ~~should~~ shall not be deemed permitted in accordance with this Rule and
22 Rule .0113 of this Subchapter. This determination shall be made in accordance with Rule .0113(e) of this Subchapter.

23
24 *History Note:* *Authority G.S. 143-215.1; 143-215.3(a);*

25 *Eff. September 1, ~~2006-2006~~;*

26 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .0304 is readopted as published in 32:06 NCR 540-541 as follows:

2

3 **15A NCAC 02T .0304 APPLICATION SUBMITTAL**

4 (a) ~~Application~~ Applications for permits pursuant to this Section shall be made on forms provided by the Division.

5 [[https://deq.nc.gov/about/divisions/water-resources/water-resources-permits/wastewater-branch/collection-
7 systems/sewer-extension-permitting](https://deq.nc.gov/about/divisions/water-resources/water-resources-permits/wastewater-branch/collection-
6 systems/sewer-extension-permitting)]

7 (b) Applications shall not be submitted unless the Permittee has assured downstream sewer capacity.

8 (c) For pressure sewers, vacuum sewers, STEP systems and other alternative sewer systems discharging into a sewer
9 system, the Permittee, by certifying the permit application and receiving an issued permit, ~~agrees to be responsible for~~
10 shall maintain in operable condition all individual pumps, tanks, service laterals and main lines as ~~permitted. The line~~
11 ~~from a building to the septic or pump tank is excluded from this responsibility. permitted, excluding the line from a~~
12 building to the septic or pump tank. This does not prohibit the Permittee from entering into a service agreement with
13 another entity. However, the Permittee shall be responsible for correcting any environmental or public health problems
14 with the system.

15 (d) For sewer extensions ~~involving gravity sewers, pump stations and force mains or any combination thereof that do~~
16 ~~not require an Environmental Assessment pursuant to 15A NCAC 01C .0408 (except for low pressure sewers, vacuum~~
17 ~~sewers and STEP systems discharging to a sewer system), are not funded through the Division's Construction, Grants~~
18 ~~and Loans Section, that have been designed in accordance with all applicable rules and design criteria, and where if~~
19 plans, calculations and specifications ~~calculations, specifications,~~ and other supporting documents have been sealed
20 by a professional engineer, application may be made according to the fast-track permitting process.

21 (e) ~~Projects involving an Environmental Assessment per 15A NCAC 01C .0408 or are funded through the Division's~~
22 ~~Construction, Grants and Loans Section must be submitted for a full technical review on application forms provided~~
23 ~~by the Division.~~ An application for sewers involving an Environmental Assessment shall not be considered complete
24 until either a Finding of No Significant Impact or an Environmental Impact Statement and Record of Decision is has
25 been issued.

26 (f) ~~Where the plans were not prepared by a professional engineer, applications shall be submitted for full technical~~
27 ~~review on application forms specified by the Division.~~

28 (g)(f) Low pressure sewer systems, vacuum sewer systems and other alternative sewer systems Sewer systems where
29 the design criteria has not been developed or if the system does not meet all applicable rules and design criteria shall
30 be submitted for a full technical review using the official application form for those systems.
31 [[https://deq.nc.gov/about/divisions/water-resources/water-resources-permits/wastewater-branch/collection-
33 systems/sewer-extension-permitting](https://deq.nc.gov/about/divisions/water-resources/water-resources-permits/wastewater-branch/collection-
32 systems/sewer-extension-permitting)]

33 (h)(g) ~~A letter of agreement from the owner or an official, meeting the criteria in Rule .0106 of this Subchapter, of~~
34 ~~the receiving collection system or treatment works accepting the wastewater is required, if~~ If the application is not
35 submitted by the owner of the receiving collection system or treatment ~~works. works~~ the application shall include a
36 letter of agreement from the owner or an official of the receiving collection system or treatment works that accepts
37 the wastewater and that meets the criteria if Rule .0106 of this Subchapter. This letter shall be specific to the project

1 ~~whether or not capacity has been purchased through an intergovernmental agreement or contract. This letter shall also~~
2 ~~signify that the owner of the receiving collection system or treatment works has adequate capacity to transport and~~
3 ~~treat the proposed new wastewater. This shall not negate the need for downstream sewer capacity calculations. In~~
4 ~~addition, this letter shall:~~

5 (1) specifically refer to the project, regardless whether capacity has been purchased through an
6 intergovernmental agreement or contract;

7 (2) signify that the owner of the receiving collection system or treatment works has adequate capacity
8 to transport and treat the proposed new wastewater; and

9 (3) shall be dated within 12 months from the date of submitting the application.

10 This letter shall not obviate the need for the downstream sewer capacity calculations.

11

12 *History Note: Authority G.S. 143-215.1; 143-215.3(a); 143-215.67;*

13 *Eff. September 1, 2006-2006;*

14 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .0305 is readopted with changes as published in 32:06 NCR 541-543 as follows;

2

3 **15A NCAC 02T .0305 DESIGN CRITERIA**

4 (a) Construction of sewers and sewer extensions are prohibited in the following ~~areas unless the specified~~
5 ~~determinations are made:~~ area:

6 (1) ~~in~~ a natural area designated on the State Registry of Natural Heritage Areas by a protection
7 agreement between the owner and the Secretary, unless ~~the Commission agrees that~~ no prudent,
8 feasible or technologically possible alternative exists; or,

9 (2) ~~in~~ a natural area dedicated as a North Carolina Nature Preserve by mutual agreement between the
10 owner and State of North Carolina (Governor and Council of State), unless ~~the Commission~~
11 ~~recommends and~~ the Governor and Council of State agree that no prudent, feasible or
12 technologically possible alternative exists;

13 (b) Engineering design documents. The following documents shall be prepared prior to submitting a permit
14 application to the Division. If submittal of such documents is not requested in the permitting process (i.e., fast-track),
15 they shall be available upon request by the Division. If required by G.S. 89C, a professional engineer shall prepare
16 these documents:

17 [Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via letter dated December
18 1, 2005, that preparation of engineering design documents pursuant to this Paragraph constitutes practicing
19 engineering under G.S. 89C.]

20 (1) A plan and profile of sewers, showing their proximity to other utilities and natural features, such as
21 water supply lines, water lines, wells, storm drains, surface waters, wetlands, roads and other
22 trafficked areas.

23 (2) Design calculations including pipe and pump sizing, velocity, pump cycle times and level control
24 settings, pump station buoyancy, wet well storage, surge protection, detention time in the wet well
25 and force main, ability to flush low points in force mains with a pump cycle, and downstream sewer
26 capacity analysis.

27 (3) ~~Specifications relative to the sewer system~~ Sewer system specifications describing all materials to
28 be used, methods of construction and means for assuring the quality and integrity of the finished
29 project.

30 (c) All deeds, easements and encroachment agreements necessary for ~~installation and operation~~ installation, operation,
31 and maintenance of the system shall be obtained prior to operation of the system.

32 (d) There shall be no by-pass or overflow lines designed in any new sewer system except for valved piping and
33 appurtenances intended for emergency pumping ~~operation(s).~~ operations.

34 (e) ~~A minimum of two~~ Two feet protection from a 100-year flood shall be provided unless there is a water-tight seal
35 on all station hatches and manholes with control panels and vents extending two feet above the 100-year flood
36 elevation.

1 (f) The following ~~minimum~~ separations shall be provided ~~for~~ from the sewer system to the listed feature except as
2 allowed by Paragraph (g) of this Rule:

3 Storm sewers and other utilities not listed below (vertical) 24 ~~18~~ inches

4 Water mains (vertical-water over sewer including in benched trenches) 18 inches
5 or (horizontal) 10 feet

6 Reclaimed water lines (vertical – reclaimed over sewer) 18 inches
7 or (horizontal) 2 feet

8 Any private or public water supply source, ~~including any~~ consisting of wells, ~~WS-I waters waters, Class I~~
9 Class I, or Class II, impounded or Class III reservoirs used as a source of drinking water
10 100 feet

11 Waters classified ~~WS (except WS I or WS V), WS-II, WS-III, WS-IV, B, SA, ORW, HQW, or SB from~~
12 normal high water (or tide elevation) and elevation), wetlands that are directly abutting these waters
13 and wetlands classified as UWL or SWL
14 50 feet

15 Any other stream, lake, impoundment, wetlands classified as WL, waters classified as C, SC, or WS-V, or
16 ground water lowering and surface drainage ditches 10 feet

17 Any building foundation 5 feet

18 Any basement 10 feet

19 Top slope of embankment or cuts of 2 feet or more vertical height 10 feet

20 Drainage systems and interceptor drains 5 feet

21 Any swimming pool 10 feet

22 Final earth grade (vertical) 36 inches

23 (g) ~~Alternatives where~~ The following separations shall be permitted if separations in Paragraph (f) of this Rule cannot
24 be ~~achieved. Nothing~~ achieved, provided that nothing in this Paragraph shall supersede the allowable alternatives
25 provided in the Commission for Public Health Public Water Supply Rules (15A NCAC 18C), Commission for Public
26 Health Sanitation Rules (15A NCAC 18A) or the Groundwater Protection Rules (15A NCAC 02L and 15A NCAC
27 02C) that pertain to the separation of sewer systems to water mains or public or private wells:

28 (1) For storm sewers, engineering solutions such as ductile iron pipe or structural bridging to prevent
29 crushing the underlying ~~pipe. pipe;~~

30 (2) For public or private wells, piping materials, testing methods and acceptability standards meeting
31 water main standards shall be used where these ~~minimum~~ separations cannot be maintained. All
32 appurtenances shall be outside the 100-foot ~~radius. radius of the well.~~ The ~~minimum~~ separation shall
33 however not be less than 25 feet from a private well or 50 ~~ft~~ feet from a public ~~well. well;~~

34 (3) For public water main horizontal or vertical separations, alternatives as described in 15A NCAC
35 18C .0906(b) and ~~(c).~~ (c);

- 1 (4) For less than 36-inches cover from final earth grade, ductile iron pipe shall be ~~specified-~~ required in
2 any alternative. Ductile iron pipe or other pipe with proper bedding to develop design supporting
3 strength shall be provided where sewers are subject to traffic bearing ~~loads.~~ loads; and
- 4 (5) For all other separations, materials, testing methods and acceptability standards meeting water main
5 standards (15A NCAC 18C) shall be ~~specified-~~ required in any alternative.
- 6 (h) The following criteria shall be met for all pumping stations and force mains:
- 7 (1) Pump Station Reliability:
- 8 (A) ~~Pump stations, except when exempted by Subparagraph (j)(2) of this Rule, Pump stations~~
9 shall be designed with multiple pumps such that peak flow can be pumped with the largest
10 pump out of service. Simplex pump stations (i.e. pump stations with only one pump) shall
11 ~~only be allowable to serve only a single building with an average daily design flow less~~
12 ~~than or equal to 600 gallons per day as calculated using Rule .0114 of this Subchapter.~~
- 13 (B) A standby power source or pump ~~is~~ shall be required at all pump stations except for ~~those~~
14 ~~simplex pump stations subject to Subparagraph (j)(2) of this Rule.~~ stations. Controls shall
15 be provided to automatically activate the standby source and signal an alarm condition.
- 16 (C) As an alternative to Part (B) of this Subparagraph for pump stations with an average daily
17 design flow less than 15,000 gallons per day as calculated using Rule .0114 of this
18 Subchapter, a portable power source or pumping capability may be ~~utilized.~~ used. ~~It shall~~
19 ~~be demonstrated to the Division that the~~ The portable source is ~~shall be~~ owned or contracted
20 by the permittee and ~~is~~ shall be compatible with the station. If the portable power source
21 or pump is dedicated to multiple pump stations, an evaluation of all the pump stations'
22 storage capacities and the rotation schedule of the portable power source or ~~pump,~~
23 ~~including travel timeframes, shall be provided in the case of a multiple station power~~
24 ~~outage. Pump in a multiple station power outage, including travel timeframes, shall be~~
25 ~~provided.~~
- 26 (D) ~~As an alternative to Part (B) for~~ Simplex pump or vacuum stations connecting a single
27 ~~building to an alternative a sewer system, wet well storage requirements system shall be~~
28 ~~documented to provide 24-hours worth of wastewater storage or, or exceed shall provide~~
29 ~~storage in excess of that needed during the greatest power outage over the last three years~~
30 ~~or the documented response time to replace a failed pump, whichever is greater.~~
31 ~~Documentation shall be required pursuant to the~~ of wastewater storage shall be provided
32 ~~with the permit application. In no case shall less than 6 hours worth of wastewater storage~~
33 ~~be provided above the pump-on level.~~
- 34 (E) All pump stations designed for two pumps or more shall have a telemetry system to provide
35 remote notification of a problem condition ~~to include~~ including power failure and high
36 water alarm.
- 37 (F) All pump stations shall have a high water audio and visual alarm.

- 1 (2) Pump stations shall have a permanent weatherproof sign stating the pump station identifier, 24-hour
2 emergency number and instructions to call in case of emergency. Simplex pump or vacuum stations
3 serving a single-family residence shall have a placard or sticker placed inside the control panel with
4 a 24-hour emergency contact number.
- 5 (3) Screened vents for all wet wells.
- 6 (4) The public shall be restricted from access to the site and equipment.
- 7 (5) Air relief valves shall be provided at all high points along force mains where the vertical distance
8 exceeds ten feet.
- 9 (i) The following criteria shall be met for gravity sewers:
- 10 (1) ~~for public gravity sewers,~~ public gravity sewers shall be equipped with a minimum eight inch
11 diameter pipe and ~~for private gravity sewers,~~ private gravity sewers shall be equipped with a
12 minimum six inch diameter pipe;
- 13 (2) the maximum separation between manholes shall be 425 feet unless ~~written~~ documentation is
14 submitted with the application that the ~~owner/authority~~ owner has the capability to perform routine
15 cleaning and maintenance ~~on~~ of the sewer at the specified manhole separation; and
- 16 (3) drop manholes shall be provided where invert separations exceed 2.5 feet.
- 17 (j) The following criteria shall be met for low pressure sewers, vacuum sewers, STEP and other alternative sewers
18 discharging into another sewer system:
- 19 (1) Hydraulic modeling of the system shall be submitted using the ~~statistical (projected)~~ statistically
20 projected number of pumps running at one time. If computer modeling is provided by a pump
21 manufacturer, it shall be indicated and shall be considered part of the design calculations pursuant
22 to Subparagraph (b)(2) of this Rule.
- 23 (2) Simplex pump stations shall only ~~be allowable for single family residences to serve a single~~
24 building with an average daily design flow less than 600 gallons per day as calculated using Rule
25 .0114 of this Subchapter. All other buildings connected to the system shall at a minimum have
26 duplex pumps.
- 27 (3) Septic tanks shall adhere to the standards established in 15A NCAC 18A .1900.

28

29 *History Note:* Authority G.S. 143-215.1; 143-215.3(a);

30 Eff. September 1, 2006-2006.

31 Readopted Eff. September 1, 2018.

1 15A NCAC 02T .0306 is readopted with changes as published in 32:06 NCR 543-544 as follows:

2

3 **15A NCAC 02T .0306 LOCAL PROGRAMS FOR SEWER SYSTEMS**

4 (a) Jurisdiction. Municipalities, counties, local boards or commissions, water and sewer authorities, or groups of
5 municipalities and counties may apply to the Commission for ~~approval~~ certification of local programs for permitting
6 construction, modification, and operation of public and private sewer systems in their utility service areas (~~i.e.,~~
7 ~~delegation~~) pursuant to G.S. 143-215.1(f). Permits issued by ~~approved~~ certified local programs serve in place of
8 permits issued by the Division except for projects involving an Environmental Impact Statement, Assessment, projects
9 that do not meet all applicable sewer related rules and minimum design criteria, or if the permitting authority has not
10 been certified (e.g. alternative sewer systems), which shall continue to be permitted by the Division. The Division
11 may ~~those~~ choose to cede permitting authority to the ~~approved~~ certified local program after review of Environmental
12 Assessment projects and issuance of a Finding of No Significant Impact. ~~or if other permits are required.~~

13 (b) ~~Applications. Application~~ An application for ~~approval~~ certification of a local program must provide adequate
14 information to assure compliance with the requirements of G.S. 143-215.1 (f) and the following requirements:

- 15 (1) Applications for local sewer system programs shall be submitted to the Director.
- 16 (2) The program application shall include: ~~include three copies of the intended permit application forms,~~
17 ~~permit shell(s), minimum design criteria (specifications), sewer ordinances, flow chart of~~
18 ~~permitting, staffing, inspection and certification procedures, intended permit application fees,~~
19 ~~downstream capacity assurance methods and other relevant documents to be used in administering~~
20 ~~the local program. The applicant shall specify in a cover letter what permits the local authority~~
21 ~~desires to issue. The options are any of the following: gravity sewers, pump stations, force mains,~~
22 ~~and/or pressure sewers. The applicant shall also specify whether such permits will be issued to~~
23 ~~public (to be self owned) or private systems (not donated to delegated authority).~~
- 24 (A) the intended permit application forms;
 - 25 (B) permit shells;
 - 26 (C) design criteria and specifications;
 - 27 (D) sewer ordinance;
 - 28 (E) flow chart of permitting;
 - 29 (F) staffing;
 - 30 (G) inspection and certification procedures;
 - 31 (H) intended permit application fees;
 - 32 (I) downstream capacity assurance methods.

33 The applicant shall specify in a cover letter what permits the local authority desires to issue. The options are
34 any of the following: gravity sewers, pump stations, force mains, or pressure sewers. The applicant shall also
35 specify whether such permits will be issued to public (to be self-owned) or private (not donated to the certified
36 authority).

1 (3) ~~Certification that the local~~ Local authorities for processing permit applications, setting permit
2 requirements, enforcement, and penalties ~~are~~ shall be compatible with those for permits issued by
3 the Division.

4 (4) If the treatment and disposal system receiving the ~~waste~~ wastewater from the sewer line extension
5 permitted under the local program is under the jurisdiction of another local unit of government, then
6 the program application must contain a written statement from ~~that~~ the other local unit of
7 government that the proposed program complies with all its requirements and that the applicant has
8 entered into a satisfactory contract which assures continued compliance.

9 (5) Any future amendments to the requirements of this Section shall be incorporated into the local sewer
10 system program within 60 days of the effective date of the amendments.

11 (6) A Professional Engineer shall be on the staff of the local sewer system program or be retained as a
12 consultant to review unusual situations or designs and to answer questions that arise in the review
13 of proposed projects.

14 (7) Each project permitted by the local sewer system program shall be inspected for compliance with
15 the requirements of the local program at least once during construction.

16 (c) Approval of Local Programs. The staff of the Division shall acknowledge receipt of an application for a local
17 sewer system program in writing, review the application, notify the applicant of additional information that may be
18 required, and make a recommendation to the Commission ~~on the acceptability~~ regarding certification of the proposed
19 local program.

20 (d) Conditions of Local Program Approval (Delegation). Once approved by the Commission, the ~~delegated authority~~
21 local program shall adhere to the following:

22 (1) Adequacy of Receiving Facilities. Local sewer system programs shall not issue a permit for a sewer
23 project ~~which that~~ would increase the flow or change the characteristics of waste to a treatment
24 works or sewer system unless the local program has received a written determination from the
25 Division that, pursuant to G.S. 143-215.67 (a), the treatment works or sewer system ~~is adequate to~~
26 receive can adequately treat the waste. The Division staff may, when appropriate, provide one
27 written determination that covers all local permits for domestic sewage sewer projects with total
28 increased flow to a particular treatment works less than a specified amount and which are issued
29 within a specified period of time. In no case shall the local sewer system program issue a permit for
30 additional wastewater if the receiving wastewater treatment is in noncompliance with its Division
31 issued permit unless the additional flow is allowed as part of a special order pursuant to G.S. 143-
32 215.2. In no case shall the delegated authority issue a permit for additional wastewater without
33 documenting capacity assurance along the tributary wastewater path to the wastewater treatment
34 plant.

35 (2) All permitting actions shall be summarized and submitted to the Division and the appropriate
36 Division Regional Office ~~on a quarterly basis~~ annually on Division ~~forms~~ forms unless more
37 frequent reporting is required by the Division. The report shall also provide a listing and summary

1 of all enforcement actions taken or pending during the reporting period, quarter. ~~The quarters begin~~
2 ~~on January 1, April 1, July 1 and October 1.~~ The report shall be submitted by February 1 of each
3 ~~year, within 30 days after the end of each quarter.~~ Reporting forms are available at:
4 [https://deq.nc.gov/about/divisions/water-resources/water-resources-permits/wastewater-](https://deq.nc.gov/about/divisions/water-resources/water-resources-permits/wastewater-branch/collection-systems/local-programs)
5 [branch/collection-systems/local-programs](https://deq.nc.gov/about/divisions/water-resources/water-resources-permits/wastewater-branch/collection-systems/local-programs)

6 (3) A copy of all program ~~documents~~ documents, such as specifications, permit applications, permit
7 shells, shell certification forms, and ordinance pertaining to ~~permitting~~ permitting, shall be
8 submitted to the Division ~~on an annual basis~~ annually along with a summary of any other program
9 changes. Program changes ~~to note~~ shall include ~~staffing~~, staffing changes, processing fees, and
10 ordinance revisions. After initial submittal of such documents and if no further changes occur in
11 subsequent years, a letter stating such may be submitted in lieu of the ~~requested~~ required
12 documentation. ~~The Division may request changes to local program documents if the Commission~~
13 ~~adopts more stringent standards.~~

14 (4) Modification of a Local Program. Modifications to local programs, including the expansion of
15 permitting ~~authority~~ authority, shall not be required to be approved by the Commission, but by the
16 Director.

17 (e) Appeal of Local Decisions. Appeal of individual permit denials or issuance with conditions the permit applicant
18 finds unacceptable shall be made according to the approved local ordinance. The Commission shall not consider
19 individual permit denials or issuance with conditions to which a Permittee objects. This Paragraph does not alter the
20 enforcement authority of the Commission as specified in G.S. 143-215.1(f).

21 (f) The Division may audit the ~~delegated~~ certified program for compliance with this Rule and G.S. 143-215.1(f) at
22 any time with a scheduled appointment with the ~~delegated~~ certified authority.

23 (g) The Division shall maintain a list of all local units of government with approved local sewer system programs and
24 make copies of the list available to the public upon request and payment of ~~any~~ reasonable costs for reproduction. The
25 list may be obtained from the Division.

26
27 *History Note: Authority G.S. 143-215.1; 143-215.3(a);*
28 *Eff. September 1, 2006-2006;*
29 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .0401 is readopted as published in 32:06 NCR 544 as follows:

2

3

SECTION .0400 – SYSTEM-WIDE COLLECTION SYSTEM PERMITTING

4

15A NCAC 02T .0401 SCOPE

6 The rules of this Section apply to system-wide collection systems pursuant to G.S. 143-215.9B, ~~where the Director~~
7 ~~may issue~~ governing the issuance of system-wide permits for collection systems relating to operation and maintenance
8 of sewers, pump stations, force mains and all appurtenances.

9

10 *History Note: Authority G.S. 143-215.1(a); 143-215.3(a); 143-215.9B;*

11 *Eff. September 1, ~~2006-2006~~;*

12 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .0402 is readopted as published in 32:06 NCR 544-545 as follows:

2

3 **15A NCAC 02T .0402 DEFINITIONS**

4 The following definitions are used in this Section:

5 (1) "Collection system" means a public or private sewer system ~~system, consisting of sewer lines, force~~
6 ~~mains, pump stations or any combination thereof~~ that conveys wastewater to a designated
7 wastewater treatment facility or separately-owned sewer system. For purposes of permitting, the
8 collection system ~~is considered to be~~ shall mean any existing or newly installed sewer system
9 extension up to the wastewater treatment facility property or point of connection with a separately-
10 owned sewer system.

11 (2) "High-priority sewer" means any aerial sewer, sewer contacting surface waters, siphon, sewer
12 positioned parallel to streambanks that is subject to erosion that undermines or deteriorates the
13 sewer, or sewer designated as a high priority in a ~~Division-issued~~ Division-issued permit ~~where~~ if
14 the sewer does not meet minimum design requirements.

15

16 *History Note:* Authority G.S. 143-215.1(a); 143-215.3(a); 143-215.9B;

17 Eff. September 1, 2006-2006;

18 Readopted Eff. September 1, 2018.

1 15A NCAC 02T .0403 is readopted with changes as published in 32:06 NCR 545 as follows:

2

3 **15A NCAC 02T .0403 PERMITTING BY REGULATION**

4 (a) Collection systems having an actual, permitted or ~~Division approved~~ Division-approved average daily flow less
5 than 200,000 gallons per day ~~are~~ shall be deemed permitted pursuant to Rule .0113 of this Subchapter ~~provided if~~ the
6 system meets the criteria in Rule .0113 of this Subchapter and all ~~specific~~ criteria required in this Rule:

7 (1) The ~~sewer collection~~ system ~~is~~ shall be effectively maintained and operated at all times to prevent
8 discharge to land or surface ~~waters,~~ waters and to prevent any contravention of groundwater
9 standards or surface water standards.

10 (2) A map of the ~~sewer collection~~ system ~~has been~~ shall have been developed and ~~is~~ shall be actively
11 maintained.

12 (3) An operation and maintenance ~~plan~~ plan, including pump station inspection frequency, preventative
13 maintenance schedule, spare parts inventory and overflow response ~~has been~~ shall have been
14 developed and implemented.

15 (4) Pump stations that are not connected to a telemetry system (~~i.e., remote alarm system~~) ~~are inspected~~
16 shall be inspected by the permittee or its representative every day (i.e., 365 days per ~~year~~-year),
17 unless the permittee demonstrates that daily inspections are not necessary because the pump station
18 has sufficient storage capacity, above the elevation at which the pump activates, to cover a longer
19 inspection interval. In no case shall the inspection interval exceed seven days. Pump stations that
20 are connected to a telemetry system ~~are~~ shall be inspected at least once per week.

21 (5) High-priority sewers ~~are~~ shall be inspected by the permittee or its representative ~~at least~~ once every
22 ~~six months~~ six-months, and inspections ~~are~~ shall be documented.

23 (6) A general observation by the permittee or its representative of the entire ~~sewer collection~~ system ~~is~~
24 shall be conducted ~~at least~~ once per year.

25 (7) Overflows and bypasses are reported to the appropriate Division regional office in accordance with
26 15A NCAC 02B .0506(a), and public notice ~~is~~ shall be provided as required by G.S. 143-215.1C.

27 (8) A Grease Control Program ~~is~~ shall be in place as follows:

28 (A) For publicly owned collection systems, the Grease Control Program shall include ~~at least~~
29 bi-annual distribution of educational materials for both commercial and residential users
30 and the legal means to require grease interceptors for new construction and retrofit, if
31 necessary, of grease interceptors at existing establishments. The plan shall also include
32 legal means for inspections of the grease interceptors, enforcement for violators and the
33 legal means to control grease entering the system from other public and private satellite
34 ~~sewer collection~~ systems.

35 (B) For privately owned collection systems, the Grease Control Program shall include ~~at least~~
36 bi-annual distribution of grease education materials to users of the collection system by the
37 permittee or its representative.

1 (C) Grease education materials shall be distributed more often than required in Parts (A) and
2 (B) of this Subparagraph if necessary to prevent grease-related sanitary sewer overflows.

3 (9) Right-of-ways and easements ~~are~~ shall be maintained in the full easement width for personnel and
4 equipment accessibility.

5 (10) Documentation shall be kept for Subparagraphs (a)(1) through (a)(9) of this Rule for ~~a minimum of~~
6 three years with the exception of the map, which shall be maintained for the life of the system.

7 (b) Private collection systems on a single property serving an industrial facility ~~where~~ from which the domestic
8 wastewater contribution is less than 200,000 gallons per day shall be deemed permitted.

9 (c) The Director may determine that a collection system ~~should~~ shall not be deemed to be permitted in accordance
10 with this Rule and Rule .0113 of this Subchapter. This determination shall be made in accordance with Rule .0113(e)
11 of this Subchapter.

12

13 *History Note: Authority G.S. 143-215.1(a); 143-215.3(a); 143-215.9B;*

14 *Eff. September 1, ~~2006~~2006;*

15 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .0404 is readopted as published in 32:06 NCR 545 as follows:

2

3 **15A NCAC 02T .0404 MULTIPLE COLLECTION SYSTEMS UNDER COMMON OWNERSHIP**

4 If a public entity owns multiple but separate collection systems (i.e., tributary to separate plants) and any one is subject
5 to an individual permit, all collection systems shall be covered ~~under~~ by one permit. This shall not be applicable to
6 public utilities authorized to operate by the North Carolina Utilities Commission ~~who~~ that own several individual
7 systems within the state.

8

9 *History Note: Authority G.S. 143-215.1(a); 143-215.3(a); 143-215.9B;*

10 *Eff. September 1, ~~2006~~ 2006;*

11 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .0405 is readopted as published in 32:06 NCR 545-546 as follows:

2

3 **15A NCAC 02T .0405 IMPLEMENTATION**

4 (a) Permit applications for the initial issuance of a collection system permit shall be completed and submitted to the
5 Division within 60 days of the collection system owner's certified mail receipt of the Division's request for application
6 submittal. Permit renewal requests shall be submitted to the Director at least 180 days prior to expiration, unless the
7 permit has been revoked in accordance with ~~15A NCAC 02T .0110~~. 15A NCAC 02T .0110, a request has been made

8 to rescind the permit, or the Director extends this deadline. All applications must be submitted in duplicate, completed
9 on official forms, and fully executed. Application forms available at: [https://deq.nc.gov/about/divisions/water-](https://deq.nc.gov/about/divisions/water-resources/water-resources-permits/wastewater-branch/collection-systems/system-wide-collection-system-permitting)
10 resources/water-resources-permits/wastewater-branch/collection-systems/system-wide-collection-system-permitting.

11 (b) Collection systems subject to an individual permit shall comply with the standards in Rule .0403 of this ~~Section~~
12 until such time as their individual permit is issued. Section and such permit conditions contained in an individual
13 permit to effectuate the purpose of Article 21, Chapter 143 of the General Statues.

14

15 *History Note:* Authority G.S. 143-215.1(a); 143-215.3(a); 143-215.9B;

16 Eff. September 1, ~~2006~~-2006;

17 Readopted Eff. September 1, 2018.

1 15A NCAC 02T .0501 is readopted as published in 32:06 NCR 546 as follows:

2

3

SECTION .0500 – WASTEWATER IRRIGATION SYSTEMS

4

15A NCAC 02T .0501 SCOPE

6 The rules in this Section shall apply to all surface irrigation of wastewater systems not otherwise specifically governed
7 by other rules of this Subchapter. Surface irrigation of wastewater shall include ~~includes~~ spray irrigation, drip
8 irrigation, and any other application of wastewater to the ground surface.

9

10 *History Note: Authority G.S. 143-215.1; 143-215.3(a);*

11 *Eff. September 1, ~~2006~~ 2006;*

12 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .0504 is readopted with changes as published in 32:06 NCR 546-548 as follows.

2

3 **15A NCAC 02T .0504 APPLICATION SUBMITTAL**

4 (a) The requirements in this Rule shall apply to all new and expanding facilities, ~~facilities, as applicable.~~

5 (b) Soils ~~Report.~~ report. A soil evaluation of the disposal site shall be provided to the Division by the Applicant
6 ~~applicant~~ in a report that includes the following. If required by G.S. 89F, a soil scientist shall prepare this evaluation:
7 [~~Note: The North Carolina Board for Licensing of Soil Scientists has determined, via letter dated December 1, 2005,~~
8 ~~that preparation of soils reports pursuant to this Paragraph constitutes practicing soil science under G.S. 89F.~~]

9 (1) A field ~~Field~~ description of the soil profile, based on examinations of excavation pits or auger
10 borings, within seven feet of land surface or to ~~bedrock~~ bedrock, describing the following
11 parameters by individual diagnostic horizons:

12 (A) the thickness of the horizon;

13 (B) the texture;

14 (C) the color and other diagnostic features;

15 (D) the structure;

16 (E) the internal drainage;

17 (F) the depth, thickness, and type of restrictive horizon; ~~horizon(s)~~; and

18 (G) the presence or absence and depth of evidence of any seasonal high water table. ~~table~~
19 (~~SHWT~~).

20 Applicants shall dig pits when necessary for evaluation of the soils at the ~~site~~. site;

21 (2) Recommendations concerning loading rates of liquids, solids, other wastewater constituents and
22 amendments. Annual hydraulic loading rates shall be based on in-situ measurement of saturated
23 hydraulic conductivity in the most restrictive horizon for each soil mapping ~~unit~~. unit;
24 irrigation precipitation rates shall be provided for each soil mapping ~~unit~~. unit;

25 (3) A field-delineated soil map delineating soil mapping units within each land application site and
26 showing all physical features, location of pits and auger borings, legends, scale, and a north arrow.
27 The legends shall also include dominant soil series name and family or higher taxonomic class for
28 each soil mapping ~~unit~~. unit; and

29 (4) A ~~representative soils analysis (i.e., Standard Soil Fertility Analysis)~~ Standard Soil Fertility Analysis
30 conducted on each land application site. The Standard Soil Fertility Analysis shall include the
31 following parameters:

32 (A) Acidity; ~~acidity~~;

33 (B) Base Saturation (by calculation); ~~base saturation (by calculation)~~;

34 (C) Calcium; ~~ealcium~~;

35 (D) Cation Exchange Capacity; ~~cation exchange capacity~~;

36 (E) Copper; ~~copper~~;

- 1 (F) Exchangeable Sodium Percentage (by calculation); ~~exchangeable sodium percentage (by~~
2 ~~calculation);~~
- 3 (G) Magnesium; ~~magnesium;~~
- 4 (H) Manganese; ~~manganese;~~
- 5 (I) Percent Humic Matter; ~~percent humic matter;~~
- 6 (J) pH; ~~pH;~~
- 7 (K) Phosphorus; ~~phosphorus;~~
- 8 (L) Potassium; ~~potassium;~~
- 9 (M) Sodium; ~~sodium;~~ and
- 10 (N) Zinc. ~~zinc.~~

11 [Note: The North Carolina Board for Licensing of Soil Scientists has determined, via letter dated December 1, 2005,
12 that preparation of soils reports pursuant to this Paragraph constitutes practicing soil science pursuant to G.S. 89F.]

13 (c) Engineering design documents. If required by G.S. 89C, a professional engineer shall prepare these documents.
14 The following documents shall be provided to the Division by the Applicant; ~~applicant;~~

15 [Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via letter dated December
16 1, 2005, that preparation of engineering design documents pursuant to this Paragraph constitutes practicing
17 engineering under G.S. 89C.]

- 18 (1) engineering plans for the entire system, including treatment, storage, application, and disposal
19 facilities and equipment except those previously permitted unless those previously permitted are
20 directly tied into the new units or are critical ~~critical~~ necessary ~~necessary~~ to the understanding of the complete process;
- 21 (2) specifications describing materials to be used, methods of construction, and means for ensuring
22 quality and integrity of the finished ~~product~~ product, including leakage testing; and
- 23 (3) engineering ~~calculations~~ calculations, including hydraulic and pollutant loading for each treatment
24 unit, treatment unit sizing criteria, hydraulic profile of the treatment system, total dynamic head and
25 system curve analysis for each pump, buoyancy calculations, and irrigation design.

26 [Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via letter dated December
27 1, 2005, that preparation of engineering design documents pursuant to this Paragraph constitutes practicing
28 engineering pursuant to G.S. 89C.]

29 (d) Site plans. If required by G.S. 89C, a professional land surveyor shall provide location information on boundaries
30 and physical features not under the purview of other licensed professions. Site plans or maps shall be provided to the
31 Division by the Applicant ~~applicant~~ depicting the location, orientation and relationship of facility components
32 including:

33 [Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via letter dated December
34 1, 2005, that locating boundaries and physical features, not under the purview of other licensed professions, on maps
35 pursuant to this Paragraph constitutes practicing surveying under G.S. 89C.]

- 36 (1) ~~a scaled map of the site, with topographic contour intervals not exceeding 10 feet or 25 percent of~~
37 ~~total site relief and showing all facility related structures and fences within the treatment, storage,~~

1 ~~and disposal areas, and soil mapping units shown on all disposal sites;~~ a scaled map of the site, with
2 topographic contour intervals not exceeding 10 feet or 25 percent of total site relief, showing:

3 (A) all facility-related structures and fences within the treatment, storage, and disposal areas;
4 and

5 (B) soil mapping units on all disposal sites;

6 (2) the location of all wells (including usage and construction details if available), streams (ephemeral,
7 intermittent, and perennial), springs, lakes, ponds, and other surface drainage features within 500
8 feet of all waste treatment, storage, and disposal ~~sites~~ sites(s) and delineation of the review and
9 compliance boundaries;

10 (3) setbacks as required by Rule .0506 of this Section; and

11 (4) site property boundaries within 500 feet of all waste treatment, storage, and disposal ~~sites~~ sites(s).

12 [Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via letter dated December
13 1, 2005, that locating boundaries and physical features, not under the purview of other licensed professions, on maps
14 pursuant to this Paragraph constitutes practicing surveying pursuant to G.S. 89C.]

15 (e) Hydrogeologic report. A hydrogeologic description prepared by a Licensed Geologist, Licensed Soil Scientist, or
16 Professional Engineer if required by Chapters 89E, 89F, or 89C, ~~respectively, respectively, of the subsurface to a depth~~
17 ~~of 20 feet or bedrock, whichever is less,~~ shall be provided to the Division by the Applicant ~~applicant~~ for systems
18 treating industrial waste and any system with a design flow over 25,000 gallons per day. Industrial facilities with a
19 design flow less than 25,000 gallons per day of wastewater that can demonstrate that the effluent will be of quality
20 similar to domestic wastewater, including effluent requirements established in 15A NCAC 02T .0505(b)(1), shall,
21 upon request, be exempted from this requirement. The hydrogeologic evaluation shall be of the subsurface to a depth
22 of 20 feet or bedrock, whichever is less deep. A greater depth of An investigation to a depth greater than 20 feet is
23 required if the respective depth is used in predictive calculations. This evaluation shall be based on borings for which
24 ~~the numbers, locations, and depths are sufficient~~ sufficient numbers, locations, and depths of borings to define the
25 components of the hydrogeologic evaluation. In addition to borings, other techniques may be used to investigate the
26 subsurface conditions at the ~~site. These techniques may include site, including~~ site, including geophysical well logs, surface
27 geophysical surveys, and tracer studies. This evaluation shall be presented in a report that includes the following
28 components:

29 ~~[Note: The North Carolina Board for Licensing of Geologists, via letter dated April 6, 2006, North Carolina Board for~~
30 ~~Licensing of Soil Scientists, via letter dated December 1, 2005, and North Carolina Board of Examiners for Engineers~~
31 ~~and Surveyors, via letter dated December 1, 2005, have determined that preparation of hydrogeologic description~~
32 ~~documents pursuant to this Paragraph constitutes practicing geology under G.S. 89E, soil science under G.S. 89F, or~~
33 ~~engineering under G.S. 89C.]~~

34 (1) a description of the regional and local geology and hydrogeology;

35 (2) a description, based on field observations of the site, of the site topographic setting, streams, springs
36 and other groundwater discharge features, drainage features, existing and abandoned wells, rock

- 1 outcrops, and other features that may affect the movement of the contaminant plume and treated
2 wastewater;
- 3 (3) changes in the lithology underlying the site;
- 4 (4) the depth to bedrock and the occurrence of any rock outcrops;
- 5 (5) the hydraulic conductivity and transmissivity of the affected ~~aquifer(s);~~ aquifer as determined by in-
6 situ field testing, such as slug tests or pumping tests, in the intended area of irrigation;
- 7 (6) the depth to the seasonal high water table;
- 8 (7) a discussion of the relationship between the affected aquifers of the site to local and regional
9 geologic and hydrogeologic features;
- 10 (8) a discussion of the groundwater flow regime of the site prior to the operation of the proposed facility
11 and the post operation of the proposed ~~facility,~~ facility, focusing on the relationship of the system
12 to groundwater receptors, groundwater discharge features, and groundwater flow media; and
- 13 (9) if the ~~SHWT~~ seasonal high water table is within six feet of the surface, a mounding analysis to
14 predict the level of the ~~SHWT~~ seasonal high water table after wastewater application.

15 [Note: The North Carolina Board for Licensing of Geologists, via letter dated April 6, 2006, North Carolina Board for
16 Licensing of Soil Scientists, via letter dated December 1, 2005, and North Carolina Board of Examiners for Engineers
17 and Surveyors, via letter dated December 1, 2005, have determined that preparation of hydrogeologic description
18 documents pursuant to this Paragraph constitutes practicing geology pursuant to G.S. 89E, soil science pursuant to
19 G.S. 89F, or engineering pursuant to G.S. 89C.]

20 (f) Property Ownership Documentation shall be provided to the Division by the Applicant, ~~applicant~~ consisting of:

- 21 (1) legal documentation of ownership (i.e., contract, deed or article of incorporation);
- 22 (2) ~~written notarized intent to purchase agreement~~ an agreement of an intent to purchase the property
23 that is written, notarized, and signed by both parties, accompanied by a plat or survey map; or
- 24 (3) ~~written notarized lease agreement~~ an agreement to lease the property that is written, notarized, and
25 signed by both parties, ~~specifically~~ indicating the intended use of the property, ~~as well as~~
26 accompanied by a plat or survey map. Lease agreements shall adhere to the requirements of 15A
27 NCAC 02L .0107.

28 (g) Public utilities shall submit to the Division a Certificate of Public ~~Conveyance~~ Convenience and Necessity or a
29 letter from the NC Utilities Commission stating that it has received a franchise application. ~~application has been~~
30 ~~received.~~

31 (h) A ~~complete~~ chemical analysis of the typical wastewater to be ~~discharged~~ irrigated shall be provided to the Division
32 by the Applicant ~~applicant~~ for industrial waste, including which shall include:

- 33 (1) Total Organic Carbon; ~~Total Organic Carbon,~~
- 34 (2) 5-day Biochemical Oxygen Demand (BOD₅); ~~5-day Biochemical Oxygen Demand (BOD₅),~~
- 35 (3) Chemical Oxygen Demand (COD); ~~Chemical Oxygen Demand (COD),~~
- 36 (4) Nitrate Nitrogen (NO₃-N); ~~Nitrate Nitrogen (NO₃-N),~~
- 37 (5) Ammonia Nitrogen (NH₃-N); ~~Ammonia Nitrogen (NH₃-N),~~

1 15A NCAC 02T .0505 is readopted with changes as published in 32:06 NCR 548-550 as follows:

2

3 **15A NCAC 02T .0505 DESIGN CRITERIA**

4 (a) The requirements in this Rule shall apply to all new and expanding facilities, ~~facilities, as applicable.~~

5 (b) Minimum degree of treatment for new and expanding systems: ~~systems are as follows:~~

6 (1) ~~For new that are~~ municipal, domestic and commercial facilities, except systems subject to
7 Subparagraph (b)(2) of this Rule, the minimum degree of treatment shall meet a monthly average
8 of each of the following:

9 (A) five-day Biochemical Oxygen Demand (BOD₅) ≤ 30 mg/L;

10 (B) Total Suspended Solids (TSS) ≤ 30 mg/L;

11 (C) Ammonia (~~NH₃-N~~) (~~NH₃~~) ≤ 15 mg/L; and

12 (D) Fecal Coliforms ≤ 200 colonies/100 ~~mL~~, mL.

13 (2) ~~For expanding municipal, domestic, and commercial facilities except systems subject to~~
14 ~~Subparagraphs (b)(3) or (b)(4) of this Rule, facilities shall meet the limitation provided in~~
15 ~~Subparagraph (b)(1) of this Rule.~~

16 (3) ~~For expanding municipal facilities, except those permitted as new under Subparagraph (b)(1) of this~~
17 ~~Rule, with lagoon treatment systems, the minimum degree of treatment shall meet a monthly average~~
18 ~~of five-day Biochemical Oxygen Demand (BOD₅) ≤ 60 mg/L; Total Suspended Solids (TSS) ≤ 90~~
19 ~~mg/L; Fecal Coliforms ≤ 200 colonies/100 ml. No expanding facilities shall be permitted under this~~
20 ~~provision for any project whose application is received by the Division after December 31, 2011.~~

21 (2)(4) ~~For expanding municipal facilities whose application is received by the Division after December~~
22 ~~31, 2011, except those permitted as new under Subparagraph (b)(1) of this Rule, with lagoon~~
23 ~~treatment systems~~ systems, except those permitted as new under Subparagraph (b)(1) of this Rule,
24 the minimum degree of treatment shall meet a monthly average of each of the following:

25 (A) five-day Biochemical Oxygen Demand (BOD₅) ≤ 30 mg/L;

26 (B) Total Suspended Solids (TSS) ≤ 90 mg/L; and

27 (C) Fecal Coliforms ≤ 200 colonies/100 ~~ml~~, mL; or

28 (3)(5) that are not described in Subparagraphs (b)(1) and (b)(2) of this Rule shall meet treatment standards
29 that assure that surface water or groundwater standards will not be exceeded. ~~Treatment for other~~
30 ~~operations shall be based on producing the quality effluent used in documenting protection of~~
31 ~~surface water or groundwater standards.~~

32 (c) All wastes shall be applied at agronomic rates unless predictive calculations are provided that ~~document~~
33 demonstrate State groundwater standards will be protected.

34 (d) All ~~treatment/storage lagoons/ponds~~ open-atmosphere treatment lagoons and ponds, and open-atmosphere storage
35 units shall have at least two feet of freeboard.

1 (e) Waste, including treated waste, shall not be placed directly into, or in contact with, GA classified groundwater
2 unless such placement will not result in a contravention of GA groundwater standards, as demonstrated by predictive
3 calculations or modeling.

4 (f) Treatment works and disposal systems ~~utilizing~~ using earthen basins, lagoons, ponds or trenches, excluding holding
5 ponds containing non-industrial treated effluent prior to ~~spray~~ irrigation, for treatment, storage or disposal shall have
6 either a liner of natural material at least one foot in thickness and having a hydraulic conductivity of no greater than 1
7 $\times 10^{-6}$ centimeters per second when compacted, or a synthetic liner of sufficient thickness to exhibit structural integrity
8 and an effective hydraulic conductivity no greater than that of the natural material liner.

9 (g) The bottoms of earthen impoundments, trenches or other similar excavations shall be at least four feet above the
10 bedrock surface, except that the bottom of excavations ~~which that~~ are less than four feet above bedrock shall have a
11 liner with a hydraulic conductivity no greater than 1×10^{-7} centimeters per second. Liner thickness shall be that
12 thickness necessary to achieve a leakage rate consistent with the sensitivity of classified groundwaters. Liner
13 requirements may be reduced if ~~it can be demonstrated by the~~ Applicant demonstrates applicant through predictive
14 calculations or modeling methods that construction and use of these treatment and disposal units will not result in
15 contravention of surface water or groundwater standards.

16 (h) Impoundments, trenches or other excavations made for the purpose of storing or treating waste shall not be
17 excavated into bedrock unless the placement of waste into such excavations will not result in a contravention of surface
18 water or groundwater standards, as demonstrated by predictive calculations or modeling.

19 (i) Each facility, except for those using septic tanks or lagoon treatment, shall provide flow equalization with either a
20 capacity based upon a representative diurnal hydrograph or a capacity of 25 percent of the daily system design flow.
21 Flow equalization of at least 25 percent of the facilities permitted hydraulic capacity must be provided for all seasonal
22 or resort facilities and all other facilities with fluctuations in influent flow which may adversely affect the performance
23 of the system.

24 (j) By-pass and overflow lines shall be prohibited.

25 (k) Multiple pumps shall be provided if wherever pumps are used.

26 (l) Power reliability shall be provided, ~~provided~~ consisting of:

27 (1) automatically activated standby power ~~supply~~ supply, located onsite, and onsite capable of powering
28 all essential treatment units under design conditions; or

29 (2) approval by the Director that the facility:

30 (A) serves a private water distribution system ~~which that~~ has automatic shut-off at power failure
31 and no elevated water storage ~~tanks; tanks,~~

32 (B) has sufficient storage capacity that no potential for overflow ~~exists; exists,~~ and

33 (C) can tolerate septic wastewater ~~due to~~ during prolonged detention.

34 (m) A water-tight seal on all ~~treatment/storage~~ treatment and storage units or ~~minimum~~ of two feet of protection from
35 the 100-year flood elevation shall be provided.

36 (n) Irrigation system design shall not exceed the recommended precipitation rates in the soils report prepared pursuant
37 to Rule .0504 of this Section.

- 1 (o) ~~A minimum~~ of 30 days of residual storage shall be provided.
- 2 (p) Disposal areas shall be designed to maintain a one-foot vertical separation between the seasonal high water table
3 and the ground surface.
- 4 (q) The public shall be prohibited access to the treatment, storage and irrigation facilities. ~~wetted irrigation area and~~
5 ~~treatment facilities.~~
- 6 (r) Influent pump stations shall meet the sewer ~~minimum~~ design criteria ~~as provided~~ set forth in Section .0300 of this
7 Subchapter.
- 8 (s) Septic tanks shall adhere to the standards established in 15A NCAC 18A .1900.
- 9 (t) ~~The irrigation system~~ Facilities [with an average daily flow greater than 10,000 GPD] shall be provided with a
10 flow meter to ~~allow accurate determination of~~ measure the volume of treated wastewater applied to each field.
- 11 (u) Coastal waste treatment facilities, defined in 15A NCAC 02H .0403, shall be equipped with noise and odor control
12 devices that shall be enclosed.
- 13 (v) For coastal waste treatment facilities, defined in 15A NCAC 02H .0403, all essential treatment and disposal units
14 shall be provided in duplicate.
- 15 (w) Facilities serving residential communities shall provide five days of effluent [storage.]storage, unless additional
16 storage is determined necessary pursuant to the water balance requirements in Rule .0504(k) of this Section.
- 17 (x) Automatically activated irrigation systems shall be connected to a rain or moisture sensor to prevent irrigation
18 during precipitation events or wet conditions that would cause runoff.

19

20 *History Note: Authority G.S. 143-215.1; 143-215.3(a);*
21 *Eff. September 1, 2006-2006;*
22 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .0506 is readopted with changes as published in 32:06 NCR 550 as follows:

2

3 **15A NCAC 02T .0506 SETBACKS**

4 (a) The setbacks for irrigation sites shall be as follows:

	Spray	Drip
	(feet)	(feet)
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		

25 (b) The setbacks for treatment and storage units shall be as follows:

26 (feet)

27		
28		
29		
30		
31		
32		
33		

34 (c) Achieving the reclaimed water effluent standards ~~contained~~ established in 15A NCAC 02U .0301 shall permit the
35 system to use the setbacks located in 15A NCAC 02U .0701(d) for property lines and the compliance boundary shall
36 be at the irrigation area boundary.

1 (d) Setback waivers shall be written, notarized, signed by all parties involved and recorded with the county Register
2 of Deeds. Waivers involving the compliance boundary shall be in accordance with 15A NCAC 02L .0107.

3 (e) Setbacks to property lines established in Paragraphs (a) and (b) of this Rule shall not be applicable when the
4 Permittee, or the entity from which the Permittee is leasing, owns both parcels creating said property line.

5 (f) Habitable residences or places of ~~public~~ assembly under separate ownership constructed after the non-discharge
6 facilities were originally permitted or subsequently modified, are exempt from the setback requirements in Paragraphs
7 (a) and (b) of this Rule.

8

9 *History Note: Authority G.S. 143-215.1; 143-215.3(a);*

10 *Eff. September 1, 2006;*

11 *Amended Eff. June 18, ~~2011-2011~~;*

12 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .0507 is readopted with changes as published in 32:06 NCR 550-551 as follows:

2

3 **15A NCAC 02T .0507 OPERATION AND MAINTENANCE PLAN**

4 (a) An operation and maintenance plan shall be maintained for all systems. The plan shall:

5 (1) describe the operation of the system in sufficient detail to show what operations are necessary for
6 the system to function and by whom the ~~functions~~ operations are to be conducted;

7 (2) describe anticipated maintenance of the system;

8 (3) include provisions for safety measures, ~~measures~~ including restriction of access to the site and
9 equipment, as appropriate; and

10 (4) include spill control provisions, ~~provisions~~ including:

11 (A)(a) response to upsets and bypasses, ~~bypasses~~ including control, containment, and
12 remediation; and

13 (B)(b) contact information for plant personnel, emergency responders, and regulatory agencies.

14 (b) Irrigation areas shall have a year-round vegetative cover.

15 (c) Irrigation shall not result in ponding or runoff of treated effluent.

16 (d) Irrigation and metering equipment shall be tested and calibrated annually, or as established by permit.

17 (e) ~~Automobiles~~ **Vehicles** and heavy machinery shall not be allowed on the irrigation area, except during installation
18 or maintenance activities.

19 (f) Water level gauges shall be provided for all open-atmosphere treatment lagoons and ponds, and open-atmosphere
20 storage units.

21 (g) Vegetative cover shall be maintained on all earthen embankments.

22 (h) The Permittee shall keep a log of maintenance activities that occur at the facility.

23 (i) The Permittee shall perform inspections and maintenance to ensure proper operation of the facility.

24

25 *History Note: Authority G.S. 143-215.1; 143-215.3(a);*

26 *Eff. September 1, 2006-2006;*

27 *Readoption Eff. September 1, 2018.*

1 15A NCAC 02T .0508 is readopted as published in 32:06 NCR 551 as follows:

2

3 **15A NCAC 02T .0508 RESIDUALS MANAGEMENT PLAN**

4 (a) A Residuals Management Plan shall be maintained for all systems that generate residuals. The plan ~~must~~ shall
5 include the following:

6 (1) a detailed explanation as to how the residuals will be collected, handled, processed, stored and
7 disposed;

8 (2) an evaluation of the residuals storage requirements for the treatment ~~facility,~~ facility based upon the
9 maximum anticipated residuals production rate and the ability to remove residuals;

10 (3) a permit for residuals ~~disposal or utilization~~ utilization, or a written commitment to the Permittee of
11 a ~~Department-approved~~ Department approved residuals ~~disposal/utilization~~ disposal or utilization
12 program accepting the residuals ~~which~~ that demonstrates that the approved program has adequate
13 capacity to accept the residuals ~~residuals,~~ or that an application for approval has been submitted;
14 and

15 (4) if oil, grease, grit, or screenings removal and collection is a designed unit process, a detailed
16 explanation as to how ~~the oil/grease~~ these materials will be collected, handled, processed, stored and
17 disposed.

18 (b) The Permittee shall maintain a record of all residuals removed from the facility.

19

20 *History Note: Authority G.S. 143-215.1; 143-215.3(a);*

21 *Eff. September 1, 2006-2006;*

22 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .0601 is readopted as published in 32:06 NCR 551 as follows:

2

3 **SECTION .0600 – SINGLE-FAMILY RESIDENCE WASTEWATER IRRIGATION SYSTEMS**

4

5 **15A NCAC 02T .0601 SCOPE**

6 The rules in this Section shall apply to all surface irrigation of wastewater systems ~~specifically~~ designed for one
7 building single-family residences. One building single-family residences generating and utilizing reclaimed water
8 shall meet requirements established in 15A NCAC 02U. Surface irrigation systems serving single-family residences
9 ~~are~~ shall be considered to be ground absorption systems in accordance with 15A NCAC 02L .0107.

10

11 *History Note: Authority G.S. 143-215.1; 143-215.3(a);*

12 *Eff. September 1, ~~2006-2006~~;*

13 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .0604 is readopted with changes as published in 32:06 NCR 551-553 as follows:

2

3 **15A NCAC 02T .0604 APPLICATION SUBMITTAL**

4 (a) The requirements in this Rule shall apply to all new and expanding ~~facilities, as applicable.~~ facilities.

5 (b) Soils **Report.report.** A soil evaluation of the disposal site shall be provided to the Division by the Applicant
6 applicant in a report that includes the following. If required by G.S. 89F, a soil scientist shall prepare this evaluation:
7 [~~Note: The North Carolina Board for Licensing of Soil Scientists has determined, via letter dated December 1, 2005,~~
8 ~~that preparation of soils reports pursuant to this Paragraph constitutes practicing soil science under G.S. 89F.~~]

9 (1) A field ~~Field~~ description of the soil profile, based on examinations of excavation pits and auger
10 borings, within seven feet of land surface or to ~~bedrock~~ bedrock, describing the following
11 parameters by individual diagnostic horizons:

12 (A) the thickness of the horizon;

13 (B) the texture;

14 (C) the color and other diagnostic features;

15 (D) the structure;

16 (E) the internal drainage;

17 (F) the depth, thickness, and type of restrictive ~~horizon(s);~~ horizon; and

18 (G) the presence or absence and depth of evidence of any seasonal high water table.

19 Applicants may be required to dig pits when necessary for proper evaluation of the soils at the site.

20 (2) Recommendations concerning loading rates of liquids, solids, other wastewater constituents and
21 amendments. Annual hydraulic loading rates shall be based on in-situ measurement of saturated
22 hydraulic conductivity in the most restrictive horizon for each soil mapping unit. Maximum
23 irrigation precipitation rates shall be provided for each soil mapping unit.

24 (3) A field-delineated soil map delineating soil mapping units within each land application site and
25 showing all physical features, location of pits and auger borings, legends, scale, and a north arrow.
26 The legends shall also include dominant soil series name and family or higher taxonomic class for
27 each soil mapping unit; and

28 (4) A ~~representative soils analysis (i.e., Standard Soil Fertility Analysis)~~ Standard Soil Fertility Analysis
29 conducted on each land application site. The Standard Soil Fertility Analysis shall include the
30 following parameters:

31 (A) Acidity; ~~acidity;~~

32 (B) Base Saturation (by calculation); ~~base saturation (by calculation);~~

33 (C) Calcium; ~~ealcium;~~

34 (D) Cation Exchange Capacity; ~~cation exchange capacity;~~

35 (E) Copper; ~~eopper;~~

36 (F) Exchangeable Sodium Percentage (by calculation); ~~exchangeable sodium percentage (by~~
37 ~~calculation);~~

- 1 (G) Magnesium; ~~magnesium~~,
- 2 (H) Manganese; ~~manganese~~,
- 3 (I) Percent Humic Matter; ~~percent humic matter~~,
- 4 (J) pH; ~~pH~~,
- 5 (K) Phosphorus; ~~phosphorus~~,
- 6 (L) Potassium; ~~potassium~~,
- 7 (M) Sodium; ~~sodium~~, and
- 8 (N) Zinc; ~~zinc~~.

9 [Note: The North Carolina Board for Licensing of Soil Scientists has determined, via letter dated December 1, 2005,
10 that preparation of soils reports pursuant to this Paragraph constitutes practicing soil science pursuant to G.S. 89F.]

11 (c) Engineering design documents. If required by G.S. 89C, a professional engineer shall prepare these documents.
12 The following documents shall be provided to the Division by the Applicant; ~~applicant~~:

13 ~~[Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via letter dated December~~
14 ~~1, 2005, that preparation of engineering design documents pursuant to this Paragraph constitutes practicing~~
15 ~~engineering under G.S. 89C.]~~

- 16 (1) engineering plans for the entire system, including treatment, storage, application, and disposal
17 facilities and equipment except those previously permitted unless those previously permitted are
18 directly tied into the new units or are critical necessary to the understanding of the complete process;
- 19 (2) specifications describing materials to be used, methods of construction, and means for ensuring
20 quality and integrity of the finished product, including leakage testing; and
- 21 (3) engineering calculations, including hydraulic and pollutant loading for each treatment unit,
22 treatment unit sizing criteria, hydraulic profile of the treatment system, total dynamic head and
23 system curve analysis for each pump, buoyancy calculations, and irrigation design.

24 [Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via letter dated December
25 1, 2005, that preparation of engineering design documents pursuant to this Paragraph constitutes practicing
26 engineering pursuant to G.S. 89C.]

27 (d) Site plans. If required by G.S. 89C, a professional land surveyor shall provide location information on boundaries
28 and physical features not under the purview of other licensed professions. Site plans or maps shall be provided to the
29 Division by the Applicant ~~applicant~~ depicting the location, orientation and relationship of facility components
30 including:

31 ~~[Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via letter dated December~~
32 ~~1, 2005, that locating boundaries and physical features, not under the purview of other licensed professions, on maps~~
33 ~~pursuant to this Paragraph constitutes practicing surveying under G.S. 89C.]~~

- 34 (1) ~~a scaled map of the site, with topographic contour intervals not exceeding 10 feet or 25 percent of~~
35 ~~total site relief and showing all facility related structures and fences within the treatment, storage~~
36 ~~and disposal areas, and soil mapping units shown on all disposal sites;~~ a scaled map of the site, with
37 topographic contour intervals not exceeding 10 feet or 25 percent of total site relief, showing:

1 15A NCAC 02T .0605 is readopted as published in 32:06 NCR 553 as follows:

2

3 **15A NCAC 02T .0605 DESIGN CRITERIA**

4 (a) The requirements in this Rule shall apply to new and expanding facilities.

5 (b) Minimum degree of treatment for new and expanding systems ~~prior to storage~~ shall meet a monthly average of
6 each of the following:

7 (1) five-day Biochemical Oxygen Demand (BOD₅) ≤ 30 mg/L;

8 (2) Total Suspended Solids (TSS) ≤ 30 mg/L;

9 (3) Ammonia (NH₃) ≤ 15 mg/L; and

10 (4) Fecal Coliforms ≤ 200 colonies/100 ~~mL~~ mL.

11 (c) Waste, including treated waste, shall not be placed directly into, or in contact with, GA classified groundwater
12 unless such placement will not result in a contravention of GA groundwater standards, as demonstrated by predictive
13 calculations or modeling.

14 (d) Excavation into bedrock shall be lined with a 10 millimeter synthetic liner.

15 (e) Earthen treatment and storage facilities shall be prohibited.

16 (f) By-pass and overflow lines shall be prohibited.

17 (g) A water-tight seal on all ~~treatment/storage~~ treatment and storage units or ~~minimum~~ of two feet of protection from
18 the 100-year flood elevation shall be provided.

19 (h) Preparation of an operational management ~~plan~~, plan and, if appropriate, a crop management plan shall be
20 provided.

21 (i) Fencing shall be provided to prevent access to the irrigation site (minimum 2-strand wire) and treatment units shall
22 be ~~secured with locks on all tankage and control panels~~. lockable.

23 (j) Irrigation system design shall not exceed the recommended precipitation rates in the soils report prepared pursuant
24 to Rule .0604 of this Section.

25 (k) Septic tanks shall adhere to 15A NCAC 18A .1900.

26 (l) Tablet chlorination or ultraviolet disinfection shall be provided.

27 (m) ~~A minimum of five~~ Five days of storage based on average daily flow between the pump off float and inlet invert
28 pipe shall be provided.

29 (n) ~~Pump/dosing~~ Pump and dosing tanks shall have audible and visual alarms external to any structure.

30 (o) A rain or moisture sensor shall be provided to prevent irrigation during precipitation events or wet conditions that
31 would cause runoff.

32 (p) ~~A minimum of~~ 18 inches of vertical separation between the apparent seasonal high water table and the ground
33 surface shall be provided.

34 (q) ~~A minimum of one~~ One foot of vertical separation between any perched seasonal high water table and the ground
35 surface shall be provided.

36 (r) Loading rates shall not exceed 50 inches per year.

37

- 1 *History Note:* *Authority G.S. 143-215.1; 143-215.3(a);*
- 2 *Eff. September 1, ~~2006~~2006;*
- 3 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .0606 is readopted with changes as published in 32:06 NCR 553-554 as follows:

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15A NCAC 02T .0606 SETBACKS

(a) The setbacks for ~~Irrigation~~irrigation sites shall be as follows:

	Spray	Drip
	(feet)	(feet)
Any habitable residence or place of public public assembly under separate ownership or not to be maintained as part of the project site	400	100
Any habitable residence or place of public public assembly owned by the Permittee permittee to be maintained as part of the project site	200	15
Any private or public water supply source	100	100
Surface waters (streams – intermittent and perennial, perennial waterbodies, and wetlands)	100	100
Groundwater lowering ditches (where the bottom of the ditch intersects the SHWT)	100	100
Surface water diversions (ephemeral streams, waterways, ditches)	25	25
Any well with exception of monitoring wells	100	100
Any property line	150	50
Top of slope of embankments or cuts of two feet or more in vertical height	15	15
Any water line from a disposal system	10	10
Subsurface groundwater lowering drainage systems	100	100
Any swimming pool	100	100
Public right of way	50	50
Nitrification field	20	20
Any building foundation or basement	15	15

(b) Treatment and storage facilities associated with systems permitted under this Section shall adhere to the setback requirements in Section .0500 of this Subchapter except as provided in this Rule.

(c) Setback waivers shall be written, notarized, signed by both parties and recorded with the County Register of Deeds. Waivers involving the compliance boundary shall be in accordance with 15A NCAC 02L .0107.

(d) Setbacks to property lines established in Paragraphs (a) and (b) of this Rule shall not be applicable when the Permittee, or the entity from which the Permittee is leasing, owns both parcels creating said property line.

(e) Habitable residences or places of ~~public~~ public assembly under separate ownership constructed after the non-discharge facilities were originally permitted or subsequently modified, are exempt from the setback requirements in Paragraphs

(a) and (b) of this Rule.

*History Note: Authority G.S. 143-215.1; 143-215.3(a);
Eff. September 1, 2006-2006;
Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .0607 is readopted as published in 32:06 NCR 554 as follows:

2

3 **15A NCAC 02T .0607 CONNECTION TO REGIONAL SYSTEM**

4 If a public or community sewage system is or becomes available, the subject wastewater treatment facilities shall be
5 closed and all wastewater shall be discharged into the public or community sewage system.

6

7 *History Note: Authority G.S. 143-215.1; 143-215.3(a);*

8 *Eff. September 1, ~~2006~~2006;*

9 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .0608 is proposed for adoption with changes as published in 32:06 NCR 554 as follows:

2

3 **15A NCAC 02T .0608 OPERATION AND MAINTENANCE**

4 (a) Irrigation areas shall have a year-round vegetative cover.

5 (b) Irrigation shall not result in ponding or runoff of treated effluent.

6 (c) Metering equipment shall be tested and calibrated annually, or as established by permit.

7 (d) ~~Automobiles-Vehicles~~ and heavy machinery shall not be allowed on the irrigation area, except during installation
8 or maintenance activities.

9 (e) The Permittee shall keep a log of maintenance activities that occur at the facility.

10 (f) The Permittee shall perform inspections and maintenance to ensure proper operation of the facility.

11

12 *History Note: Authority G.S. 143-215.1; 143-215.3(a);*

13 *Eff. September 1, 2018.*

1 15A NCAC 02T .0701 is readopted as published in 32:06 NCR 554 as follows:

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3

SECTION .0700 – ~~HIGH-RATE~~ HIGH-RATE INFILTRATION SYSTEMS

4

15A NCAC 02T .0701 SCOPE

6 This Section shall apply ~~applies~~ to all high-rate infiltration facilities. High-rate infiltration facilities include all
7 facilities that dispose of wastewater effluent onto the land at an application rate that meets or exceeds the rates provided
8 in Rule .0702 of this Section.

9

10 *History Note: Authority G.S. 143-215.1; 143-215.3(a);*

11 *Eff. September 1, ~~2006~~ 2006;*

12 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .0702 is readopted with changes as published in 32:06 NCR 554 as follows:

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3 **15A NCAC 02T .0702 DEFINITIONS**

4 **As s** used in this Section, "High-rate infiltration" shall mean any application rate that exceeds 1.75 inches of
5 wastewater effluent per week or 0.156 gallons per day per square foot of land. ~~mean:~~

6 (1) ~~In coastal areas as defined in Section 15A NCAC 02H .0400, an application rate that exceeds 1.75~~
7 ~~inches of wastewater effluent per week (0.156 gallons per day per square foot of land).~~

8 (2) ~~In non-coastal areas, an application rate that exceeds 1.50 gallons of wastewater effluent per day per~~
9 ~~square foot of land (16.8 inches per week).~~

10

11 *History Note: Authority G.S. 143-215.1; 143-215.3(a);*

12 *Eff. September 1, 2006-2006;*

13 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .0704 is readopted with changes as published in 32:06 NCR 554-557 as follows:

2

3 **15A NCAC 02T .0704 APPLICATION SUBMITTAL**

4 (a) The requirements in this Rule shall apply to all new and expanding ~~facilities, as applicable,~~ facilities.

5 (b) Soils ~~Report, report.~~ A soil evaluation of the disposal site shall be provided to the Division by the Applicant
6 applicant in a report that includes the following. If required by G.S. 89F, a soil scientist shall prepare this evaluation:
7 ~~[Note: The North Carolina Board for Licensing of Soil Scientists has determined, via letter dated December 1, 2005,~~
8 ~~that preparation of soils reports pursuant to this Paragraph constitutes practicing soil science under G.S. 89F.]~~

9 (1) A field ~~Field~~ description of the soil profile, based on examinations of excavation pits or auger
10 borings, within seven feet of land surface or to bedrock ~~bedrock~~, describing the following
11 parameters by individual diagnostic horizons:

12 (A) the thickness of the horizon;

13 (B) the texture;

14 (C) the color and other diagnostic features;

15 (D) the structure;

16 (E) the internal drainage;

17 (F) the depth, thickness, and type of restrictive ~~horizon(s);~~ horizon; and

18 (G) the presence or absence and depth of evidence of any seasonal high water ~~table (SHWT).~~
19 table.

20 Applicants shall dig pits when necessary for evaluation of the soils at the ~~site.~~ site;

21 (2) Recommendations concerning loading rates of liquids, solids, other wastewater constituents and
22 amendments. Annual hydraulic loading rates shall be based on in-situ measurement of saturated
23 hydraulic conductivity in the most restrictive horizon for each soil mapping unit. Maximum
24 ~~irrigation-precipitation~~ infiltration rates shall be provided for each soil mapping unit.

25 (3) A field-delineated soil map delineating soil mapping units within each land application site and
26 showing all physical features, location of pits and auger borings, legends, scale, and a north arrow.
27 The legends shall also include dominant soil series name and family or higher taxonomic class for
28 each soil mapping unit; and

29 (4) A ~~representative soils analysis (i.e., Standard Soil Fertility Analysis)~~ Standard Soil Fertility Analysis
30 conducted on each land application site. The Standard Soil Fertility Analysis shall include the
31 following parameters:

32 (A) Acidity; ~~acidity;~~

33 (B) Base Saturation (by calculation); ~~base saturation (by calculation);~~

34 (C) Calcium; ~~ealcium;~~

35 (D) Cation Exchange Capacity; ~~cation exchange capacity;~~

36 (E) Copper; ~~copper;~~

- 1 (F) Exchangeable Sodium Percentage (by calculation); ~~exchangeable sodium percentage (by~~
2 ~~calculation);~~
- 3 (G) Magnesium; ~~magnesium;~~
- 4 (H) Manganese; ~~manganese;~~
- 5 (I) Percent Humic Matter; ~~percent humic matter;~~
- 6 (J) pH; ~~pH;~~
- 7 (K) Phosphorus; ~~phosphorus;~~
- 8 (L) Potassium; ~~potassium;~~
- 9 (M) Sodium; ~~sodium;~~ and
- 10 (N) Zinc. ~~zinc.~~

11 [Note: The North Carolina Board for Licensing of Soil Scientists has determined, via letter dated December 1, 2005,
12 that preparation of soils reports pursuant to this Paragraph constitutes practicing soil science pursuant to G.S. 89F.]

13 (c) Engineering design documents. If required by G.S. 89C, a professional engineer shall prepare these documents.
14 The following documents shall be provided to the Division by the Applicant; ~~applicant;~~

15 ~~[Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via letter dated December~~
16 ~~1, 2005, that preparation of engineering design documents pursuant to this Paragraph constitutes practicing~~
17 ~~engineering under G.S. 89C.]~~

- 18 (1) engineering plans for the entire system, including treatment, storage, application, and disposal
19 facilities and equipment except those previously permitted unless those previously permitted are
20 directly tied into the new units or are critical necessary to ~~the~~ understanding of the complete process;
- 21 (2) specifications describing materials to be used, methods of construction, and means for ensuring
22 quality and integrity of the finished product including leakage testing; and
- 23 (3) engineering calculations, including hydraulic and pollutant loading for each treatment unit,
24 treatment unit sizing criteria, hydraulic profile of the treatment system, total dynamic head and
25 system curve analysis for each pump, buoyancy calculations, and ~~irrigation/infiltration design.~~
26 infiltration design.

27 [Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via letter dated December
28 1, 2005, that preparation of engineering design documents pursuant to this Paragraph constitutes practicing
29 engineering pursuant to G.S. 89C.]

30 (d) Site plans. If required by G.S. 89C, a professional land surveyor shall provide location information on boundaries
31 and physical features not under the purview of other licensed professions. Site plans or maps shall be provided to the
32 Division by the Applicant; ~~applicant;~~ depicting the location, orientation and relationship of facility components
33 including:

34 ~~[Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via letter dated December~~
35 ~~1, 2005, that locating boundaries and physical features, not under the purview of other licensed professions, on maps~~
36 ~~pursuant to this Paragraph constitutes practicing surveying under G.S. 89C.]~~

- 1 (1) ~~a scaled map of the site, with topographic contour intervals not exceeding 10 feet or 25 percent of~~
2 ~~total site relief and showing all facility related structures and fences within the treatment, storage~~
3 ~~and disposal areas, and soil mapping units shown on all disposal sites; a scaled map of the site, with~~
4 topographic contour intervals not exceeding 10 feet or 25 percent of total site relief, showing:
- 5 (A) all facility-related structures and fences within the treatment, storage, and disposal areas;
6 and
7 (B) soil mapping units on all disposal sites;
- 8 (2) the location of all wells (including usage and construction details if available), streams (ephemeral,
9 intermittent, and perennial), springs, lakes, ponds, and other surface drainage features within 500
10 feet of all waste treatment, storage, and disposal ~~site(s)~~ sites and delineation of the review and
11 compliance boundaries;
- 12 (3) setbacks as required by Rule .0706 of this Section; and
- 13 (4) site property boundaries within 500 feet of all waste treatment, storage, and disposal ~~site(s)~~ sites.

14 [Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via letter dated December
15 1, 2005, that locating boundaries and physical features, not under the purview of other licensed professions, on maps
16 pursuant to this Paragraph constitutes practicing surveying pursuant to G.S. 89C.]

17 (e) Hydrogeologic report. A hydrogeologic description prepared by a Licensed Geologist, Licensed Soil Scientist, or
18 Professional Engineer if required by Chapters 89E, 89F, or 89C, ~~respectively~~ respectively, ~~of the subsurface to a depth~~
19 ~~of 20 feet or bedrock, whichever is less,~~ shall be provided to the Division by the Applicant ~~applicant~~ for systems
20 treating industrial waste and any system with a design flow over 25,000 gallons per day. Industrial facilities with a
21 design flow less than 25,000 gallons per day, and can demonstrate that the effluent will be of quality similar to
22 domestic wastewater including effluent requirements established in 15A NCAC 02T .0705(b) and 02T .0706(b) or (c)
23 as applicable, may request and receive an exemption from this requirement. The hydrogeologic evaluation shall be of
24 the subsurface to a depth of 20 feet or bedrock, whichever is less deep. A greater depth of An investigation to a depth
25 greater than 20 feet is required if the respective depth is used in predictive calculations. This evaluation shall be based
26 on ~~borings for which the numbers, locations, and depths are sufficient~~ sufficient numbers, locations, and depths of
27 borings to define the components of the hydrogeologic evaluation. In addition to borings, other techniques may be
28 used to investigate the subsurface conditions at the ~~site.~~ site, including. ~~These techniques may include~~ geophysical
29 well logs, surface geophysical surveys, and tracer studies. This evaluation shall be presented in a report that includes
30 the following components:

31 ~~[Note: The North Carolina Board for Licensing of Geologists, via letter dated April 6, 2006, North Carolina Board for~~
32 ~~Licensing of Soil Scientists, via letter dated December 1, 2005, and North Carolina Board of Examiners for Engineers~~
33 ~~and Surveyors, via letter dated December 1, 2005, have determined that preparation of hydrogeologic description~~
34 ~~documents pursuant to this Paragraph constitutes practicing geology under G.S. 89E, soil science under G.S. 89F, or~~
35 ~~engineering under G.S. 89C.]~~

- 36 (1) a description of the regional and local geology and hydrogeology;

- 1 (2) a description, based on field observations of the site, of the site topographic setting, streams, springs
2 and other groundwater discharge features, drainage features, existing and abandoned wells, rock
3 outcrops, and other features that may affect the movement of the contaminant plume and treated
4 wastewater;
- 5 (3) changes in the lithology underlying the site;
- 6 (4) the depth to bedrock and the occurrence of any rock outcrops;
- 7 (5) the hydraulic conductivity and transmissivity of the affected ~~aquifer(s);~~ aquifer as determined by in-
8 situ field testing, such as slug tests or pumping tests, in the intended area of infiltration;
- 9 (6) the depth to the seasonal high water table;
- 10 (7) a discussion of the relationship between the affected aquifers of the site to local and regional
11 geologic and hydrogeologic features;
- 12 (8) a discussion of the groundwater flow regime of the site prior to the operation of the proposed facility
13 and the post operation of the proposed ~~facility~~ facility, focusing on the relationship of the system to
14 groundwater receptors, groundwater discharge features, and groundwater flow media; and
- 15 (9) a mounding analysis to predict the level of the ~~SHWT~~ seasonal high water table after wastewater
16 application.

17 [Note: The North Carolina Board for Licensing of Geologists, via letter dated April 6, 2006, North Carolina Board for
18 Licensing of Soil Scientists, via letter dated December 1, 2005, and North Carolina Board of Examiners for Engineers
19 and Surveyors, via letter dated December 1, 2005, have determined that preparation of hydrogeologic description
20 documents pursuant to this Paragraph constitutes practicing geology pursuant to G.S. 89E, soil science pursuant to
21 G.S. 89F, or engineering pursuant to G.S. 89C.]

22 (f) Property Ownership Documentation shall be provided to the Division consisting of:

- 23 (1) legal documentation of ownership (i.e., contract, deed or article of incorporation);
- 24 (2) ~~written notarized intent to purchase agreement~~ an agreement of an intent to purchase the property
25 that is written, notarized, and signed by both parties, accompanied by a plat or survey map; or
- 26 (3) ~~written notarized lease agreement~~ an agreement to lease the property that is written, notarized, and
27 signed by both parties, specifically indicating the intended use of the property, as well as
28 accompanied by a plat or survey map. Lease agreements shall adhere to the requirements of 15A
29 NCAC 02L .0107.

30 (g) Public utilities shall submit a Certificate of Public ~~Conveyance~~ Convenience and Necessity or a letter from the
31 NC Utilities Commission stating that it has received a franchise ~~application has been received.~~ application.

32 (h) A ~~complete~~ chemical analysis of the typical wastewater to be ~~discharged~~ infiltrated shall be provided to the
33 Division by the Applicant ~~applicant~~ for industrial waste, including which shall include:

- 34 (1) ~~Total Organic Carbon,~~ Total Organic Carbon;
- 35 (2) ~~5-day Biochemical Oxygen Demand (BOD₅),~~ 5-day Biochemical Oxygen Demand (BOD₅);
- 36 (3) ~~Chemical Oxygen Demand (COD),~~ Chemical Oxygen Demand (COD);
- 37 (4) ~~Nitrate Nitrogen (NO₃-N),~~ Nitrate Nitrogen (NO₃-N);

1 15A NCAC 02T .0705 is readopted with changes as published in 32:06 NCR 557-558 as follows:

2

3 **15A NCAC 02T .0705 DESIGN CRITERIA**

4 (a) The requirements in this Rule ~~shall~~ apply to all new and expanding ~~facilities, facilities, as applicable.~~

5 ~~(b) Degree of treatment shall be based on a monthly average 5-day Biochemical Oxygen Demand (BOD₅) ≤ 10 mg/L;~~
6 ~~Total Suspended Solids (TSS) ≤ 15 mg/L; Ammonia Nitrogen (NH₃-N) ≤ 4 mg/L; Fecal Coliforms ≤ 14 per 100 mL;~~
7 ~~and Nitrate Nitrogen (NO₃-N) ≤ 10 mg/L for domestic and commercial operations. Treatment for other operations~~
8 ~~shall be based on producing the quality effluent used in documenting protection of surface water or groundwater~~
9 ~~standards. More stringent effluent limits may be applied in accordance with calculations submitted by the applicant to~~
10 ~~document protection of surface water or groundwater standards.~~

11 (b) Minimum degree of treatment for new and expanding systems:

12 (1) that are municipal, domestic and commercial facilities, except systems subject to Subparagraph
13 (b)(2) of this Rule, shall meet a monthly average of each of the following:

14 (A) five-day Biochemical Oxygen Demand (BOD₅) ≤ 10 mg/L;

15 (B) Total Suspended Solids (TSS) ≤ 15 mg/L;

16 (C) Ammonia (NH₃-N) ≤ 4 mg/L;

17 (D) Fecal Coliforms ≤ 14 colonies/100 mL; and

18 (E) Nitrate Nitrogen (NO₃-N) ≤ 10 mg/L; or

19 (2) that are not described in Subparagraph (b)(1) of this Rule shall meet treatment standards that assure
20 that surface water or groundwater standards will not be exceeded.

21 (c) All ~~treatment/storage lagoons/ponds~~ open-atmosphere treatment lagoons and ponds, and open-atmosphere storage
22 and basin infiltration units shall have at least two feet of freeboard.

23 (d) Waste, including treated waste, shall not be placed directly into, or in contact with, GA classified groundwater
24 unless such placement will not result in a contravention of GA groundwater standards, as demonstrated by predictive
25 calculations or modeling.

26 (e) Treatment works and disposal systems ~~utilizing~~ using earthen basins, lagoons, ponds or trenches, excluding
27 holding ponds containing non-industrial treated effluent prior to ~~spray-irrigation~~ infiltration, for treatment, storage or
28 disposal shall have either a liner of natural material at least one foot in thickness and having a hydraulic conductivity
29 of no greater than 1×10^{-6} centimeters per second when compacted, or a synthetic liner of sufficient thickness to
30 exhibit structural integrity and an effective hydraulic conductivity no greater than that of the natural material liner.

31 (f) The bottoms of earthen impoundments, trenches or other similar excavations shall be at least four feet above the
32 bedrock surface, except that the bottom of excavations ~~which~~ that are less than four feet above bedrock shall have a
33 liner with a hydraulic conductivity no greater than 1×10^{-7} centimeters per second. Liner thickness shall be that
34 thickness necessary to achieve a leakage rate consistent with the sensitivity of classified groundwaters. Liner
35 requirements may be reduced if ~~it can be demonstrated by~~ the Applicant demonstrates applicant through predictive
36 calculations or modeling methods that construction and use of these treatment and disposal units will not result in
37 contravention of surface water or groundwater standards.

- 1 (g) Impoundments, trenches or other excavations made for the purpose of storing or treating waste shall not be
2 excavated into bedrock unless the placement of waste into such excavations will not result in a contravention of surface
3 water or groundwater standards, as demonstrated by predictive calculations or modeling.
- 4 (h) Each facility, except for those using septic tanks or lagoon treatment, shall provide flow equalization with either
5 a capacity based upon a representative diurnal hydrograph or a capacity of 25 percent of the daily system design flow.
6 ~~Flow equalization of at least 25 percent of the facilities permitted hydraulic capacity must be provided for all seasonal~~
7 ~~or resort facilities and all other facilities with fluctuations in influent flow which may adversely affect the performance~~
8 ~~of the system.~~
- 9 (i) By-pass and overflow lines shall be prohibited.
- 10 (j) Multiple pumps shall be provided ~~if~~ wherever pumps are used.
- 11 (k) Power reliability shall be ~~provided~~ provided, consisting of:
- 12 (1) automatically activated standby ~~power supply~~ power supply, located onsite, onsite and capable of
13 powering all essential treatment units under design conditions; or
- 14 (2) approval by the Director that the facility:
- 15 (A) serves a private water distribution system ~~which that~~ has automatic shut-off at power failure
16 and no elevated water storage ~~tanks, tanks;~~ tanks;
- 17 (B) has sufficient storage capacity that no potential for overflow ~~exists, exists;~~ exists; and
- 18 (C) can tolerate septic wastewater ~~due to~~ during prolonged detention.
- 19 (l) A water-tight seal on all ~~treatment/storage~~ treatment and storage units or ~~minimum~~ of two feet of protection from
20 the 100-year flood elevation shall be provided.
- 21 (m) ~~Irrigation~~ Infiltration system design shall not exceed the recommended precipitation rates in the soils report
22 prepared pursuant to Rule .0704 of this Section.
- 23 (n) ~~A minimum~~ of 30 days of residuals storage shall be provided.
- 24 (o) Disposal areas shall be designed to maintain a one-foot vertical separation between the seasonal high water table
25 and the ground surface.
- 26 (p) The public shall be prohibited access to the treatment, storage and infiltration facilities, wetted disposal area and
27 ~~treatment facilities.~~
- 28 (q) Influent pump stations shall meet the sewer ~~minimum~~ design criteria ~~as provided~~ set forth in Section .0300 of this
29 Subchapter.
- 30 (r) Septic tanks shall adhere to 15A NCAC 18A .1900.
- 31 (s) Infiltration areas shall be designed to allow routine maintenance of the area without interruption of disposal.
- 32 (t) Subsurface groundwater lowering drainage systems permitted under this Subchapter shall be subject to the
33 corrective action requirements in 15A NCAC 02L .0106.
- 34 (u) Waste treatment facilities shall be equipped with noise and odor control devices that shall be enclosed.
- 35 (v) All essential treatment and disposal units shall be provided in duplicate.
- 36 (w) The application rate shall not exceed 10 gallons per day per square foot (GPD/ft²).

1 (x) Facilities [with an average daily flow greater than 10,000 GPD] shall be provided with a flow meter to measure
2 the volume of treated wastewater applied to each infiltration site.

3 (y) Subsurface groundwater lowering drainage systems shall be prohibited within the compliance boundary.

4 (z) Facilities serving residential communities shall provide five days of effluent storage, unless the Applicant
5 demonstrates that the infiltrated effluent will not pond, runoff or breakout regardless of weather or soil conditions.

6 (aa) Automatically activated infiltration systems, excluding basin, rotary, and spray bed infiltration systems, shall be
7 connected to a rain or moisture sensor to prevent infiltration during precipitation events or wet conditions that would
8 cause runoff.

9

10 *History Note: Authority G.S. 143-215.1; 143-215.3(a);*

11 *Eff. September 1, 2006-2006;*

12 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .0706 is readopted with changes as published in 32:06 NCR 558-559 as follows:

2

3 **15A NCAC 02T .0706 SETBACKS**

4 (a) The setbacks for Infiltration Units infiltration sites shall be as follows:

	<u>Spray</u>	<u>Drip</u>	<u>Basin</u>
	<u>(feet)</u>	<u>(feet)</u>	<u>(feet)</u>
7 <u>Any habitable residence or place of public assembly under separate</u>			
8 <u>ownership or not to be maintained as part of the project site</u>	<u>400</u>	<u>100</u>	<u>100</u>
9 <u>Any habitable residence or place of public assembly owned by the Permittee</u>			
10 <u>to be maintained as part of the project site</u>	<u>200</u>	<u>15</u>	<u>50</u>
11 <u>Any private or public water supply source</u>	<u>100</u>	<u>100</u>	<u>100</u>
12 <u>Surface waters (streams – intermittent and perennial, perennial waterbodies,</u>			
13 <u>and wetlands)</u>	<u>200</u>	<u>200</u>	<u>200</u>
14 <u>Groundwater lowering ditches (where the bottom of the ditch intersects</u>			
15 <u>the SHWT)</u>	<u>200</u>	<u>200</u>	<u>200</u>
16 <u>Subsurface groundwater lowering drainage systems</u>	<u>200</u>	<u>200</u>	<u>200</u>
17 <u>Surface water diversions (ephemeral streams, waterways, ditches)</u>	<u>50</u>	<u>50</u>	<u>50</u>
18 <u>Any well with exception of monitoring wells</u>	<u>100</u>	<u>100</u>	<u>100</u>
19 <u>Any property line</u>	<u>150</u>	<u>50</u>	<u>50</u>
20 <u>Top of slope of embankments or cuts of two feet or more in vertical height</u>	<u>100</u>	<u>100</u>	<u>100</u>
21 <u>Any water line from a disposal system</u>	<u>10</u>	<u>10</u>	<u>10</u>
22 <u>Public right of way</u>	<u>50</u>	<u>50</u>	<u>50</u>
23 <u>Nitrification field</u>	<u>20</u>	<u>20</u>	<u>20</u>
24 <u>Any building foundation or basement</u>	<u>15</u>	<u>15</u>	<u>15</u>
25 <u>Impounded public water supplies</u>	<u>500</u>	<u>500</u>	<u>500</u>
26 <u>Public shallow groundwater supply (less than 50 feet deep)</u>	<u>500</u>	<u>500</u>	<u>500</u>
27 <u>(feet)</u>			
28 <u>Any habitable residence or place of public assembly under separate ownership</u>			
29 <u>or not to be maintained as part of the project site</u>			<u>400</u>
30 <u>Any habitable residence or place of public assembly owned by the permittee</u>			
31 <u>to be maintained as part of the project site</u>			<u>200</u>
32 <u>Any private or public water supply source</u>			<u>100</u>
33 <u>Surface waters (streams— intermittent and perennial, perennial waterbodies, and wetlands)</u>			<u>200</u>
34 <u>Groundwater lowering ditches (where the bottom of the ditch intersects the SHWT)</u>			<u>200</u>
35 <u>Subsurface groundwater lowering drainage systems</u>			<u>200</u>
36 <u>Surface water diversions (ephemeral streams, waterways, ditches)</u>			<u>50</u>
37 <u>Any well with exception of monitoring wells</u>			<u>100</u>

1	Any property line	200
2	Top of slope of embankments or cuts of two feet or more in vertical height	100
3	Any water line from a disposal system	10
4	Any swimming pool	100
5	Public right of way	50
6	Nitrification field	20
7	Any building foundation or basement	15
8	Impounded public water supplies	500
9	Public shallow groundwater supply (less than 50 feet deep)	500

10 (b) Setbacks in Paragraph (a) of this Rule to surface waters, groundwater lowering ditches, and subsurface
11 groundwater lowering drainage systems shall be 100 feet if the treatment units are designed to meet a Total Nitrogen
12 of ~~7 mg/L~~ mg/L and Total Phosphorus of ~~3 mg/L~~ mg/L effluent limit.

13 (c) Setbacks in Paragraph (a) of this Rule to surface waters, groundwater lowering ditches, and subsurface
14 groundwater lowering drainage systems shall be 50 feet if the treatment units are designed to meet a Total Nitrogen
15 of ~~4 mg/L~~ mg/L and Total Phosphorus of ~~2 mg/L~~ mg/L effluent limit. This setback provision ~~does~~ shall not apply to SA
16 waters.

17 (d) Treatment and storage facilities associated with systems permitted under this Section shall adhere to the setback
18 requirements in Section .0500 of this Subchapter except as provided in this Rule.

19 (e) Setback waivers shall be written, notarized, signed by all parties involved and recorded with the County Register
20 of Deeds. Waivers involving the compliance boundary shall be in accordance with 15A NCAC 02L .0107.

21 (f) Setbacks to property lines established in Paragraphs (a) and (d) of this Rule shall not be applicable when the
22 Permittee, or the entity from which the Permittee is leasing, owns both parcels creating said property line.

23 (g) Habitable residences or places of ~~public~~ assembly under separate ownership constructed after the non-discharge
24 facilities were originally permitted or subsequently modified, are exempt from the setback requirements in Paragraphs
25 (a) and (d) of this Rule.

26

27 *History Note: Authority G.S. 143-215.1; 143-215.3(a);*

28 *Eff. September 1, 2006, 2006;*

29 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .0707 is readopted with changes as published in 32:06 NCR 559 as follows:

2

3 **15A NCAC 02T .0707 OPERATION AND MAINTENANCE ~~PLAN~~**

4 (a) An operation and maintenance plan shall be maintained for all systems. The plan shall:

5 (1) describe the operation of the system in sufficient detail to show what operations are necessary for
6 the system to function and by whom the functions are to be conducted;

7 (2) describe anticipated maintenance of the system;

8 (3) include provisions for safety ~~measures~~, measures including restriction of access to the site and
9 equipment, as appropriate; and

10 (4) include spill control ~~provisions~~, provisions including:

11 (A) response to upsets and ~~bypasses~~, bypasses including control, containment, and
12 remediation; and

13 (B) contact information for plant personnel, emergency responders, and regulatory agencies.

14 (b) Infiltration areas, excluding basin, rotary, and spray bed infiltration systems, shall have a year-round vegetative
15 cover.

16 (c) Infiltration, excluding basin infiltration systems, shall not result in ponding or runoff of treated effluent.

17 (d) Infiltration and metering equipment shall be tested and calibrated annually, or as established by permit.

18 (e) ~~Automobiles~~ **Vehicles** and heavy machinery shall not be allowed on the infiltration area, except during
19 installation or maintenance activities.

20 (f) Water level gauges shall be provided for all open-atmosphere treatment lagoons and ponds, and all open-
21 atmosphere storage and basin infiltration units.

22 (g) Vegetative cover shall be maintained on all earthen embankments.

23 (h) Basin, rotary, and spray bed infiltration systems shall be cleaned to remove deposited materials every permit cycle,
24 or as established by permit.

25 (i) The Permittee shall keep a log of all maintenance activities that occur at the facility.

26 (j) The Permittee shall perform inspections and maintenance to ensure proper operation of the facility.

27

28 *History Note: Authority G.S. 143-215.1; 143-215.3(a);*

29 *Eff. September 1, 2006-2006;*

30 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .0708 is readopted as published in 32:06 NCR 559-560 as follows:

2

3 **15A NCAC 02T .0708 RESIDUALS MANAGEMENT PLAN**

4 (a) A Residuals Management Plan shall be maintained for all systems that generate residuals. The plan ~~must~~ shall
5 include the following:

6 (1) a detailed explanation as to how the residuals will be collected, handled, processed, stored and
7 disposed;

8 (2) an evaluation of the residuals storage requirements for the treatment ~~facility~~ facility, based upon the
9 maximum anticipated residuals production rate and the ability to remove residuals;

10 (3) a permit for residuals ~~disposal or utilization, utilization or~~ utilization or a written commitment to the Permittee of
11 a ~~Department-approved~~ Department-approved residuals ~~disposal/utilization~~ disposal or utilization
12 program accepting the residuals ~~which~~ that demonstrates that the approved program has adequate
13 capacity to accept the ~~residuals,~~ residuals or that an application for approval has been submitted;
14 and

15 (4) if oil, grease, grit, or screenings removal and collection is a designed unit process, a detailed
16 explanation as to how ~~the oil/grease~~ these materials will be collected, handled, processed, stored and
17 disposed.

18 (b) The Permittee shall maintain a record of all residuals removed from the facility.

19

20 *History Note: Authority G.S. 143-215.1; 143-215.3(a);*

21 *Eff. September 1, 2006-2006;*

22 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .0801 is readopted as published in 32:06 NCR 560 as follows:

2

3

SECTION .0800 – OTHER NON-DISCHARGE WASTEWATER SYSTEMS

4

15A NCAC 02T .0801 SCOPE

6 This Section ~~applies~~ shall apply to systems not specifically regulated by other rules in this Subchapter ~~in which the~~
7 ~~waste~~ and governs waste that is disposed of by ground absorption systems or other non-discharge systems such as
8 infiltration lagoons and evaporative ~~systems~~ systems, as well as authorizations to construct for NPDES facilities.

9

10 *History Note: Authority G.S. 143-215.1; 143-215.3(a.);*

11 *Eff. September 1, ~~2006-2006~~;*

12 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .0804 is readopted as published in 32:06 NCR 560 as follows:

2

3 **15A NCAC 02T .0804 APPLICATION SUBMITTAL**

4 Submittal requirements shall be the same as systems permitted under ~~15A NCAC 02T .0504~~ 15A NCAC 02T .0504,
5 except those that are not applicable to authorization to construct type ~~permits (e.g., soils report, hydrogeological~~
6 ~~investigations, or receiver site management plan).~~ permits.

7

8 *History Note: Authority G.S. 143-215.1; 143-215.3(a);*

9 *Eff. September 1, ~~2006-2006~~;*

10 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .0805 is readopted as published in 32:06 NCR 560 as follows:

2

3 **15A NCAC 02T .0805 DESIGN CRITERIA**

4 Design requirements shall be the same as systems permitted under ~~15A NCAC 02T .0505~~ 15A NCAC 02T .0505,
5 except those that are not applicable to authorization to construct type permits (~~e.g. degree of treatment and irrigation~~
6 ~~system design requirements~~) or specifically addressed by Section 15A NCAC 02H .0100.

7

8 *History Note: Authority G.S. 143-215.1; 143-215.3(a);*

9 *Eff. September 1, ~~2006-2006~~;*

10 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .0806 is readopted with changes as published in 32:06 NCR 560 as follows:

2

3 **15A NCAC 02T .0806 SETBACKS**

4 Setbacks shall be the same as those listed in 15A NCAC 02T .0506 except infiltration basins, which shall meet the
5 setbacks listed in 15A NCAC 02T ~~.0706 for infiltration units.~~ .0706.

6

7 *History Note: Authority G.S. 143-215.1; 143-215.3(a);*

8 *Eff. September 1, ~~2006-2006~~;*

9 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .0807 is adopted as published in 32:06 NCR 590 as follows:

2

3 **15A NCAC 02T .0807 OPERATION AND MAINTENANCE**

4 Operation and maintenance requirements shall be the same as systems permitted under 15A NCAC 02T .0707.

5

6 History Note: Authority G.S. 143-215.1; 143-215.3(a);

7 Eff. September 1, 2018.

1 15A NCAC 02T .0808 is adopted as published in 32:06 NCR 560 as follows:

2

3 **15A NCAC 02T .0808 RESIDUALS MANAGEMENT**

4 Residuals management requirements shall be the same as systems permitted under 15A NCAC 02T .0708.

5

6 History Note: Authority G.S. 143-215.1; 143-215.3(a);

7 Eff. September 1, 2018.

1 15A NCAC 02T .1101 is readopted with changes as published in 32:06 NCR 560 as follows:

2

3

SECTION .1100 – RESIDUALS MANAGEMENT

4

15A NCAC 02T .1101 SCOPE

6 This Section shall apply ~~applies~~ to the treatment, storage, transportation, use, and disposal of residuals. Not regulated
7 under this Section is the treatment, storage, transportation, use, or disposal of:

8

(1) oil, grease, grit and screenings from wastewater treatment facilities;

9

(2) septage from wastewater treatment facilities;

10

(3) ash that is regulated in accordance with ~~Section .1200;~~ Section .1200 of this Subchapter;

11

(4) residuals that are regulated in accordance with Section .1300 and Section .1400 of this Subchapter;

12

(5) residuals that are prepared for land application, used, or disposed of in a solid waste management
13 facility permitted by the Division of Waste Management;

14

(6) residuals that are disposed of in an incinerator permitted by the Division of Air Quality;

15

(7) residuals that are transported out of state for treatment, storage, use, or disposal; ~~and~~

16

(8) residuals that meet the definition of a hazardous waste in accordance with 40 CFR 260.10 as adopted
17 by reference in 15A NCAC 13A .0102(b) or that have a concentration of polychlorinated biphenyls
18 equal to or greater than 50 milligrams per kilogram of total solids on a dry weight basis; and (i.e.,
19 dry weight basis).

20

(9) byproduct waste resulting from any process of industry, manufacturing, trade, business, or the
21 development of any natural resource (i.e., not from a wastewater treatment, water supply treatment,
22 or air pollution control facility permitted under the authority of the Commission).

23

24 *History Note: Authority G.S. 143-215.1; 143-215.3(a);*

25 *Eff. September 1, ~~2006-2006;~~*

26 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .1102 is readopted with changes as published in 32:06 NCR 560-562 as follows:

2

3 **15A NCAC 02T .1102 DEFINITIONS**

4 As used in this Section:

5 (1) "Aerobic digestion" shall mean the biochemical decomposition of organic matter in residuals into
6 carbon dioxide and water by microorganisms in the presence of air.

7 (2) "Agricultural land" shall mean land on which a food crop, feed crop, or fiber crop is grown.

8 (3) "Anaerobic digestion" shall mean the biochemical decomposition of organic matter in residuals into
9 methane gas and carbon dioxide by microorganisms in the absence of air.

10 (4) "Bag and other container" shall mean a bag, bucket, bin, box, carton, vehicle, trailer, tanker, or an
11 open or closed receptacle with a load capacity of 1.102 short tons or one metric ton or less.

12 (5) "Base flood" shall mean a flood that has a one percent ~~chance~~ change of occurring in any given year.
13 ~~year (i.e., a flood with a magnitude equaled once in 100 years).~~

14 (6) "Biological residuals" shall mean residuals that have been generated during the treatment of
15 domestic wastewater, the treatment of animal processing wastewater, or the biological treatment of
16 industrial wastewater.

17 (7) "Biological treatment" shall mean treatment in a system that ~~utilizes~~ uses biological processes,
18 ~~processes that shall include~~ including lagoons, activated sludge systems, extended aeration systems,
19 and fixed film systems.

20 (8) "Bulk residuals" shall mean residuals that are transported and not sold or given away in a bag or
21 other container for application to the land.

22 (9) "Class A residuals" shall mean residuals that are either bagged or bulk residuals meeting:

23 (a) the Pollutant Limits in Rule .1105(a) of this Section and Rule .1105(c) of this Section;

24 (b) the Pathogen Reduction Requirements in Rule .1106(a) of this Section; and

25 (c) the Vector Attraction Reduction Requirements in Rule .1107 of this Section.

26 (10) "Class B residuals" shall mean residuals that are bulk residuals meeting:

27 (a) the Pollutant Limits in Rule .1105(a) of this Section and Rule .1105(b) of this Section;

28 (b) the Pathogen Reduction Requirements in Rule .1106(b) of this Section; and

29 (c) the Vector Attraction Reduction Requirements in Rule .1107 of this Section.

30 (11)~~(8)~~(9) "Cover" shall mean soil or ~~other~~ Division-approved material used to cover residuals placed
31 in a surface disposal unit.

32 (12)~~(9)~~(10) "Cumulative pollutant loading rate" shall mean the maximum amount of a pollutant that
33 ~~can~~ is permitted to be applied to a unit area of land.

34 (13)~~(10)~~(11) "Dedicated program" shall mean a program involving the application of ~~bulk~~ residuals in
35 which any of the permitted land meets the definition of a dedicated land application site.

36 (14)~~(11)~~(12) "Dedicated land application site" shall mean land:

37 (a) to which ~~bulk~~ residuals are applied at greater than agronomic rates; ~~rates~~,

- 1 (b) to which ~~bulk~~ residuals are applied through fixed irrigation facilities or irrigation facilities
2 fed through a fixed supply ~~system~~; ~~system~~, or
- 3 (c) where the primary use of the land is for the disposal of ~~bulk residuals~~, residuals and
4 agricultural crop production is of secondary importance.
- 5 ~~(15)~~ ~~(12)~~ ~~(13)~~ "Density of microorganisms" shall mean the number of microorganisms per unit mass of
6 total solids on a dry weight basis (~~i.e., dry weight basis~~) in the residuals.
- 7 ~~(16)~~ ~~(13)~~ ~~(14)~~ "Dry weight basis" shall mean the weight calculated after the residuals have been dried at
8 105 degrees Celsius until they reach a constant mass.
- 9 ~~(17)~~ ~~(14)~~ ~~(15)~~ "Feed crop" shall mean a crop produced for consumption by animals.
- 10 ~~(18)~~ ~~(15)~~ ~~(16)~~ "Fiber crop" shall mean a crop grown for fiber ~~production~~. ~~This shall include~~ production,
11 including flax and cotton.
- 12 ~~(19)~~ ~~(16)~~ ~~(17)~~ "Food crop" shall mean a crop produced for consumption by ~~humans~~. ~~This shall include~~
13 humans, including fruits, vegetables, and tobacco.
- 14 ~~(20)~~ ~~(17)~~ ~~(18)~~ "Grit" shall mean sand, gravel, cinders, or other materials with a high specific gravity
15 generated during preliminary treatment of wastewater in a wastewater treatment facility.
- 16 ~~(21)~~ ~~(18)~~ ~~(19)~~ "Incorporation" shall mean the mixing of residuals with top soil to a minimum depth of
17 four inches by methods such as discing, plowing, and rototilling.
- 18 ~~(22)~~ ~~(19)~~ ~~(20)~~ "Injection" shall mean the subsurface application of liquid residuals to a depth of four to
19 12 inches.
- 20 ~~(23)~~ ~~(20)~~ ~~(21)~~ "Land application" shall mean the spraying or spreading of residuals onto the land surface,
21 ~~surface~~; the injection of residuals below the land surface, ~~surface~~; or the incorporation of residuals
22 into the soil so that the residuals can condition the soil or fertilize crops or vegetation grown in the
23 soil.
- 24 ~~(24)~~ ~~(21)~~ ~~(22)~~ "Lower explosive limit for methane gas" shall mean the lowest percentage of methane gas
25 in air, by volume, that propagates a flame at 25 degrees Celsius and atmospheric pressure.
- 26 ~~(25)~~ ~~(22)~~ ~~(23)~~ "Monthly average" shall mean the arithmetic mean of all measurements taken during ~~the a~~
27 month.
- 28 ~~(26)~~ ~~(23)~~ ~~(24)~~ "Pathogens" shall mean disease-causing ~~organisms~~ organisms, including disease-causing
29 bacteria, protozoa, viruses, and viable helminth ova.
- 30 ~~(27)~~ ~~(24)~~ ~~(25)~~ "Place residuals" shall mean to dispose of residuals in a surface disposal unit.
- 31 ~~(28)~~ ~~(25)~~ ~~(26)~~ "Person who prepares residuals" shall mean either the person who generates residuals
32 during the treatment of waste in a wastewater treatment facility or the person who derives a material
33 from residuals.
- 34 ~~(29)~~ ~~(26)~~ ~~(27)~~ "Pollutant limit" shall mean a numerical value that describes the amount of a pollutant
35 allowed per unit amount of residuals or the amount of a pollutant that can be applied to a unit area
36 of land.

1 15A NCAC 02T .1103 is readopted with changes as published in 32:06 NCR 562 as follows:

2

3 **15A NCAC 02T .1103 PERMITTING BY REGULATION**

4 (a) The following systems ~~are~~ shall be deemed permitted pursuant to Rule .0113 of this Subchapter ~~provided~~ if the
5 system meets the criteria in Rule .0113 of this Subchapter and all criteria required for ~~the specific~~ that system in this
6 Rule:

7 (1) Preparation for land application, use, or disposal of residuals in a solid waste facility permitted by
8 the Division of Waste Management that is approved to receive the residuals.

9 (2) Land application of residuals that have been prepared for land application in a solid waste facility
10 permitted by the Division of Waste Management approved to receive the residuals ~~as long as~~ if the
11 requirements of this Section are met.

12 (3) Land application sites onto which Class A residuals that are sold or given away in a bag or other
13 ~~container~~ container, are ~~applied~~ applied, provided the following criteria ~~is~~ are met:

14 (A) the residuals meet the pollutant limits in Rule .1105(a) and Rule .1105(c) of this Section,

15 (B) the residuals meet the pathogen requirements in Rule ~~.1106(a)(1)~~ .1106(a) of this Section,

16 (C) the residuals meet the vector attraction reduction requirements in Rule .1107(a) of this
17 Section, and

18 (D) the land application activities are carried out according to the instructions provided in the
19 informational ~~sheet~~ sheet or bag bag, or other container label as required in Rule .1109(c)
20 ~~.1109(a)~~ of this Section.

21 (4) Land application sites onto which ~~bulk~~ Class A biological residuals are applied, ~~provided that~~ if the
22 residuals and activities ~~meet~~ meeting the following criteria:

23 (A) the residuals meet the pollutant limits in Rule .1105(a) and Rule .1105(c) of this Section,

24 (B) the residuals meet the pathogen requirements in Rule ~~.1106(b)~~ .1106(a) of this Section,

25 (C) the residuals meet the vector attraction reduction requirements in Rule .1107(a) of this
26 Section, and

27 (D) the land application activities meet all applicable conditions of Rule .1108(b) ~~.1108(b)(1)~~
28 and Rule .1109(a)(1) ~~.1109(b)~~ of this Section.

29 (5) Land application sites onto which Class A non-biological residuals ~~generated from the treatment of~~
30 ~~potable or fresh water or that are generated from the treatment of non-biological industrial~~
31 ~~wastewater with no domestic or municipal wastewater contributions~~ are applied, ~~provided that~~ if the
32 residuals and activities meet the following criteria:

33 (A) the residuals meet the pollutant limits in Rule .1105(a) and Rule .1105(c) of this Section,

34 (B) the residuals meet the pathogen requirements in Rule .1106(b) of this Section, and

35 (C) the land application activities meet all applicable conditions of Rule .1108(b) ~~.1108(b)(1)~~
36 and Rule ~~.1109~~ .1109(a)(1) of this Section.

1 (6) Transportation of residuals from the ~~residuals-generating~~ residuals-generating source facility to
2 other Division or Division of Waste Management facilities approved to treat, store, use, or dispose
3 the residuals.

4 (b) The Director may determine that a system ~~should~~ shall not be deemed permitted in accordance with this Rule and
5 Rule .0113 of this Subchapter. This determination shall be made in accordance with Rule .0113(e) of this Subchapter.

6
7 *History Note: Authority G.S. 143-215.1; 143-215.3(a);*
8 *Eff. September 1, ~~2006-2006.~~*
9 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .1104 is readopted with changes as published in 32:06 NCR 563-569 as follows:

2

3 **15A NCAC 02T .1104 APPLICATION SUBMITTAL**

4 (a) For new and expanding residuals treatment and storage facilities:

5 (1) Site plans. If required by G.S. 89C, a professional land surveyor shall provide location information
6 on boundaries and physical features not under the purview of other licensed professions. Site plans
7 or maps shall be provided to the Division by the Applicant ~~applicant~~ depicting the location,
8 orientation and relationship of facility ~~components~~ components, including:

9 ~~[Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via~~
10 ~~letter dated December 1, 2005, that locating boundaries and physical features, not under the purview~~
11 ~~of other licensed professions, on maps pursuant to this Paragraph constitutes practicing surveying~~
12 ~~under G.S. 89C.]~~

13 (A) a scaled map of the site, with topographic contour intervals not exceeding 10 feet or 25
14 percent of total site relief and showing all facility-related structures and fences within the
15 treatment and storage areas;

16 (B) the location of all wells (including ~~usage~~ use and construction details if available), streams
17 (ephemeral, intermittent, and perennial), springs, lakes, ponds, and other surface drainage
18 features within 500 feet of all treatment and storage facilities and delineation of the review
19 and compliance boundaries;

20 (C) setbacks as required by Rule .1108 of this Section; and

21 (D) site property boundaries within 500 feet of all treatment and storage facilities.

22 ~~[Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via~~
23 ~~letter dated December 1, 2005, that locating boundaries and physical features, not under the purview~~
24 ~~of other licensed professions, on maps pursuant to this Paragraph constitutes practicing surveying~~
25 ~~pursuant to G.S. 89C.]~~

26 (2) Engineering design documents. If required by G.S. 89C, a professional engineer shall prepare these
27 documents. The following documents shall be provided to the Division by the Applicant; ~~applicant~~:

28 ~~[Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via~~
29 ~~letter dated December 1, 2005, that preparation of engineering design documents pursuant to this~~
30 ~~Paragraph constitutes practicing engineering under G.S. 89C.]~~

31 (A) engineering plans for the facilities and equipment except those previously permitted unless
32 they are directly tied into the new units or are ~~critical~~ necessary to ~~the~~ understanding of the
33 complete process;

34 (B) specifications describing materials to be used, methods of construction, and means for
35 ensuring quality and integrity of the finished product, ~~product~~ including leakage testing;
36 and

1 (C) engineering ~~calculations~~ calculations, including hydraulic and pollutant loading for each
2 unit, unit sizing criteria, hydraulic profile of the facilities, total dynamic head and system
3 curve analysis for each pump, and buoyancy calculations.

4 [Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via
5 letter dated December 1, 2005, that preparation of engineering design documents pursuant to this
6 Paragraph constitutes practicing engineering pursuant to G.S. 89C.]

7 (b) For new and modified sources of residuals:

8 (1) Site maps shall be provided to the Division by the Applicant ~~applicant~~ depicting the location of the
9 source.

10 (2) ~~A complete~~ An analysis of the residuals shall be provided to the Division by the Applicant.
11 ~~applicant~~. The analysis ~~may include~~ shall include:

12 (A) all pollutants identified in Rule .1105 of this ~~Section~~; Section;

13 (B) nutrients and micronutrients; ~~micronutrients~~;

14 (C) hazardous waste characterization tests; ~~tests~~; and

15 (D) proof of compliance with Rule .1106 and Rule .1107 of this Section if applicable.

16 (3) A ~~sampling/monitoring~~ sampling and monitoring plan that describes how compliance with Rule
17 .1105, Rule .1106, and Rule .1107 of this Section if applicable shall be provided to the Division by
18 the Applicant. ~~applicant~~.

19 (c) For new and expanding non-dedicated land application sites:

20 (1) ~~Buffer Setback~~ maps shall be provided to the Division by the Applicant ~~applicant~~ depicting the
21 location, orientation and relationship of land application site features including:

22 (A) a scaled map of the land application site, showing all related structures and fences within
23 the land application area;

24 (B) the location of all wells, streams (ephemeral, intermittent, and perennial), springs, lakes,
25 ponds, and other surface drainage features within 500 feet of the land application area and
26 delineation of the review and compliance boundaries;

27 (C) setbacks as required by Rule .1108 of this Section; and

28 (D) property boundaries within 500 feet of the land application site.

29 (2) Soils ~~Report-report~~. A soil evaluation of the land application site shall be provided to the Division
30 by the Applicant. ~~applicant~~. This evaluation shall be presented in a report that includes the following.
31 If required by G.S. 89F, a soil scientist shall prepare this evaluation:

32 ~~[Note: The North Carolina Board for Licensing of Soil Scientists has determined, via letter dated~~
33 ~~December 1, 2005, that preparation of soils reports pursuant to this Paragraph constitutes practicing~~
34 ~~soil science under G.S. 89F.]~~

35 (A) Confirmation of a county soils map, soil evaluation, and verification of the presence or
36 absence of a seasonal high water table within three feet of land surface or establishment of
37 a soil map through field description of soil profile, based on examinations of excavation

1 pits or auger borings, within seven feet of land surface or to bedrock describing the
2 following parameters by individual diagnostic horizons: thickness of the horizon; texture;
3 color and other diagnostic features; structure; internal drainage; depth, thickness, and type
4 of restrictive ~~horizon; horizon(s);~~ and presence or absence and depth of evidence of any
5 seasonal high water ~~table. table (SHWT).~~

6 (B) A representative soils analysis for standard soil fertility and all pollutants listed in Rule
7 .1105(b) of this Section. The Standard Soil Fertility Analysis shall include the following
8 parameters: acidity; base saturation (by calculation); calcium; cation exchange capacity;
9 copper; exchangeable sodium percentage (by calculation); magnesium; manganese;
10 percent humic matter; pH; phosphorus; potassium; sodium, and zinc.

11 [Note: The North Carolina Board for Licensing of Soil Scientists has determined, via letter dated
12 December 1, 2005, that preparation of soils reports pursuant to this Paragraph constitutes practicing
13 soil science pursuant to G.S. 89F.]

14 (3) A project evaluation and a land application site management plan (if applicable) with
15 recommendations concerning cover crops and their ability to accept the proposed application rates
16 of liquid, solids, minerals and other constituents of the residuals shall be provided to the Division.

17 (4) Unless the land application site is owned by the Permittee, property ownership documentation
18 consisting of a notarized landowner agreement shall be provided to the Division.

19 (d) For new and expanding dedicated land application sites:

20 (1) Site plans. If required by G.S. 89C, a professional land surveyor shall provide location information
21 on boundaries and physical features not under the purview of other licensed professions. Site plans
22 or maps shall be provided to the Division by the Applicant applicant depicting the location,
23 orientation and relationship of land application site features including:

24 ~~[Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via~~
25 ~~letter dated December 1, 2005, that locating boundaries and physical features, not under the purview~~
26 ~~of other licensed professions, on maps pursuant to this Paragraph constitutes practicing surveying~~
27 ~~under G.S. 89C.]~~

28 (A) a scaled map of the site, with topographic contour intervals not exceeding 10 feet or 25
29 percent of total site relief and showing all facility-related structures and fences within the
30 land application area;

31 (B) the location of all wells (including ~~usage~~ use and construction details if available), streams
32 (ephemeral, intermittent, and perennial), springs, lakes, ponds, and other surface drainage
33 features within 500 feet of the land application site and delineation of the review and
34 compliance boundaries;

35 (C) setbacks as required by Rule .1108 of this Section; and

36 (D) property boundaries within 500 feet of the land application site.

1 [Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via
2 letter dated December 1, 2005, that locating boundaries and physical features, not under the purview
3 of other licensed professions, on maps pursuant to this Paragraph constitutes practicing surveying
4 pursuant to G.S. 89C.]

- 5 (2) Engineering design documents (for land applications sites onto which ~~bulk~~ residuals are applied
6 through fixed irrigation facilities or irrigation facilities fed through a fixed supply system only). If
7 required by G.S. 89C, a professional engineer shall prepare these documents. The following
8 documents shall be provided to the Division by the Applicant; ~~applicant~~:

9 ~~[Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via~~
10 ~~letter dated December 1, 2005, that preparation of engineering design documents pursuant to this~~
11 ~~Paragraph constitutes practicing engineering under G.S. 89C.]~~

- 12 (A) engineering plans for the facilities and equipment except those previously permitted unless
13 they are directly tied into the new units or are ~~critical~~ necessary to ~~the~~ understanding of the
14 complete process;
- 15 (B) specifications describing materials to be used, methods of construction, and means for
16 ensuring quality and integrity of the finished ~~product~~ product, including leakage testing;
17 and
- 18 (C) engineering ~~calculations~~ calculations, including hydraulic and pollutant loading, sizing
19 criteria, hydraulic profile, total dynamic head and system curve analysis for each pump,
20 and irrigation design.

21 [Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via
22 letter dated December 1, 2005, that preparation of engineering design documents pursuant to this
23 Paragraph constitutes practicing engineering pursuant to G.S. 89C.]

- 24 (3) Soils ~~Report-report~~. A soil evaluation of the land application site shall be provided. This evaluation
25 shall be presented to the Division by the Applicant; ~~applicant~~ in a report that includes the following.
26 If required by G.S. 89F, a soil scientist shall prepare this evaluation:

27 ~~[Note: The North Carolina Board for Licensing of Soil Scientists has determined, via letter dated~~
28 ~~December 1, 2005, that preparation of soils reports pursuant to this Paragraph constitutes practicing~~
29 ~~soil science under G.S. 89F.]~~

- 30 (A) Field description of soil profile, based on examinations of excavation pits or auger borings,
31 within seven feet of land surface or to bedrock describing the following parameters by
32 individual diagnostic horizons: thickness of the horizon; texture; color and other diagnostic
33 features; structure; internal drainage; depth, thickness, and type of restrictive ~~horizon(s);~~
34 horizon; and presence or absence and depth of evidence of any seasonal high water ~~table.~~
35 ~~table (SHWT)~~. Applicants shall dig pits if necessary for proper evaluation of the soils at
36 the site.

1 (B) Recommendations concerning loading rates of liquids, solids, other residuals constituents
2 and amendments (i.e., for land application sites onto which ~~bulk~~ residuals are applied
3 through fixed irrigation facilities or irrigation facilities fed through a fixed supply system
4 only). Annual hydraulic loading rates shall be based on in-situ measurement of saturated
5 hydraulic conductivity in the most restrictive horizon for each soil mapping unit. Maximum
6 irrigation precipitation rates shall be provided for each soil mapping unit.

7 (C) A field-delineated soil map delineating soil mapping units within the land application site
8 and showing all physical features, location of pits and auger borings, legends, scale, and a
9 north arrow. The legends shall also include dominant soil series name and family or higher
10 taxonomic class for each soil mapping unit.

11 (D) A representative soils analysis for standard soil fertility and all pollutants listed in Rule
12 .1105(b) of this Section. The Standard Soil Fertility Analysis shall include the following
13 parameters: acidity, base saturation (by calculation), calcium, cation exchange capacity,
14 copper, exchangeable sodium percentage (by calculation), magnesium, manganese, percent
15 humic matter, pH, phosphorus, potassium, sodium, and zinc.

16 [Note: The North Carolina Board for Licensing of Soil Scientists has determined, via letter dated
17 December 1, 2005, that preparation of soils reports pursuant to this Paragraph constitutes practicing
18 soil science pursuant to G.S. 89F.]

19 (4) Hydrogeologic report. A hydrogeologic description prepared by a Licensed Geologist, Licensed Soil
20 Scientist, or Professional Engineer if required by Chapters 89E, 89F, or 89C, respectively,
21 respectively of the subsurface to a depth of 20 feet or bedrock, whichever is less, shall be provided
22 to the Division by the Applicant, applicant. The hydrogeologic evaluation shall be of the subsurface
23 to a depth of 20 feet or bedrock, whichever is less deep. A greater depth of An investigation to a
24 depth greater than 20 feet is required if the respective depth is used in predictive calculations. This
25 evaluation shall be based on borings for which the numbers, locations, and depths are sufficient
26 sufficient numbers, locations, and depths of borings to define the components of the hydrogeologic
27 evaluation. In addition to borings, other techniques may be used to investigate the subsurface
28 conditions at the site, including site. These techniques may include geophysical well logs, surface
29 geophysical surveys, and tracer studies. This evaluation shall be presented in a report that includes
30 the following components:

31 [Note: The North Carolina Board for Licensing of Geologists, via letter dated April 6, 2006, North
32 Carolina Board for Licensing of Soil Scientists, via letter dated December 1, 2005, and North
33 Carolina Board of Examiners for Engineers and Surveyors, via letter dated December 1, 2005, have
34 determined that preparation of hydrogeologic description documents pursuant to this Paragraph
35 constitutes practicing geology under G.S. 89E, soil science under G.S. 89F, or engineering under
36 G.S. 89C.]

37 (A) a description of the regional and local geology and hydrogeology;

- 1 (B) a description, based on field observations of the land application site, of the land
- 2 application site topographic setting, streams, springs and other groundwater discharge
- 3 features, drainage features, existing and abandoned wells, rock outcrops, and other features
- 4 that may affect the movement of the contaminant plume and treated wastewater;
- 5 (C) changes in the lithology underlying the ~~land application~~ site;
- 6 (D) depth to the bedrock and the occurrence of any rock outcrops;
- 7 (E) the hydraulic conductivity and transmissivity of the affected ~~aquifer(s);~~ aquifer as
- 8 determined by in-situ field testing, such as slug tests or pumping tests, in the intended area
- 9 of irrigation;
- 10 (F) the depth to the seasonal high water table;
- 11 (G) a discussion of the relationship between the affected aquifers of the land application site to
- 12 local and regional geologic and hydrogeologic features;
- 13 (H) a discussion of the groundwater flow regime of the ~~land application~~ site prior to the
- 14 operation of the proposed site and the post operation of the proposed ~~site~~ site, focusing on
- 15 the relationship of the site to groundwater receptors, groundwater discharge features, and
- 16 groundwater flow media; and
- 17 (I) if residuals are applied through fixed irrigation facilities or irrigation facilities fed through
- 18 a fixed supply system only and if the ~~SHWT~~ seasonal high water table is within six feet of
- 19 the surface, a mounding analysis to predict the level of the ~~SHWT~~ seasonal high water
- 20 table after residuals land application.

21 [Note: The North Carolina Board for Licensing of Geologists, via letter dated April 6, 2006, North

22 Carolina Board for Licensing of Soil Scientists, via letter dated December 1, 2005, and North

23 Carolina Board of Examiners for Engineers and Surveyors, via letter dated December 1, 2005, have

24 determined that preparation of hydrogeologic description documents pursuant to this Paragraph

25 constitutes practicing geology pursuant to G.S. 89E, soil science pursuant to G.S. 89F, or

26 engineering pursuant to G.S. 89C.]

- 27 (5) For land application sites onto which ~~bulk~~ residuals are applied through fixed irrigation facilities or
- 28 irrigation facilities fed through a fixed supply system only, the Applicant shall provide to the
- 29 Division a water balance ~~shall be provided to the Division by the applicant~~ that determines the
- 30 required residuals storage based upon the following most limiting ~~factor:~~ factor
- 31 (A) hydraulic loading based on the most restrictive horizon;
- 32 (B) hydraulic loading based on the groundwater mounding analysis;
- 33 (C) nutrient management based on agronomic rates for the specified cover crop; or
- 34 (D) nutrient management based on crop management.
- 35 ~~of the hydraulic loading based on either the most restrictive horizon or groundwater mounding~~
- 36 ~~analysis; or nutrient management based on either agronomic rates for the specified cover crop or~~
- 37 ~~crop management requirements.~~

1 (6) A project evaluation and a receiver site management plan (if applicable) with recommendations
2 concerning cover crops and their ability to accept the proposed application rates of liquid, solids,
3 minerals and other constituents of the residuals shall be provided to the Division by the Applicant.
4 ~~applicant.~~

5 (7) Property Ownership Documentation shall be provided to the Division by the Applicant ~~applicant~~
6 consisting of:

7 (A) legal documentation of ownership (i.e., contract, deed or article of incorporation);

8 (B) ~~written notarized intent to purchase agreement~~ an agreement of an intent to purchase the
9 property that is written, notarized, and signed by both parties, accompanied by a plat or
10 survey map; or

11 (C) ~~written notarized lease agreement~~ an agreement to lease the property that is written,
12 notarized, and signed by both parties, specifically indicating the intended use of the
13 property, as well as accompanied by a plat or survey map. Lease agreements shall adhere
14 to the requirements of 15A NCAC 02L .0107.

15 (e) For new and expanding surface disposal units:

16 (1) Site plans. If required by G.S. 89C, a professional land surveyor shall provide location information
17 on boundaries and physical features not under the purview of other licensed professions. Site plans
18 or maps shall be provided to the Division by the Applicant ~~applicant~~ depicting the location,
19 orientation and relationship of the surface disposal unit features including:

20 ~~[Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via~~
21 ~~letter dated December 1, 2005, that locating boundaries and physical features, not under the purview~~
22 ~~of other licensed professions, on maps pursuant to this Paragraph constitutes practicing surveying~~
23 ~~under G.S. 89C.]~~

24 (A) a scaled map of the surface disposal unit, with topographic contour intervals not exceeding
25 10 feet or 25 percent of total site relief and showing all surface disposal unit-related
26 structures and fences within the surface disposal unit;

27 (B) the location of all wells (including ~~usage~~ use and construction details if available), streams
28 (ephemeral, intermittent, and perennial), springs, lakes, ponds, and other surface drainage
29 features within 500 feet of the surface disposal unit and delineation of the review and
30 compliance boundaries;

31 (C) setbacks as required by Rule .1108 of this Section; and

32 (D) site property boundaries within 500 feet of the surface disposal unit.

33 [Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via
34 letter dated December 1, 2005, that locating boundaries and physical features, not under the purview
35 of other licensed professions, on maps pursuant to this Paragraph constitutes practicing surveying
36 pursuant to G.S. 89C.]

1 (2) Engineering design documents. If required by G.S. 89C, a professional engineer shall prepare these
2 documents. The following documents shall be provided to the Division by the Applicant; ~~applicant~~;
3 ~~[Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via~~
4 ~~letter dated December 1, 2005, that preparation of engineering design documents pursuant to this~~
5 ~~Paragraph constitutes practicing engineering under G.S. 89C.]~~

6 (A) engineering plans for the surface disposal unit and equipment except those previously
7 permitted unless they are directly tied into the new units or are ~~critical~~ necessary to the
8 understanding of the complete process;

9 (B) specifications describing materials to be used, methods of construction, and means for
10 ensuring quality and integrity of the finished ~~product~~ product, including leakage testing;
11 and

12 (C) engineering ~~calculations~~ calculations, including hydraulic and pollutant loading, sizing
13 criteria, hydraulic profile, and total dynamic head and system curve analysis for each pump.

14 ~~[Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via~~
15 ~~letter dated December 1, 2005, that preparation of engineering design documents pursuant to this~~
16 ~~Paragraph constitutes practicing engineering pursuant to G.S. 89C.]~~

17 (3) Soils ~~Report~~ report. A soil evaluation of the surface disposal unit site shall be provided to the
18 Division by the Applicant; ~~applicant~~ in a report that includes the following. If required by G.S. 89F,
19 a soil scientist shall prepare this evaluation:

20 ~~[Note: The North Carolina Board for Licensing of Soil Scientists has determined, via letter dated~~
21 ~~December 1, 2005, that preparation of soils reports pursuant to this Paragraph constitutes practicing~~
22 ~~soil science under G.S. 89F.]~~

23 (A) Field description of soil profile, based on examinations of excavation pits or auger borings,
24 within seven feet of land surface or to bedrock describing the following parameters by
25 individual diagnostic horizons: thickness of the horizon; texture; color and other diagnostic
26 features; structure; internal drainage; depth, thickness, and type of restrictive horizon;
27 ~~horizon(s)~~; and presence or absence and depth of evidence of any seasonal high water table.
28 ~~table (SHWT)~~. Applicants may be required to dig pits when necessary for proper evaluation
29 of the soils at the site.

30 (B) A field-delineated soil map delineating major soil mapping units within the surface
31 disposal unit site and showing all physical features, location of pits and auger borings,
32 legends, scale, and a north arrow. The legends shall also include dominant soil series name
33 and family or higher taxonomic class for each soil mapping unit.

34 ~~[Note: The North Carolina Board for Licensing of Soil Scientists has determined, via letter dated~~
35 ~~December 1, 2005, that preparation of soils reports pursuant to this Paragraph constitutes practicing~~
36 ~~soil science pursuant to G.S. 89F.]~~

1 (4) Hydrogeologic report. A hydrogeologic description prepared by a Licensed Geologist, Licensed Soil
2 Scientist, or Professional Engineer if required by Chapters 89E, 89F, or 89C, respectively,
3 respectively of the subsurface to a depth of 20 feet or bedrock, whichever is less, shall be provided
4 to the Division by the Applicant, applicant. The hydrogeologic evaluation shall be of the subsurface
5 to a depth of 20 feet or bedrock, whichever is less deep. A greater depth of An investigation to a
6 depth greater than 20 feet is required if the respective depth is used in predictive calculations. This
7 evaluation shall be based on borings for which the numbers, locations, and depths are sufficient
8 sufficient numbers, locations, and depths of borings to define the components of the hydrogeologic
9 evaluation. In addition to borings, other techniques may be used to investigate the subsurface
10 conditions at the site, including site. These techniques may include geophysical well logs, surface
11 geophysical surveys, and tracer studies. This evaluation shall be presented in a report that includes
12 the following components:

13 ~~[Note: The North Carolina Board for Licensing of Geologists, via letter dated April 6, 2006, North~~
14 ~~Carolina Board for Licensing of Soil Scientists, via letter dated December 1, 2005, and North~~
15 ~~Carolina Board of Examiners for Engineers and Surveyors, via letter dated December 1, 2005, have~~
16 ~~determined that preparation of hydrogeologic description documents pursuant to this Paragraph~~
17 ~~constitutes practicing geology under G.S. 89E, soil science under G.S. 89F, or engineering under~~
18 ~~G.S. 89C.]~~

- 19 (A) a description of the regional and local geology and hydrogeology;
- 20 (B) a description, based on field observations of the site, of the site topographic setting,
21 streams, springs and other groundwater discharge features, drainage features, existing and
22 abandoned wells, rock outcrops, and other features that may affect the movement of the
23 contaminant plume and treated wastewater;
- 24 (C) changes in the lithology underlying the site;
- 25 (D) the depth to bedrock and the occurrence of any rock outcrops;
- 26 (E) the hydraulic conductivity and transmissivity of the affected aquifer(s); aquifer as
27 determined by in-situ field testing, such as slug tests or pumping tests, in the intended area
28 of irrigation;
- 29 (F) the depth to the seasonal high water table;
- 30 (G) a discussion of the relationship between the affected aquifers of the site to local and
31 regional geologic and hydrogeologic features; and
- 32 (H) a discussion of the groundwater flow regime of the site prior to the operation of the
33 proposed unit and the post operation of the proposed unit, unit focusing on the relationship
34 of the unit to groundwater receptors, groundwater discharge features, and groundwater
35 flow media.

36 [Note: The North Carolina Board for Licensing of Geologists, via letter dated April 6, 2006, North
37 Carolina Board for Licensing of Soil Scientists, via letter dated December 1, 2005, and North

1 Carolina Board of Examiners for Engineers and Surveyors, via letter dated December 1, 2005, have
2 determined that preparation of hydrogeologic description documents pursuant to this Paragraph
3 constitutes practicing geology pursuant to G.S. 89E, soil science pursuant to G.S. 89F, or
4 engineering pursuant to G.S. 89C.]

5 (5) Property Ownership Documentation shall be provided to the Division by the Applicant ~~applicant~~
6 consisting of:

7 (A) legal documentation of ownership (i.e., contract, deed or article of incorporation);

8 (B) ~~written notarized intent to purchase agreement~~ an agreement of an intent to purchase the
9 property that is written, notarized, and signed by both parties, accompanied by a plat or
10 survey map; or

11 (C) ~~written notarized lease agreement~~ an agreement to lease the property that is written,
12 notarized, and signed by both parties, specifically indicating the intended use of the
13 property, as well as accompanied by a plat or survey map. Lease agreements shall adhere
14 to the requirements of 15A NCAC 02L .0107.

15
16 *History Note:* Authority G.S. 143-215.1; 143-215.3(a);
17 Eff. September 1, 2006-2006;
18 Readopted Eff. September 1, 2018.

1 15A NCAC 02T .1105 is readopted with changes as published in 32:06 NCR 569-570 as follows:

2

3 **15A NCAC 02T .1105 POLLUTANT LIMITS**

4 (a) ~~Bulk residuals or residuals that are sold or given away in a bag or other container~~ Residuals shall not be land
5 applied to the land if the concentration of any pollutant in the residuals exceeds the ceiling concentration for that
6 pollutant as stipulated in the following on a dry weight basis: (i.e., on a dry weight basis):

7

8	<u>Pollutant</u>	<u>Ceiling Concentration</u>
9		<u>(milligrams per kilogram)</u>
10	Arsenic	75
11	Cadmium	85
12	Copper	4,300
13	Lead	840
14	Mercury	57
15	Molybdenum	75
16	Nickel	420
17	Selenium	100
18	Zinc	7,500

19 (b) ~~Bulk Class B~~ Class B residuals shall not be land applied ~~to the land~~ if the ~~land~~ application causes the ~~exceedance of the~~
20 cumulative pollutant loading rate ~~rate~~, on a dry weight basis, to be exceeded for any pollutant as stipulated in the
21 following: following (i.e., on a dry weight basis):

22

23	<u>Pollutant</u>	<u>Cumulative Pollutant</u>
24		<u>Loading Rate</u>
25		<u>(kilograms per hectare)</u>
26	Arsenic	41
27	Cadmium	39
28	Copper	1,500
29	Lead	300
30	Mercury	17
31	Nickel	420
32	Selenium	100
33	Zinc	2,800

34 (1) ~~A person shall determine compliance~~ Compliance with the cumulative pollutant loading rates shall
35 be determined using one of the following methods:

1 (A) by calculating the existing cumulative level of pollutants using ~~actual~~ analytical data from
2 all historical land application ~~events~~ of residuals not otherwise exempted by this ~~Paragraph~~
3 Paragraph; or

4 (B) for land on which land application events of residuals has not occurred or for which the
5 data required in Rule .1105(b) Paragraph (b) of this Rule is incomplete, by determining
6 background concentrations through representative soil sampling.

7 (2) ~~When applied to the land, bulk residuals shall be exempt from complying with this Paragraph as~~
8 ~~long as they meet all of the following criteria:~~

9 (A) ~~the monthly average concentrations stipulated in Rule .1105(c) of this Section.~~

10 (B) ~~the pathogen reduction requirements stipulated in Rule .1106(b) of this Section, and~~

11 (C) ~~the vector attraction reduction requirements stipulated in Rule .1107 of this Section.~~

12 (c) ~~Bulk Class A~~ residuals shall not be applied to a lawn, home garden, or public contact use site nor shall residuals
13 be sold or given away in a bag or other container for application to the land if the concentration of any pollutant in the
14 residuals exceeds the concentration for that ~~pollutant~~ pollutant, as stipulated in the following on a dry weight basis:
15 (i.e., on a dry weight basis):

<u>Pollutant</u>	<u>Monthly Average Concentration</u> (<u>milligrams per kilogram</u>)
Arsenic	41
Cadmium	39
Copper	1,500
Lead	300
Mercury	17
Nickel	420
Selenium	100
Zinc	2,800

27 (d) ~~Bulk residuals~~ Residuals shall not be placed in a surface disposal unit if the concentration of any pollutant in the
28 residuals exceeds the concentration for that ~~pollutant~~ pollutant, as stipulated in the following on a dry weight basis:
29 (i.e., on a dry weight basis):

<u>Distance from Surface Disposal Unit</u> <u>Boundary to Closest Property Line</u> (<u>meters</u>)	<u>Ceiling Concentration</u> (<u>milligrams per kilogram</u>)		
	Arsenic	Chromium	Nickel
0 to less than 25	30	200	210
25 to less than 50	34	220	240
50 to less than 75	39	260	270

1	75 to less than 100	46	300	320
2	100 to less than 125	53	360	390
3	125 and greater <u>to less than 150</u>	62	450	420
4	<u>greater than 150</u>	<u>73</u>	<u>600</u>	<u>420</u>

5

6 *History Note: Authority G.S. 143-215.1; 143-215.3(a);*

7 *Eff. September 1, ~~2006~~; 2006;*

8 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .1106 is readopted with changes as published in 32:06 NCR 570-572 as follows:

2

3 **15A NCAC 02T .1106 PATHOGEN REDUCTION REQUIREMENTS**

4 ~~(a) The following pathogen requirements shall be met when biological residuals are [land] applied to the land or~~
5 ~~placed in a surface disposal unit:~~

6 ~~(1) The Class A pathogen requirements shall be met when bulk biological residuals are applied to a~~
7 ~~lawn, home garden, or public contact use site [site,] or sold or given away in a bag or other container~~
8 ~~for [land application.] application to the land.~~

9 ~~(2) Biological residuals placed in a surface disposal unit shall be exempt from meeting the Class A or~~
10 ~~Class B pathogen requirements if the vector attraction reduction method in Rule .1107(b)(2) of this~~
11 ~~Section is met.~~

12 ~~(3) Programs involving the land application of biological residuals generated by wastewater treatment~~
13 ~~facilities treating industrial wastewater only that are operational at the time of this Rule's effective~~
14 ~~date shall comply with the requirements stipulated in this Rule no later than five years from the~~
15 ~~effective date of this Rule unless the Permittee is adhering to an established schedule in an individual~~
16 ~~permit, settlement agreement, special order pursuant to G.S. 143-215.2, or other similar document~~
17 ~~that establishes a later deadline.~~

18 ~~(3) The pathogen reduction requirements in Subparagraph (b)(2) and Paragraph (c) of this Rule shall~~
19 ~~not apply for biological residuals generated from treatment of waste shown to not contain pathogens.~~

20 ~~(a)(b) For Class A biological residuals to be classified as Class A with respect to pathogens, shall meet the following~~
21 ~~requirements: shall be met:~~

22 (1) The requirements in this Paragraph ~~are~~ shall be met either prior to no later than meeting or at the
23 ~~same time as the~~ vector attraction reduction requirements in Rule .1107 of this ~~Section. Section are~~
24 ~~met,~~ unless the vector attraction reduction methods ~~stipulated~~ in Rule .1107(a)(6), Rule .1107(a)(7),
25 and Rule .1107(a)(8) of this Section are met.

26 (2) ~~The biological~~ Biological residuals ~~are~~ shall be monitored for the density of fecal coliform or
27 Salmonella sp. bacteria at the time that the ~~biological~~ residuals are used or ~~disposed~~ disposed, or at
28 the time they are prepared for sale or giving away in a bag or other container for land application to
29 ~~the land for the density of fecal coliform or Salmonella sp. bacteria to demonstrate that: the~~
30 ~~following:~~

31 (A) the density of fecal coliform is less than 1,000 Most Probable Number per gram of total
32 solids on a dry weight basis; (i.e., dry weight basis), or

33 (B) the density of ~~Salmonella~~ Salmonella sp. bacteria is less than three Most Probable Number
34 per four grams of total solids on a dry weight basis. (i.e., dry weight basis).

35 (3) The biological residuals meet one of the following ~~alternatives:~~ requirements:

36 (A) Time/Temperature. The temperature of the biological residuals shall be maintained at a
37 specific value for a period of consecutive time in accordance with the following:

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Total Solids (percent)	Temperature (t) (degrees Celsius)	Time	Equation to Determine Minimum Holding Time (D) (days)
≥ 7	≥ 50	≥ 20 minutes	$\frac{131,700,000}{10^{0.1400t}}$
≥ 7	≥ 50	≥ 15 seconds ¹	$\frac{131,700,000}{10^{0.1400t}}$
< 7	≥ 50	≥ 15 seconds <30 minutes	$\frac{131,700,000}{10^{0.1400t}}$
<7	≥ 50	≥ 30 minutes	$\frac{50,070,000}{10^{0.1400t}}$

1 – when residuals are heated by warmed gases or an immiscible liquid

- (B) Alkaline Treatment. The pH of the biological residuals shall be raised to above 12 and shall remain ~~remains~~ above 12 for 72 consecutive hours. The temperature of the biological residuals shall be above 52 degrees Celsius for 12 hours or longer during the period that the pH of the biological residuals is above 12. At the end of the 72-hour period during which the pH is above 12, the biological residuals shall be air dried to achieve a total solids greater than 50 ~~percent,~~ percent;
- (C) Prior Testing for Enteric Viruses/Viable Helminth Ova. The biological residuals shall be analyzed prior to pathogen reduction treatment to determine whether the biological residuals contain enteric viruses or viable helminth ova. The density of enteric viruses prior to pathogen reduction treatment shall be less than one Plaque-forming Unit per four grams of total solids on a dry weight basis ~~(i.e., dry weight basis)~~ or the density of viable helminth ova shall be less than one per four grams of total solids on a dry weight basis. ~~(i.e., dry weight basis)~~. When the density of enteric viruses or viable helminth ova are equal to or greater than these values, the biological residuals shall be considered ~~to be~~ Class A following pathogen reduction treatment if the resultant densities are less than these values and the operating parameters for the pathogen reduction treatment are documented. ~~documented to the satisfaction of the Division.~~ After this demonstration, the biological residuals shall be considered ~~to be~~ Class A as long as ~~if~~ the operating parameters for the pathogen reduction treatment are met and documented; ~~documented to the satisfaction of the Division;~~

- 1 (D) No Prior Testing for Enteric Viruses/Viable Helminth Ova. The density of enteric viruses
2 in the biological residuals shall be less than one Plaque-forming Unit per four grams of
3 total solids on a dry weight basis (~~i.e., dry weight basis~~) or the density of viable helminth
4 ova in the biological residuals shall be less than one per four grams of total solids on a dry
5 weight basis (~~i.e., dry weight basis~~) at the time that the biological residuals are used or
6 disposed or ~~is~~ are prepared for sale or giving away in a bag or other container ~~contained~~
7 for land application; ~~application to the land~~.
- 8 (E) Process to Further Reduce Pathogens - Composting. The biological residuals shall be
9 composted using either the within-vessel method or the static aerated pile method, during
10 which the temperature of the biological residuals is maintained at 55 degrees Celsius or
11 higher for three consecutive days or longer. Alternatively, the biological residuals shall be
12 composted using the windrow method, during which the temperature of the biological
13 residuals is maintained at 55 degrees Celsius or higher for 15 consecutive days or longer.
14 The windrow shall be turned five times during the period when the biological residuals are
15 maintained at 55 degrees Celsius or ~~higher~~, higher. Natural decay of the biological residuals
16 under uncontrolled conditions ~~are not sufficient to meet this process~~, shall not be deemed
17 to comply with these composting requirements;
- 18 (F) Process to Further Reduce Pathogens - Heat Drying. The biological residuals shall be dried
19 by direct or indirect contact with hot gases to reduce the moisture content of the biological
20 residuals to 10 percent or lower. During the process, either the temperature of the biological
21 residuals particles ~~exceeds~~ shall exceed 80 degrees Celsius or the wet bulb temperature of
22 the gas in contact with the biological residuals as they leave the dryer exceeds 80 degrees
23 ~~Celsius~~, Celsius;
- 24 (G) Process to Further Reduce Pathogens - Heat Treatment. The biological residuals shall be
25 heated to a temperature of 180 degrees Celsius or higher for 30 minutes. This process ~~is~~
26 ~~only available to~~ shall be applied only to biological residuals that are in a liquid ~~state~~, state;
- 27 (H) Process to Further Reduce Pathogens - Thermophilic Aerobic Digestion. The biological
28 residuals shall be agitated with air or oxygen to maintain aerobic conditions, and the mean
29 cell residence time of the biological residuals shall be 10 days at between 55 and 60 degrees
30 Celsius. This process ~~is only available to~~ shall be applied only to biological residuals that
31 are in a liquid ~~state~~, state;
- 32 (I) Process to Further Reduce Pathogens - Beta Ray Irradiation. The biological residuals shall
33 be irradiated with beta rays from an accelerator at dosages of at least 1.0 megarad at room
34 temperature (~~i.e., approximately 20 degrees Celsius~~), (i.e., approximately 20 degrees
35 Celsius);
- 36 (J) Process to Further Reduce Pathogens - Gamma Ray Irradiation. The biological residuals
37 shall be irradiated with gamma rays from certain isotopes, such as Cobalt 60 and Cesium

1 137, at room temperature (~~i.e., approximately 20 degrees Celsius~~), (i.e., approximately 20
2 degrees Celcius); or

3 (K) Process to Further Reduce Pathogens - Pasteurization. The temperature of the biological
4 residuals shall be maintained at 70 degrees Celsius or higher for 30 minutes or longer.

5 **(b)(e)** For Class B biological residuals ~~to be classified as Class B with respect to pathogens~~ shall meet one of the
6 following ~~shall be met~~ requirements:

7 (1) Fecal Coliform Density Demonstration. Seven samples of the biological residuals ~~are~~ shall be
8 collected at the time the residuals are used or disposed, and the geometric mean of the density of
9 fecal coliform in the samples collected ~~is~~ shall be less than either 2,000,000 Most Probable Number
10 per gram of total solids on a dry weight basis (~~i.e., dry weight basis~~) or 2,000,000 Colony Forming
11 Units per gram of total solids on a dry weight basis. (~~i.e., dry weight basis~~).

12 (2) Process to Significantly Reduce Pathogens. The biological residuals meet one of the following
13 requirements: ~~processed in a process to significantly reduce pathogens. The processes to~~
14 ~~significantly reduce pathogens are as follows:~~

15 (A) Aerobic Digestion. Biological residuals ~~are~~ shall be agitated with air or oxygen to maintain
16 aerobic conditions for a specific mean cell time at a specific temperature. Values for the
17 mean cell residence time and temperature ~~are~~ shall be between 40 days at 20 degrees
18 Celsius and 60 days at 15 degrees ~~Celeius~~, Celsius;

19 (B) Air Drying. Biological residuals ~~are~~ shall be dried on sand beds or on paved or unpaved
20 basins for ~~a minimum of~~ three months. During two of the three months, the ambient average
21 daily temperature ~~is~~ shall be above zero degrees ~~Celeius~~, Celsius;

22 (C) Anaerobic Digestion. Biological residuals ~~are~~ shall be treated in the absence of air for a
23 specific mean cell residence time at a specific temperature. Values for the mean cell
24 residence time and temperature ~~are~~ shall be between 15 days at 35 to 55 degrees Celsius
25 and 60 days at 20 degrees ~~Celeius~~, Celsius;

26 (D) Composting. Using either the within-vessel, static aerated pile, or windrow composting
27 methods, the temperature of the biological residuals ~~is~~ shall be raised to 40 degrees Celsius
28 or higher and ~~remains~~ shall remain at 40 degrees Celsius or higher for five days. For four
29 hours during the five days, the temperature in the compost pile ~~exceeds~~ shall exceed 55
30 degrees Celsius. Natural decay of the biological residuals under uncontrolled conditions
31 ~~are not sufficient to meet this process~~ shall not be deemed to comply with these composting
32 requirements; or

33 (E) Lime Stabilization. Sufficient lime ~~is~~ shall be added to the biological residuals to raise the
34 pH to 12 after two hours of contact.

35 **(c)** Biological residuals placed in a surface disposal unit shall be exempt from meeting the Class A or Class B
36 pathogen requirements if the vector attraction method in Rule .1107(b)(2) of this Section is met.

37 **(d)** The pathogen reduction requirements in Paragraphs (a)(2) and (b) of this Rule shall not apply for biological

1 residuals generated from treatment of waste to not contain pathogens.

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3 *History Note: Authority G.S. 143-215.1; 143-215.3(a);*

4 *Eff. September 1, ~~2006~~2006;*

5 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .1107 is readopted as published in 32:06 NCR 572-573 as follows:

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3 **15A NCAC 02T .1107 VECTOR ATTRACTION REDUCTION REQUIREMENTS**

4 (a) Biological residuals shall not be land applied to the ~~land~~ unless the requirements of one of the following vector
5 attraction reduction alternatives have been met: ~~met~~. ~~Programs involving the land application of biological residuals~~
6 ~~generated by wastewater treatment facilities treating industrial wastewater only that are operational at the time of this~~
7 ~~Rule's effective date shall comply with the requirements stipulated in this Rule no later than five years from the~~
8 ~~effective date of this Rule unless the Permittee is adhering to an established schedule in an individual permit,~~
9 ~~settlement agreement, special order pursuant to G.S. 143-215.2, or other similar document that establishes a later~~
10 ~~deadline. The vector attraction reduction alternatives shall be as follows:~~

11 (1) 38-Percent Volatile Solids Reduction. The mass of the volatile solids in the biological residuals shall
12 be reduced by ~~a minimum of~~ 38 percent between the time that the biological residuals enter the
13 digestion process and the time it is land applied: ~~applied~~;

14 (2) 40-Day Bench Scale Test. A portion of previously anaerobically-digested biological residuals shall
15 be further anaerobically-digested in the laboratory in a bench-scale unit for 40 additional days at a
16 temperature between 30 and 37 degrees Celsius. The volatile solids in the biological residuals shall
17 be reduced by less than 17 percent as measured from the beginning to the end of the ~~test~~: test;

18 (3) 30-Day Bench Scale Test. A portion of previously aerobically-digested biological residuals shall be
19 further aerobically-digested in the laboratory in a bench-scale unit for 30 additional days at a
20 temperature of 20 degrees Celsius. The previously aerobically-digested biological residuals shall
21 either have a concentration of two percent total solids or less or shall be diluted with effluent down
22 to two percent total solids at the start of the test. The volatile solids in the biological residuals shall
23 be reduced by less than 15 percent as measured from the beginning to the end of the ~~test~~: test;

24 (4) Specific Oxygen Uptake Rate Test. The specific oxygen uptake rate (SOUR) for biological residuals
25 treated in an aerobic process shall be equal to or less than 1.5 milligrams of oxygen per hour per
26 gram of total solids on a dry weight basis (~~i.e., dry weight basis~~) corrected to a temperature of 20
27 degrees ~~Celeius~~: Celsius;

28 (5) 14-Day Aerobic Processes. The biological residuals shall be treated in an aerobic process for 14
29 days or longer. During that time the temperature of the biological residuals shall be higher than 40
30 degrees Celsius, and the average temperature of the biological residuals shall be higher than 45
31 degrees ~~Celeius~~: Celsius;

32 (6) Alkaline Stabilization. The pH of the biological residuals shall be raised to 12 or higher by alkali
33 addition and, without the addition of more alkali, shall remain at 12 or higher for two hours and then
34 at 11.5 or higher for an additional 22 ~~hours~~: hours;

35 (7) Drying of Stabilized Residuals. The biological residuals shall be dried to 75 percent total solids if
36 the biological residuals contain no unstabilized solids from a primary wastewater treatment process.

1 The biological residuals shall not be mixed with other materials to meet this requirement; ~~Mixing~~
2 of the biological residuals with other materials shall not be used to meet this alternative,

3 (8) Drying of Unstabilized Residuals. The biological residuals shall be dried to 90 percent total solids
4 if the biological residuals contain unstabilized solids from a primary wastewater treatment process.

5 The biological residuals shall not be mixed with other materials to meet this requirement; ~~Mixing~~
6 of the biological residuals with other materials shall not be used to meet this alternative,

7 (9) Injection.

8 (A) Biological residuals shall be injected below the land surface ~~of the land~~ in accordance with
9 ~~40 CFR 503.33(b)(9)(ii).~~ 40 CFR 503.33(b)(9)(ii); and

10 (B) ~~If Class A with respect to pathogens, the~~ biological residuals shall be injected below the
11 land surface within eight hours after being discharged from the pathogen treatment ~~process,~~
12 process; or

13 (10) Incorporation.

14 (A) ~~If Class B with respect to pathogens, the~~ biological residuals shall be incorporated into the
15 soil within six hours after land application; and application to the land,

16 (B) ~~If Class A with respect to pathogens, the~~ biological residuals shall be land applied ~~to the~~
17 ~~land~~ within eight hours after being discharged from the pathogen treatment process.

18 (b) Biological residuals shall not be placed in a surface disposal unit unless one of the following vector attraction
19 reduction alternatives have been met:

20 (1) Any alternative stipulated in Paragraph (a) of this ~~Rule,~~ Rule; or

21 (2) Daily Cover. Biological residuals shall be covered with soil or ~~other~~ Division-approved material at
22 the end of each operating day.

23 (c) For biological residuals generated by wastewater treatment facilities treating industrial wastewater only, the vector
24 attraction reduction requirements in Paragraph (a) of this Rule shall be met unless the Permittee demonstrates that the
25 residuals are pathogen free or meet the pathogen requirements in Rule .1106(b)(2) of this Section.

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27 *History Note:* *Authority G.S. 143-215.1; 143-215.3(a);*

28 *Eff. September 1, 2006-2006;*

29 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .1108 is readopted with changes in 32:06 NCR 573-575 as follows:

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15A NCAC 02T .1108 SETBACKS

(a) For residuals treatment and storage facilities, the following ~~minimum~~ setbacks in feet (i.e., in feet) shall be as follows: adhered to:

Habitable residences or place places of public assembly under separate ownership	
or	
not to be maintained as part of the project site	100
Private or public water supply source sources	100
Surface waters (streams – intermittent and perennial, lakes , perennial waterbodies, and wetlands)	50
Wells with exception of to monitoring wells	100
Property lines	50

(b) For land onto which Class A bulk residuals are applied or stockpiled, the following ~~minimum~~ setbacks in feet (i.e., in feet) shall be as follows: adhered to:

(1) ~~If the bulk residuals meet the requirements of Rules .1105(c), .1106(b), and .1107 of this Section:~~

	Liquid Residuals	Cake Residuals
Private or public water supply source sources	100	100
Surface waters (streams - intermittent and perennial, perennial waterbodies, and wetlands)	100	25
Surface water diversions (ephemeral streams, waterways, ditches)	25	0
Groundwater lowering ditches (where the bottom of the ditch intersects the SHWT)	25	0
Wells with exception of to monitoring wells	100	100
Bedrock outcrops	25	0

(c) For land onto which Class B residuals are applied or stockpiled, the following setbacks in feet shall be as follows:

(2) ~~If the bulk residuals do not meet the requirements of Rules .1105(c), .1106(b), and .1107 of this Section:~~

	Surface Application by Vehicle	Surface Application	Injection / Incorporation by Irrigation
Habitable residences or place places of public assembly under separate ownership or not to be maintained as part of the project site	400	400	200

1	<u>Any habitable residence</u> Habitable residences or <u>place places</u> of public assembly owned by			
2	the Permittee, permittee, the owner of the land, or the			
3	lessee/operator of the land to be maintained as part			
4	of the project site	0	200	0
5	<u>Any property line</u> Property lines	50	150	50
6	Public <u>right</u> rights of way	50	50	50
7	<u>Any private</u> Private or public water supply <u>source</u> sources	100	100	100
8	Surface waters (streams - intermittent and perennial, perennial			
9	waterbodies, and wetlands)	400 <u>32.8</u>	400 <u>32.8</u>	50 <u>32.8</u>
10	Surface water diversions (ephemeral streams, waterways, ditches)	25	400 <u>25</u>	25
11	Groundwater lowering ditches (where the bottom of the ditch			
12	intersects the SHWT)	25	100	25
13	Subsurface groundwater lowering drainage systems	0	100	0
14	<u>Any well</u> Wells with exception of <u>to</u> to monitoring wells	100	100	100
15	Bedrock outcrops	25	25	25
16	Top of slope of embankments or cuts of two feet or more in			
17	vertical height	15	15	15
18	<u>Any building foundation</u> Building foundations or <u>basement</u>			
19	basements	0	15	0
20	<u>Any water line</u> Water lines	0	10	0
21	<u>Swimming pools</u>	400	400	400
22	Nitrification <u>field</u> fields	0	20	0

23 (d)(e) For the construction and operation of surface disposal units, the following ~~minimum~~ setbacks in feet ~~(i.e., in~~
24 ~~feet)~~ shall be as follows: ~~adhered to:~~

26	<u>Any habitable residence</u> Habitable residences or <u>place places</u> of public assembly under separate ownership or			
27	not to be			
28	maintained as part of the project site			400
29	<u>Any property line</u> Property lines			50
30	Public <u>right</u> rights of way			50
31	<u>Any private</u> Private or public water supply <u>source</u> sources			100
32	Surface waters (streams - intermittent and perennial, perennial waterbodies, and wetlands)			100
33	Surface water diversions (ephemeral streams, waterways, ditches)			25
34	Groundwater lowering ditches (where the bottom of the ditch intersects the SHWT)			100
35	Subsurface groundwater lowering drainage systems			100
36	<u>Any well</u> Wells with exception of <u>to</u> to monitoring wells			100
37	<u>Any water line</u> Water lines			10

1 Swimming pools

400

2 ~~(e) [Setback waivers from habitable residences or places of public assembly under separate ownership, or not to be~~
3 ~~maintained as part of the project site, shall be written, notarized, and signed by all parties involved.]~~ Setback waivers
4 shall be written, notarized, signed by all parties involved and recorded with the county Register of Deeds. Waivers
5 involving the compliance boundary shall be in accordance with 15A NCAC 02L .0107.

6 (f) Setbacks to property lines established in Paragraphs (a), (c), and (d) of this Rule shall not be applicable when the
7 Permittee; the entity from which the Permittee is leasing; or the entity that executed the notarized landowner agreement
8 in 15A NCAC 02T .1104(c)(4) owns both parcels creating said property line.

9 (g) Habitable residences or places of ~~public~~ assembly under separate ownership constructed after the non-discharge
10 facilities were originally permitted or subsequently modified, are exempt from the setback requirements in Paragraphs
11 (a) and (d) of this Rule.

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13 *History Note:* *Authority G.S. 143-215.1; 143-215.3(a);*
14 *Eff. September 1, ~~2006~~2006;*
15 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .1109 is readopted with changes as published in 32:06 NCR 575-577 as follows:

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3 **15A NCAC 02T .1109 OPERATION AND RESIDUALS MANAGEMENT PRACTICES**

4 ~~(a) For residuals that are sold or given away in a bag or other container for application to the land, either a label shall~~
5 ~~be affixed to the bag or other container or an information sheet shall be provided to the person who receives the~~
6 ~~residuals. The label/information sheet shall contain the following information:~~

7 ~~(1) the name and address of the person who prepared the residuals and~~

8 ~~(2) a statement that land application of the residuals shall be prohibited except with the instructions on~~
9 ~~the label/sheet.~~

10 ~~(3) that residuals shall be applied at agronomic rates and recommended rates for intended uses.~~

11 ~~(a)(b) Land applied residuals shall meet the following requirements: For land onto which bulk residuals are applied,~~
12 ~~the following shall apply:~~

13 (1) Residuals ~~Bulk residuals~~ shall not be land applied to the ~~land~~ under the following conditions:

14 (A) if the requirements specified by 40 CFR 503.14(a) as stated on January 1, 1996 and
15 incorporated by reference ~~cannot be~~ have not been met;

16 (B) if the application causes prolonged nuisance conditions;

17 (C) if the land fails to assimilate the ~~bulk~~ residuals or the application causes the contravention
18 of surface water or groundwater standards;

19 (D) if the land is flooded, frozen, or snow-covered or is otherwise in a condition such that
20 runoff of the residuals would occur;

21 (E) within the 100-year flood elevation unless the ~~bulk~~ residuals are injected or incorporated
22 within a 24-hour period following the application of residuals to land; land application
23 event;

24 (F) during precipitation events or within 24 hours following a rainfall event of 0.5 inches or
25 greater in a 24-hour period;

26 (G) if the slope of the land is greater than 10 percent when ~~bulk~~ liquid residuals are surface
27 applied, and if the slope of the land is greater than 18 percent when ~~bulk~~ liquid residuals
28 are injected or incorporated;

29 (H) if the land does not have an established vegetative cover crop unless the land is a Division-
30 approved no-till site [in a state or federal no till program] or the ~~bulk~~ residuals are
31 incorporated within a 24-hour period following the injection or application of residuals to
32 land; land application event or injected;

33 (I) if the vertical separation of the seasonal high water table and the depth of residuals
34 application is less than one foot;

35 (J) if the vertical separation of the depth to bedrock and the depth of residuals application is
36 less than one foot; or

- 1 (K) ~~if the application exceeds agronomic rates rates,~~ except for dedicated sites where the
2 ~~Applicant applicant~~ has specifically requested higher rates in an applications pursuant to
3 Rule .1104(d) of this Section.
- 4 (L) new land application sites located within a WS-I watershed pursuant to 15A NCAC 02B
5 .0212 or within the Critical Area of a WS-II pursuant to Sub-Item (4)(g) of Rule 15A
6 NCAC 02B .0212, or within the Critical Area of a WS-III or WS-IV watershed pursuant to
7 Sub-Item (4)(h) of Rules 15A NCAC 02B .0215, and .0216.
- 8 (2) Class B land application sites shall have ~~For land onto which bulk residuals that do not meet the~~
9 ~~requirements of Rule .1106(b) of this Section are applied,~~ the following public access restrictions:
10 ~~restrictions shall be adhered to:~~
- 11 (A) public access to public contact sites shall be restricted for one calendar year after any
12 ~~residuals land application event;~~ land application of residuals;
- 13 (B) public access to land that is not a public contact site shall be restricted for 30 days after any
14 ~~residuals land application event;~~ land application of residuals; and
- 15 (C) public access to land associated with a dedicated land application site shall be restricted
16 continuously while the land is permitted for active use and for one calendar year after the
17 ~~final residuals land application event.~~ land application of residuals.
- 18 (3) Class B land application sites shall have ~~For land onto which bulk residuals that do not meet the~~
19 ~~requirements of Rule .1106(b) of this Section are applied,~~ the following harvesting and grazing
20 ~~restrictions:~~ restrictions shall be adhered to:
- 21 (A) animals shall not be allowed to graze on land for 30 calendar days after any ~~residuals land~~
22 ~~application event;~~ land application of residuals;
- 23 (B) food crops, feed crops, and fiber crops shall not be harvested for 30 calendar days after any
24 ~~residuals land application event;~~ land application of residuals;
- 25 (C) food crops with harvested parts that touch the ~~residuals/soil~~ mixture of residuals and soil
26 and are totally above the land surface shall not be harvested for 14 months after any
27 ~~residuals land application event;~~ land application of residuals;
- 28 (D) food crops with harvested parts below the land surface ~~of the land~~ shall not be harvested
29 for 20 months after any ~~residuals land application event~~ land application of residuals ~~when~~
30 if the residuals remain on the land surface for four months or longer prior to incorporation
31 into the soil;
- 32 (E) food crops with harvested parts below the land surface ~~of the land~~ shall not be harvested
33 for 38 months after any ~~residuals land application event~~ land application of residuals ~~when~~
34 if the residuals remain on the land surface for less than four months prior to incorporation
35 into the soil; and
- 36 (F) turf grown on land where residuals are applied shall not be harvested for one calendar year
37 after any ~~residuals land application event.~~ land application of residuals.

1 (b) Class A residuals that are sold or given away in a bag or other container for land application are exempt from
2 Paragraph (a) of this Rule.

3 (c) Class A residuals that are sold or given away in a bag or other container for land application, shall either have a
4 label affixed to the bag or other container, or an information sheet shall be provided to the person who receives the
5 residuals. The label or information sheet shall contain the following information:

6 (1) the name and address of the person who prepared the residuals;

7 (2) a statement that land application of the residuals shall be prohibited except with the instructions on
8 the label or information sheet; and

9 (3) that residuals shall be applied at agronomic rates and recommended rates for intended uses.

10 (d)(e) Surface disposal units shall meet the following requirements: For surface disposal units, the following
11 conditions shall be met:

12 (1) For new and expanding surface disposal units shall meet the following requirements: units, the
13 following conditions shall be met.

14 (A) Surface disposal units shall not be located in a seismic impact zone unless designed to
15 withstand the maximum recorded horizontal ground level ~~acceleration~~, acceleration;

16 (B) Surface disposal units shall not be located less than 60 meters from a fault that has
17 displacement in Holocene ~~time~~, time;

18 (C) Surface disposal units shall not be located within ~~an~~ a geologically unstable area, area;

19 (D) Surface disposal units shall not be located within the 100-year ~~floodplain~~, floodplain;

20 (E) Surface disposal units shall not restrict base flood ~~flow~~, flow;

21 (F) The vertical separation of the seasonal high water table and the bottom of surface disposal
22 units shall not be less than three ~~feet~~, feet; and

23 (G) Surface disposal units shall be provided with a liner system with a maximum hydraulic
24 conductivity of 10^{-7} centimeters per second. Units into which cake residuals are to be
25 placed shall be equipped with a leachate collection system. Units into which liquid
26 residuals are to be placed shall be equipped with a decanting system and freeboard marker.
27 If cake residuals are to be placed in the unit, a leachate collection system shall be required.
28 If liquid residuals are to be placed in the unit, a decanting system and freeboard marker
29 shall be required.

30 (2) The following ~~conditions~~ requirements shall be met while surface disposal units are permitted for
31 active use and for three calendar years after closure:

32 (A) The requirements specified by 40 CFR 503.24(a) as stated on January 1, 1996 and
33 incorporated by reference shall be ~~met~~, met;

34 (B) Surface disposal units shall not cause prolonged nuisance ~~conditions~~, conditions;

35 (C) Surface disposal units shall not cause the contravention of surface water or groundwater
36 ~~standards~~, standards;

- 1 (D) Runoff from a 24-hour 25-year storm event, decant water, and leachate (~~i.e., as applicable~~)
2 shall be collected from surface disposal ~~units,~~ units;
- 3 (E) If biological residuals are placed in the surface disposal unit, the concentration of methane
4 gas shall not exceed 25 percent of the lower explosive limit for methane gas in any structure
5 within the surface disposal unit ~~boundary,~~ boundary;
- 6 (F) If biological residuals are placed in the surface disposal unit, the concentration of methane
7 gas shall not exceed the lower explosive limit for methane gas at any property line of the
8 surface disposal ~~unit,~~ unit;
- 9 (G) Public access to surface disposal units shall be restricted ~~continuously,~~ continuously;
- 10 (H) Animals shall not be allowed to graze on surface disposal ~~units,~~ units; ~~and~~
- 11 (I) Food crops, feed crops, and fiber crops shall not be harvested from surface disposal units.
- 12 (3) Following active use, surface disposal units shall be closed. Permits for surface disposal units shall
13 be maintained for ~~a minimum of~~ three years following successful closure. Requests for approval of
14 closure plans shall be submitted to the Division at least 180 days prior to the date that a surface
15 disposal unit is to be closed and shall include the following information:
 - 16 (A) how the surface disposal unit will be closed;
 - 17 (B) a discussion of how the leachate collection system will be operated and maintained, if
18 applicable;
 - 19 (C) a description of the system used to monitor the air for methane gas in the air in any
20 structures within the surface disposal unit boundary and at the property line of the surface
21 disposal unit, if applicable;
 - 22 (D) a discussion of how public access to the surface disposal unit will be restricted; and
 - 23 (E) proof that the deed for the surface disposal unit property has been amended to provide
24 permanent written notification to subsequent owners of the property that the property was
25 used for the purposes of operating a surface disposal unit.

26
27 *History Note:* Authority G.S. 143-215.1; 143-215.3(a);
28 Eff. September 1, 2006-2006;
29 Readopted Eff. September 1, 2018.

1 15A NCAC 02T .1110 is readopted as published in 32:06 NCR 577 as follows:

2

3 **15A NCAC 02T .1110 OPERATION AND MAINTENANCE PLAN**

4 (a) An Operation and Maintenance Plan shall be maintained for all residuals management programs. The plan shall:

5 (1) describe the operation of the program and ~~any~~ all associated facilities and equipment in sufficient
6 detail to show what operations are necessary for the program to function and by whom the functions
7 are to be conducted;

8 (2) describe anticipated maintenance of facilities and equipment that are associated with the ~~program,~~
9 program;

10 (3) include provisions for safety ~~measures~~ measures, including restriction of access to the site and
11 equipment, as appropriate;

12 (4) include spill control ~~provisions~~ provisions, including:

13 (A)(a) response to upsets and ~~bypasses~~ bypasses, including control, containment, and
14 remediation; and

15 (B)(b) contact information for program personnel, emergency responders, and regulatory
16 agencies;

17 (5) detail procedures for sampling and monitoring to ensure that the program stays in compliance with
18 this Section and ~~any~~ each issued permit; and

19 (6) for surface disposal units, detail procedures for post-closure care management.

20 (b) The Permittee shall ensure that an electronic or physical copy of their permit and the Operation and Maintenance
21 Plan required by Paragraph (a) of this Rule is available when land applying residuals.

22 (c) Residuals shall be stored or staged in a manner to prevent runoff of leachate and other wastewaters generated from
23 residuals storage or staging.

24 (d) Class A residuals may be staged at the application site for up to 30 days for biological residuals and 60 days for
25 non-biological residuals. Storage or staging that exceeds these limits shall require written approval from the Division.

26 (e) Class B residuals shall not be stored or staged at any land application site without prior written approval from the
27 Division.

28 (f) The Permittee shall perform inspections and maintenance on storage, distribution, and application facilities.

29 (g) Class B land application areas shall be clearly marked on each site prior to and during any land application of
30 residuals.

31

32 *History Note: Authority G.S. 143-215.1; 143-215.3(a);*

33 *Eff. September 1, 2006-2006;*

34 *Readopted Eff. September 1, 2018.*

35

1 15A NCAC 02T .1111 is readopted as published in 32:06 NCR 577-578 as follows:

2

3 **15A NCAC 02T .1111 MONITORING AND REPORTING**

4 (a) Representative samples of residuals that are prepared for land application ~~to the land~~ or placed in a surface disposal
5 unit shall be collected and analyzed.

6 (b) The analytical methods listed in 40 CFR ~~503.8(b)~~ 503.8(b), incorporated by reference with subsequent
7 amendments and editions, ~~as stated on January 1, 1996 shall be incorporated into this Section by reference.~~

8 (c) Residuals land applied ~~to the land~~ or placed in a surface disposal unit shall be monitored for pollutants as ~~listed in~~
9 required by Rule .1105(a) and Rule .1105(d) of this Section and Rule .1106 and Rule .1107 of this Section, as
10 applicable, at the following frequency: Rule .1105(a) and Rule .1105(d) of this Section as well as Rule .1106 and Rule
11 .1107 as applicable at the frequency as stipulated in the following:

12

Metric Tons per 365 day period (Dry Weight Basis)	Monitoring Frequency
Greater than zero but less than 290	Once per year
Equal to or greater than 290 but less than 1,500	Once per quarter (four times per year)
Equal to or greater than 1,500 but less than 15,000	Once per 60 days (six times per year)
Equal to or greater than 15,000	Once per month (12 times per year)

19 (d) A report of all monitoring and reporting requirements as specified in the permit shall be submitted to the Division
20 by the Permittee ~~permittee~~ annually on or before March 1st of each calendar year.

21 (e) All records shall be retained for ~~a minimum of~~ five years.

22

23 *History Note: Authority G.S. 143-215.1; 143-215.3(a);*

24 *Eff. September 1, ~~2006-2006~~;*

25 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .1201 is readopted as published in 32:06 NCR 578 as follows:

2

3

SECTION .1200 – COAL COMBUSTION PRODUCTS MANAGEMENT

4

15A NCAC 02T .1201 SCOPE

5
6 (a) This Section ~~shall apply~~ applies to the treatment, storage, transportation, and beneficial reuse ~~use, and disposal~~ of
7 coal combustion products (CCPs) that ~~are defined as~~ meet the definition of wastewater treatment residuals. ~~Not~~
8 ~~regulated under this Section is~~ This Section shall not regulate the treatment, storage, transportation, use, or disposal
9 of:

10 (1) CCPs that are not generated from a wastewater treatment facility; ~~and~~

11 (2) CCPs that are transported out of state for treatment, storage, use, or ~~disposal~~; disposal; and

12 (3) CCPs that are used for structural fill.

13 (b) CCPs may be distributed for the following ~~uses including~~; uses:

14 (1) ~~fuel~~ Fuel for combustion for energy recovery in equipment such as in boilers, boilers and furnaces,
15 ~~etc. for energy recovery;~~ furnaces;

16 (2) ~~material~~ Material for manufacturing ~~of~~ concrete products, asphalt products, brick products,
17 lightweight aggregate, roofing materials, insulation products, plastics, paints, bowling balls,
18 cosmetics, and other manufactured products in which the CCPs are encapsulated in the
19 manufactured ~~product~~; product;

20 (3) ~~daily~~, Daily, intermediate, and final cover as well as any other use at a landfill as approved by the
21 Division of Waste ~~Management~~; Management;

22 (4) ~~material~~ Material for traction control during snow and ~~ice events~~; ice events;

23 (5) ~~substitute~~ Substitute for blasting grit, roofing granules, and filter cloth precoat for residuals
24 ~~dewatering~~; dewatering;

25 (6) ~~flowable~~ Flowable fill for backfill of trenches for potable water mains as approved by the Division
26 of Environmental Health, sanitary sewers, storm drainage structures, and other similar uses where
27 flowable fill is used in lieu of compacted ~~soil~~; soil;

28 (7) ~~raw~~ Raw product for the stabilization of ~~residuals~~; residuals;

29 (8) ~~soil~~ Soil nutrient additive, amendment, or other agricultural ~~purpose~~; purpose;

30 (9) ~~overlay~~ Overlay for roads, residential driveways, farm roads, and high-traffic farm ~~areas~~; areas; or

31 (10) ~~bedding~~ Bedding for pipes, railroad beds, and underground storage tanks.

32 ~~(11)~~ Structural fill.

33

34 *History Note:* Authority G.S. 143-215.1; 143-215.3(a);

35 Eff. September 1, 2006-2006;

36 Readopted Eff. September 1, 2018.

1 15A NCAC 02T .1202 is readopted as published in 32:06 NCR 578-579 as follows:

2

3 **15A NCAC 02T .1202 DEFINITIONS**

4 As used in this Section:

5 (1) "Coal combustion products" or "CCPs" is defined in G.S. 130A-309.201(4). ~~shall mean fly ash,~~
6 ~~bottom ash, boiler slag, flue gas emission control products, mill rejects, and cenospheres resulting~~
7 ~~from the combustion solely of coal, oil, or natural gas; the combustion of any mixtures of coal, oil,~~
8 ~~or natural gas; or the combustion of any mixture of coal and up to a 50 percent mixture of other~~
9 ~~fuels as provided for in 58 FR 42466.~~

10 (2) "Dry weight basis" shall mean the weight calculated after the CCPs have been dried at 105 degrees
11 Celsius until they reach a constant mass.

12 (3) "Flowable fill" shall mean a controlled, low strength, cementitious material that is used primarily as
13 a backfill in lieu of compacted soil and typically exhibits a compressive strength of greater than 30
14 pounds per square inch.

15 (4) "Land application" shall mean the spraying or spreading of CCPs onto the land surface; the injection
16 of CCPs below the land surface; or the incorporation of CCPs into the soil so that the CCPs can
17 condition the soil or fertilize crops or vegetation grown in the soil.

18 (5) "Monthly average" shall mean the arithmetic mean of all measurements taken during ~~the~~ a month.

19 (6) "Pollutant limit" shall mean a numerical value that describes the amount of a pollutant allowed per
20 unit amount of CCPs.

21 (7) "Source of CCPs" shall mean the point of origin of the ~~CCPs~~ CCPs, such as a coal fired power
22 plant's wastewater treatment system.

23 ~~(8) "Structural fill" shall mean an engineered fill constructed using CCPs that is properly placed in~~
24 ~~accordance with this Section and compacted. This shall include fill used for embankments,~~
25 ~~greenscapes, foundations, construction foundations, and for bases/sub-bases under a structure or a~~
26 ~~footprint of a paved road, parking lot, sidewalk, walkway, or similar structure.~~

27 ~~(8)(9)~~ (8)(9) "Toxicity Characteristic Leaching Procedure" shall mean EPA Test Method Number 1311 as
28 described in EPA publication SW-846, entitled Test Methods for Evaluating Solid Waste,
29 Physical/Chemical Methods.

30

31 *History Note: Authority G.S. 143-215.1; 143-215.3(a);*

32 *Eff. September 1, ~~2006-2006~~;*

33 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .1203 is readopted with changes as published in 32:06 NCR 579 as follows:

2

3 **15A NCAC 02T .1203 PERMITTING BY REGULATION**

4 (a) The following activities ~~are~~ shall be deemed permitted in accordance with Rule .0113 of this Subchapter ~~provided~~
5 if the activity does not result in any violations of groundwater or surface water quality ~~standards (i.e., ground or~~
6 ~~surface); standards,~~ there is no direct discharge to surface waters, the generator of the ~~CCPs, CCPs~~ provides the
7 information required by Rule .1207(a) of this Section to the recipient of the CCPs, and all other ~~specified~~ criteria
8 required for the specific activity ~~is~~ are met:

9 (1) ~~use~~ Use of CCPs as fuel for combustion in boilers, furnaces, etc. for energy ~~recovery; recovery;~~

10 (2) ~~use~~ Use of CCPs as material for manufacturing concrete products, asphalt products, brick products,
11 lightweight aggregate roofing materials, insulation products, plastics, paints, bowling balls,
12 cosmetics and other manufactured products in which the CCPs are encapsulated in the manufactured
13 ~~product; product;~~

14 (3) ~~use~~ Use or disposal of CCPs in a solid waste facility permitted by the Division of Waste
15 Management that is approved to receive the ~~CCPs; CCPs;~~

16 (4) ~~use~~ Use of CCPs as material for traction control during snow and ice events, ~~provided that if~~ the
17 CCPs do not exceed the leachate concentrations ~~of concern set forth~~ in Rule .1205(a) of this ~~Section.~~
18 Section;

19 (5) ~~use~~ Use of CCPs as a substitute for blasting grit, roofing granules, and filter cloth precoat for
20 residuals dewatering, ~~provided that if~~ the CCPs do not exceed the leachate concentrations of concern
21 in Rule .1205(a) of this ~~Section.~~ Section;

22 (6) ~~use~~ Use of CCPs in flowable fill for backfill of trenches for potable water mains as approved by the
23 Division of Environmental Health, sanitary sewers, storm drainage structures, and other trenching
24 uses ~~provided that if~~ the CCPs do not exceed the leachate concentrations ~~of concern set forth~~ in Rule
25 ~~.1206(a) .1205(a)~~ of this ~~Section.~~ Section;

26 (7) ~~use~~ Use of CCPs as a raw product for the stabilization of ~~residuals; residuals; and~~

27 (8) ~~land~~ Land application ~~of sites onto which~~ CCPs ~~are land applied, provided that if~~ the following
28 criteria are met:

29 (A) the CCPs meet the pollutant limits in Rule .1205 of this ~~Section.~~ Section; and

30 (B) the land application activities meet all applicable conditions of Rule .1108(b)(1) and
31 Rule.1109(b)(1) of this ~~Subchapter.~~ Subchapter; and

32 (C) less than 12,400 tons are applied to any one site.

33 (9) ~~Use of CCPs as a base or subbase under a structure or footprint of a paved road, parking lot,~~
34 ~~sidewalk, or similar structure as long as the total depth of CCPs does not exceed one foot.~~

35 (b) Unless otherwise specified in Rule .1203(a) of this Section, Paragraph (a) of this Rule, CCPs that are used for the
36 activities deemed permitted in this Rule are not subject to the pollutant limits in Rule .1205 of this Section.

1 (c) The Director may determine that a system should not be deemed permitted in accordance with this Rule and Rule
2 .0113 of this Subchapter. This determination shall be made in accordance with Rule .0113(e) of this Subchapter.

3

4 *History Note: Authority G.S. 143-215.1; 143-215.3(a);*

5 *Eff. September 1, ~~2006~~2006;*

6 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .1204 is readopted as published in 32:06 NCR 579-580 as follows:

2

3 **15A NCAC 02T .1204 APPLICATION REQUIREMENTS**

4 (a) The requirements in this Rule shall apply to activities not deemed permitted under Rule .1203 of this Section.

5 (b) For new and modified sources of CCPs:

6 (1) ~~site~~ Site plans or maps shall be provided to the Division by the Applicant, ~~applicant~~ depicting the
7 location of the ~~source~~, source;

8 (2) ~~an~~ An analysis of the CCPs shall be provided to the Division by the Applicant, ~~applicant~~. The
9 analysis shall include all pollutants identified in Rule .1205 of this Section. If the CCPs are to be
10 used in a land application, the analyses shall also include nutrients and ~~micronutrients~~,
11 micronutrients; and

12 (3) ~~a~~ A sampling/monitoring plan that describes how Rule .1205 of this Section shall be complied with
13 shall be provided to the Division by the Applicant, ~~applicant~~.

14 (c) For uses of CCPs not already approved by the ~~applicant's/Permittee's~~ Applicant's or Permittee's individual permit,
15 information shall be provided to the Division by the Applicant ~~applicant~~ that describes and explains site-specific
16 engineering or institutional controls proposed to prevent adverse impacts to public health and the environment.

17 (d) For the use of CCR for land application with greater than 12,400 tons of CCP to be applied to a single site,
18 documentation shall be provided to the Division by the Applicant, showing that environmental releases to
19 groundwater, surface water, and soil are comparable to or lower than those from analogous products made without
20 CCR, or that environmental releases to groundwater, surface water, or soil will be at or below relevant regulatory and
21 health-based benchmarks for human and ecological receptors during use.

22 ~~(d) For new and expanding structural fill sites or sites where CCPs are used for bedding if the bedding is applied at a~~
23 ~~depth greater than two feet underneath the structure:~~

24 ~~(1) Site plans. If required by G.S. 89C, a professional land surveyor shall provide location information~~
25 ~~on boundaries and physical features not under the purview of other licensed professions. Site plans~~
26 ~~or maps shall be provided to the Division by the applicant depicting the location, orientation, and~~
27 ~~relationship of the CCPs use site's features including:~~

28 ~~[Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via~~
29 ~~letter dated December 1, 2005, that locating boundaries and physical features, not under the purview~~
30 ~~of other licensed professions, on maps pursuant to this Paragraph constitutes practicing surveying~~
31 ~~under G.S. 89C.]~~

32 ~~(A) a scaled map of the site, with topographic contour intervals not exceeding 10 feet or 25~~
33 ~~percent of total site relief and showing all site related structures and fences within the site;~~

34 ~~(B) the location of all wells (including usage and construction details if available), streams~~
35 ~~(ephemeral, intermittent, and perennial), springs, lakes, ponds, and other surface drainage~~
36 ~~features within 500 feet of the CCPs use boundry and delineation of the review and~~
37 ~~compliance boundaries;~~

- 1 ~~(C) setbacks as required by Rule .1206 of this Section; and~~
2 ~~(D) site property boundaries within 500 feet of the CCPs use boundary.~~
3 (2) Information shall be provided to the Division that describes and explains site specific engineering
4 or institutional controls proposed to prevent adverse impacts to public health and the environment.
5 (3) Property Ownership Documentation of the site where the CCPs are to be used shall be provided to
6 the Division. This documentation shall consist of:
7 (A) legal documentation of ownership (i.e., contract, deed or article of incorporation);
8 (B) written notarized intent to purchase agreement signed by both parties, accompanied by a
9 plat or survey map; or
10 ~~(C) easements specifically indicating the intended use of the property, as well as a plat or~~
11 ~~survey map. Easements shall adhere to the requirements of 15A NCAC 02L .0107.~~
12 ~~(e) The submittal process for information Information listed in Paragraph (c) of this Rule shall not be required if a~~
13 ~~permit from the Division has been issued that specifically addresses the use of CCPs from the source of CCPs, at new~~
14 ~~and expanding structural fill sites or sites where CCPs are used for bedding.~~
15 ~~(f) A compliance boundary shall be established for all structural fill sites not subject to Rule .1203 of this Section and~~
16 ~~the permittee shall comply with the provisions of 15A NCAC 02L .0107.~~

17
18 History Note: Authority G.S. 143-215.1; 143-215.3(a);
19 Eff. September 1, 2006-2006;
20 Readopted Eff. September 1, 2018.

1 15A NCAC 02T .1205 is readopted as published in 32:06 NCR 580-581 as follows:

2

3 **15A NCAC 02T .1205 POLLUTANT LIMITS**

4 (a) Except as provided for in Rule .1203 of this Section, CCPs shall not be distributed for use or used if the
5 concentration of any pollutant during the performance of a Toxicity Characteristic Leaching Procedure of the CCPs
6 exceeds the leachate concentration of concern for that pollutant as follows; ~~stipulated in the following~~:

7	Pollutant	Leachate Concentration of Concern
8		(milligrams per liter)
9	Arsenic	5.0
10	Barium	100.0
11	Cadmium	1.0
12	Chromium	5.0
13	Lead	5.0
14	Mercury	0.2
15	Selenium	1.0
16	Silver	5.0

17

18 (b) Except as provided for in Rule .1203 of this Section, CCPs shall not be distributed for use or used if the
19 concentration of any pollutant in the CCPs exceeds the ceiling concentration for that pollutant on a dry weight basis
20 as ~~stipulated in the following (i.e., on a dry weight basis)~~; follows:

21	Pollutant	Ceiling Concentration
22		(milligrams per kilogram)
23	Arsenic	75
24	Cadmium	85
25	Copper	4,300
26	Lead	840
27	Mercury	57
28	Molybdenum	75
29	Nickel	420
30	Selenium	100
31	Zinc	7,500

32 (c) Except as provided for in Rule .1203 of this Section, CCPs shall not be distributed for use or used if the
33 concentration of any pollutant in the CCPs exceeds the concentration for that pollutant on a dry weight basis as follows;
34 ~~stipulated in the following (i.e., on a dry weight basis)~~:

35	Pollutant	Monthly Average Concentration
36		(milligrams per kilogram)
37	Arsenic	41

1	Cadmium	39
2	Copper	1,500
3	Lead	300
4	Mercury	17
5	Molybdenum	75
6	Nickel	420
7	Selenium	100
8	Zinc	2,800

9 (d) CCPs may be distributed for use or used if the limits specified in Paragraphs (a), (b), or (c) of this Rule are not
10 met ~~provided that~~ if the following criteria are met:

- 11 (1) ~~the~~ The potential release of pollutants from the CCPs to the environment is minimized to the extent
12 ~~practicable, practicable;~~ and
- 13 (2) ~~the~~ The Applicant applicant demonstrates that it will meet the applicable surface water and
14 groundwater quality standards at the compliance boundary at the site of use. ~~shall demonstrate to~~
15 ~~the Division the ability to meet the applicable surface water quality or groundwater quality standards~~
16 ~~at the compliance boundary at the site of use is demonstrated.~~

17
18 *History Note: Authority G.S. 143-215.1; 143-215.3(a);*
19 *Eff. September 1, 2006-2006;*
20 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .1206 is readopted as published in 32:06 NCR 581 as follows:

2

3 **15A NCAC 02T .1206 SETBACKS**

4 For areas for the storage of CCPs ~~and sites where CCPs are used for structural fill and bedding, where the bedding is~~
5 ~~applied at a depth greater than two feet underneath the structure,~~ the following ~~minimum~~ setbacks (i.e., in feet) in feet
6 shall be adhered to:

7 Private or public water supply sources	100
8 Surface waters (streams - intermittent and perennial, lakes,	
9 perennial waterbodies, and wetlands)	50
10 Wells with exception to monitoring wells	100
11 Seasonal high water table	2

12 All distances are horizontal distances except for the distance from a seasonal high water ~~table~~ table, which is a
13 measured as a vertical distance.

14

15 *History Note:* Authority G.S. 143-215.1; 143-215.3(a);

16 *Eff. September 1, ~~2006-2006~~;*

17 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .1207 is readopted as published in 32:06 NCR 581 as follows:

2

3 **15A NCAC 02T .1207 OPERATION AND MANAGEMENT PRACTICES**

4 (a) For CCPs to be distributed for use, the following shall be provided by the Permittee ~~permittee~~ to the person who
5 receives the CCPs:

6 (1) the name and address of the person who distributed the CCPs;

7 (2) materials safety data, pursuant to 29 CFR 1910.1200, for the CCPs;

8 (3) guidance regarding how to comply with Paragraphs (b), (c), and (d) of this Rule;

9 (4) guidance regarding requirements ~~stipulated~~ required by this Section that are specific to the intended
10 use and must be followed by the recipient of the CCPs; and

11 (5) a statement that use of the CCPs ~~shall be~~ is prohibited unless in compliance with the guidance
12 provided.

13 (b) CCPs shall be transported in a manner that does not cause nuisances and hazards to public health or safety or
14 otherwise cause an adverse impact.

15 (c) The person distributing CCPs shall take preparatory measures to store CCPs prior to distribution for use, as well
16 as prior to use, to prevent unpermitted runoff to surface waters.

17 (d) The person distributing CCPs shall take actions necessary to prevent wind erosion and surface runoff from
18 conveying CCPs onto adjacent property or into any surface waters prior to distribution for use as well as after use.

19

20 *History Note: Authority G.S. 143-215.1; 143-215.3(a);*

21 *Eff. September 1, 2006-2006;*

22 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .1208 is readopted with changes as published in 32:06 NCR581 as follows:

2

3 **15A NCAC 02T .1208 OPERATION AND MAINTENANCE PLAN**

4 ~~(a)~~ An Operation and Maintenance Plan shall be maintained for all CCPs management programs. The plan shall:

5 (1) describe the operation of the program and any associated wastewater treatment systems and
6 equipment in sufficient detail to show what operations are necessary for the program to function and
7 by whom the functions are to be conducted;

8 (2) describe anticipated maintenance of wastewater treatment systems and equipment that are
9 associated with the program;

10 (3) include provisions for safety ~~measures~~ measures, including restriction of access to the site and
11 equipment, as appropriate;

12 (4) include spill control ~~provisions~~ provisions, including:

13 (a) response to ~~spills~~ spills, including control, containment, and ~~remediation~~ remediation; and

14 (b) contact information for program personnel, emergency responders, and regulatory ~~agencies~~; agencies; ~~and~~

15 (5) describe the sampling and analysis protocol used to ensure that the program complies with this
16 Section and ~~any~~ all issued permits.

17

18 *History Note: Authority G.S. 143-215.1; 143-215.3(a);*

19 *Eff. September 1, 2006-2006;*

20 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .1209 is readopted as published in 32:06 NCR 581 as follows:

2

3 **15A NCAC 02T .1209 MONITORING AND REPORTING**

4 (a) Records shall be maintained by the Permittee ~~permittee~~ of all CCPs distributed for use or used and shall include
5 the following:

6 (1) the source, volume and type of CCPs distributed for use or used;

7 (2) the date of CCPs distributed for use or used; and

8 (3) the name of the initial recipient of the CCPs and a description of their intended use.

9 (b) A report of all monitoring and reporting requirements as specified in the permit shall be submitted annually to the
10 Division by the Permittee on or before March 1st of each calendar year.

11 (c) All records shall be retained for ~~a minimum of~~ five years.

12

13 *History Note: Authority G.S. 143-215.1; 143-215.3(a);*

14 *Eff. September 1, ~~2006-2006~~;*

15 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .1301 is readopted as published in 32:06 NCR 582 as follows:

2

3

SECTION .1300 – ANIMAL WASTE MANAGEMENT SYSTEMS

4

15A NCAC 02T .1301 SCOPE

6 The rules in this Section apply to all persons proposing to construct, modify, expand, or operate an animal waste
7 management system. These Rules do not apply to manure haulers regulated pursuant to Section .1400 of this
8 Subchapter.

9

10 *History Note: Authority G.S. 143-215.1; 143-215.3(a); 143-215.10A;*

11 *Eff. September 1, ~~2006~~2006;*

12 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .1302 is readopted with changes as published 32:06 NCR 582as follows:

2

3 **15A NCAC 02T .1302 DEFINITIONS**

4 The definitions used for the purpose of this Section shall be as defined in G.S. 143-215.10B, in Rule .0103 of this
5 Subchapter, ~~of~~ in Rule .1102 in this Subchapter, and as follows:

6 (1) "Animal waste management plan" means a plan to properly collect, store, treat or apply animal
7 waste to the land in an environmentally safe manner developed in accordance with G.S. 143-
8 215.10C.

9 (2) "Animal Waste Residuals" means residuals that have been generated during the treatment of animal
10 waste.

11 (3) "Bag or other container" shall mean a bag, bucket, bin, box, carton, vehicle, trailer, tanker, or an
12 open or closed receptacle with a load capacity of 1.102 short tons or one metric ton or less.

13 ~~[(4) "Bulk animal waste residuals" shall mean animal waste residuals that are transported and not sold~~
14 ~~or given away in a bag or other container for application to the land.]~~

15 ~~(4)(2)(5)~~ "Expanded animal waste management system" means ~~animal waste treatment and storage~~
16 ~~facilities which require an increase over the existing animal waste design treatment and storage~~
17 ~~capacity due to an increase in the permitted steady state live weight~~ at the feedlot associated with
18 the animal waste management system.

19 ~~(5)(3)(6)~~ "New animal waste management system" means animal waste management systems which
20 are constructed and operated at a site where no feedlot existed previously or ~~where a system serving~~
21 ~~a feedlot has been abandoned or unused for a period of four years or more and is then put back into~~
22 ~~service.~~ where a permit for a system has been rescinded and is then reissued when the permittee
23 confines animals in excess of the thresholds established in G.S. 143-215.10B. Notwithstanding Rule
24 .1307(a) of this Section, a 'new animal waste management system' shall not apply to a facility where
25 a system serving a feedlot which has been abandoned or unused for a period of less than five years
26 and then put back into service or if all of the following conditions are met:

27 (A) Has had no animals on site for five continuous years or more;

28 (B) Notifies the Division in writing at least 60 days prior to bringing any animals back on to
29 the site;

30 (C) The system depopulated after January 1, 2005, and the system ceased operation no longer
31 than 10 years prior to the current date;

32 (D) At the time the system ceased operation, the system was in compliance with an individual
33 permit or a general permit issued pursuant to G.S. 143-215.10C;

34 (E) The Division issues an individual permit or certificate of coverage under a general permit
35 issued pursuant to G.S. 143-215.10C for operation of the system before any animals are
36 brought on the facility;

1 15A NCAC 02T .1303 is readopted with changes as published in 32:06 NCR 582-583 as follows:

2

3 **15A NCAC 02T .1303 PERMITTING BY REGULATION**

4 (a) The following systems are deemed permitted pursuant to Rule .0113 of this Subchapter provided the system meets
5 the criteria in Rule .0113 of this Subchapter and all criteria required for the specific system in this Rule:

6 (1) Systems that do not meet the criteria of an animal operation permitted under Rule .1304 or Rule
7 .1305 of this Subchapter and all other systems not specifically mentioned in this ~~Section.~~ Section
8 if:

9 (A) the animal waste is land applied at no greater than agronomic rates to land owned by the
10 waste generator or under the waste generators generator's authority, authority; agronomic
11 rates must be met.

12 (B) the storage and land application of animal waste is ~~not~~ no closer than 100 feet ~~of~~ from
13 a ~~well;~~ well, other than a monitoring well;

14 (C) animal waste is not applied on land that is flooded, saturated with water, frozen, or snow
15 covered at the time of land application; and

16 (D) no animal waste is land applied during precipitation events.

17 (2) Poultry operations which use a dry litter system with more than 30,000 birds and that do not meet
18 the criteria specified in Rule .1305 of this Subchapter if:

19 (A) records are maintained for a minimum of three years which include the dates the litter was
20 removed, the estimated amount of litter removed and the location of the sites where the
21 litter was land applied by the poultry operation;

22 (B) the waste is applied at no greater than agronomic rates;

23 (C) a vegetative buffer (separation) of at least 25 feet is maintained from a perennial stream or
24 perennial waterbody for land application sites;

25 (D) land application of litter is ~~not~~ no closer than 100 feet from a ~~well;~~ well, other than a
26 monitoring well;

27 ~~(E)~~(E) litter is stockpiled ~~not~~ no closer than 100 feet from a perennial ~~stream~~ stream, or perennial
28 waterbody; waterbody, or ~~well;~~ well, other than a monitoring well;

29 ~~(F)~~(F) litter is not stockpiled uncovered for greater than 15 days; and

30 (G) litter ~~animal waste~~ is not applied on land that is flooded, saturated with water, frozen, or
31 snow covered at the time of land application;

32 (H) no ~~animal waste~~ litter is land applied during precipitation events; and

33 ~~(I)~~(I) if a manure hauler is used, records must be maintained of the dates the litter was removed,
34 the estimated amount of litter removed, and name, address and phone number of the
35 manure hauler.

1 (3) Land application sites under separate ownership from the waste generator, receiving animal waste
2 from animal waste management systems which are deemed permitted, when all the following
3 conditions are met:

4 (A) the waste is applied at no greater than agronomic rates; ~~and~~

5 (B) the storage and land application of animal waste is ~~not~~ no closer than 100 feet from a
6 ~~well;~~ well, other than a monitoring well;

7 ~~(B)~~(C) a vegetative buffer (separation) of at least 25 feet is maintained from a perennial stream or
8 perennial ~~waterbody-~~ waterbody;

9 (D) animal waste is not applied on land that is flooded, saturated with water, frozen, or snow
10 covered at the time of land application; and

11 (E) no animal waste is land applied during precipitation events.

12 (b) The Director may determine that a system should not be deemed permitted in accordance with this Rule and Rule
13 .0113 of this Subchapter. This determination shall be made in accordance with Rule .0113(e) of this Subchapter.

14
15 *History Note:* Authority G.S. 143-215.1; 143-215.3(a); 143-215.10A;
16 Eff. September 1, ~~2006-2006~~;
17 Readopted Eff. September 1, 2018.
18

1 15A NCAC 02T .1304 is readopted with changes as published in 32:06 NCR 583-584 as follows:

2

3 **15A NCAC 02T .1304 STATE PERMITTING REQUIREMENTS**

4 (a) This rule applies to animal waste management systems that meet the definition of an animal operation in G.S.
5 143-215.10B but are not subject to regulation under Rule .1305-Rule .1305 of this Section.

6 (b) An animal waste management plan shall be submitted as follows:

7 (1) The animal waste management practices or combination of practices which are selected to comprise
8 a plan for a specific facility must meet NRCS standards, or the standard of practices adopted by the
9 Soil and Water Conservation Commission pursuant to ~~15A NCAC 06F .0104~~, 02 NCAC 59E .0104,
10 or standards for any combination of practices which provide water quality protection and are
11 approved by one of these two agencies; and all applicable state statutes and rules at the time of
12 development or design. NRCS standards relating to phosphorus application rates for animal waste
13 are not incorporated as part of this rule.

14 (2) As required by G.S. 143-215.10C, plans must be approved by a technical specialist and the
15 certificate must be submitted to the Division on Division supplied forms or forms approved by the
16 Division as providing the same information as required by the Division's forms. The technical
17 specialist must certify that the best management practices that comprise the plan meet the applicable
18 standards and specifications.

19 ~~(3)~~ (3) The waste shall not be applied at greater than agronomic rates.

20 ~~(4)~~ (4) The land application and siting setbacks must meet the applicable conditions established in G.S.
21 106-803 and NRCS standards at the time of ~~construction.~~ site construction or at the time the land
22 application site is first put into use.

23 (5) Notwithstanding ~~Rule .1304~~ Subparagraph (b)(4) of this ~~Section,~~ Rule, land application of waste
24 shall be no closer than 100 feet from a ~~well,~~ well, other than a monitoring well, and no closer than
25 200 feet from a dwelling not owned by the waste generator at the time the land application site is
26 first put into use. Setback waivers related to distance of land application of waste from a dwelling
27 not owned by the waste generator shall be written, notarized, signed by all parties involved and
28 recorded with the county of Register of Deeds.

29 (6) Notwithstanding Rule .1304(b)(4) of this Section, a vegetative buffer (separation) of at least 25 feet
30 is maintained from a perennial stream or perennial waterbody for land application sites.

31 (7) The waste shall not be applied on land that is flooded, saturated with water, frozen, or snow covered
32 at the time of land application.

33 (8) Land application of waste is prohibited during precipitation events.

34 (9) All waste application equipment must be tested and calibrated at least once every two calendar years,
35 and the results must be documented on forms supplied by or approved by the Division as providing
36 the same information as required by the Division's forms.

1 (10) Highly visible waste-level gauges shall be installed and maintained to mark the level of the waste
2 in each animal waste lagoon or storage pond that does not gravity feed through a free flowing
3 transfer pipe into a subsequent waste storage structure. The gauge shall have readily visible
4 permanent markings.

5 (4)(11) New and expanded animal waste treatment systems such as lagoons and waste storage structures
6 shall be located at least 100 feet from a perennial stream or perennial waterbody. For new and
7 expanding systems, this setback requirement shall also apply to areas in feedlots where an
8 established vegetative cover will not be maintained because of the concentration of animals, with
9 the exception of stock trails and stream crossings.

10 (6)(12) For animal waste management facilities desiring to increase their animal population beyond that
11 permitted, a new individual permit or new certificate of coverage to operate under a general permit
12 must be issued before the additional animals are stocked.

13 (c) For each change of ownership of the system, the new owner must notify the Division in writing within 60 days of
14 transfer of ownership.

15 (d) New and expanding swine facilities must demonstrate compliance with Rule .1307 of this Section prior to
16 receiving a permit from the Division.

17
18 *History Note:* Authority G.S. 106-803; 143-215.1; 143-215.3(a); 143-215.10A; 143-215.10C; 143-215.10I;
19 Eff. September 1, 2006-2006;
20 Readopted Eff. September 1, 2018.

1 15A NCAC 02T .1305 is readopted with changes as published in 32:06 NCR 584-585 as follows:

2

3 **15A NCAC 02T .1305 NPDES PERMITTING REQUIREMENTS**

4 (a) This Rule applies to animal waste management systems subject to regulation under G.S. 143-215.10C and 40 CFR
5 § ~~122.23~~ 40 CFR 122.23, which is incorporated by reference including subsequent amendments and editions and shall
6 apply throughout this Rule. 40 CFR 122.23 can be accessed free of charge at <http://www.gpo.gov/fdsys/>. ~~and G.S.~~
7 ~~143-215.10C.~~

8 (b) With the exception of dry litter poultry systems, an animal waste management plan shall be submitted as follows:

9 (1) The animal waste management practices or combination of practices which are selected to comprise
10 a plan for a specific facility must meet NRCS standards, or the standard of practices adopted by the
11 Soil and Water Conservation Commission pursuant to ~~15A NCAC 06F .0104~~, 02 NCAC 59E .0104,
12 or standards for any combination of practices which provide water quality protection and are
13 approved by one of these two agencies; and all applicable state statutes and rules and all applicable
14 federal requirements at the time of development or design.

15 (2) As required by G.S. 143-215.10C, plans must be approved by a technical specialist and the
16 certificate must be submitted to the Division on Division supplied forms or forms approved by the
17 Division as providing the same information as required by the Division's forms. The technical
18 specialist must certify that the best management practices that comprise the plan meet the applicable
19 standards and specifications.

20 ~~(5)~~(3) The waste shall not be applied at greater than agronomic rates.

21 ~~(3)~~(4) The land application and siting setbacks must meet the applicable conditions established in G.S.
22 106-803, and NRCS standards and 40 CFR Part 412 at the time of site construction or at the time
23 the land application site is first put into use.

24 (5) The land application and siting setbacks must meet the applicable conditions established in 40 CFR
25 Part 412.

26 (6) Notwithstanding Subparagraph (b)(4) of this Rule, land application of waste shall be no closer than
27 100 feet from a ~~well~~ well, other than a monitoring well, and no closer than 200 feet from a dwelling
28 not owned by the waste generator at the time the land application site is first put into use. **Setback**
29 waivers related to distance of land application of waste from a dwelling not owned by the waste
30 generator shall be written, notarized, signed by all parties involved and recorded with the county of
31 Register of Deeds.

32 (7) The waste shall not be applied on land that is flooded, saturated with water, frozen, or snow covered
33 at the time of land application.

34 (8) Land application of waste is prohibited during precipitation events.

35 (9) All waste application equipment must be tested and calibrated at least once every calendar year, and
36 the results must be documented on forms supplied by or approved by the Division as providing the
37 same information as required by the Division's forms.

1 (10) Highly visible waste-level gauges shall be installed and maintained to mark the level of the waste
2 in each animal waste lagoon or storage pond that does not gravity feed through a free flowing
3 transfer pipe into a subsequent waste storage structure. The gauge shall have readily visible
4 permanent markings.

5 ~~(4)~~(11) New and expanded animal waste treatment systems such as lagoons and waste storage structures
6 shall be located at least 100 feet from a perennial stream or perennial waterbody. For new and
7 expanding systems, this setback requirement shall also apply to areas in feedlots where an
8 established vegetative cover will not be maintained because of the concentration of animals, with
9 the exception of stock trails and stream crossings.

10 ~~(6)~~(12) For animal waste management facilities desiring to increase their animal population beyond that
11 permitted, a new individual permit or new certificate of coverage to operate under a general permit
12 must be issued before the additional animals are stocked.

13 (c) Dry litter poultry systems, for the purpose of this Rule and G.S. 143-215.10C, shall submit an animal waste
14 management plan as follows:

15 (1) The animal waste management practices or combination of practices which are selected to comprise
16 a plan for a specific facility must meet NRCS standards, or the standard of practices adopted by the
17 Soil and Water Conservation Commission, or standards for any combination of practices which
18 provide water quality protection and are approved by one of these two agencies; and all applicable
19 state statutes and rules and all applicable federal requirements at the time of development or design.

20 (2) The land application and siting setbacks must meet the conditions established in NRCS standards
21 and 40 CFR Part 412 at the time of construction.

22 (3) New and expanded animal waste structures such as houses and dry stacks shall be protected from
23 the 100-year flood as determined by the Federal Emergency Management Agency.

24 (4) The waste shall not be applied at greater than agronomic rates.

25 (5) Notwithstanding Subparagraph (c)(2) of this Section, of this Rule, land application of waste litter
26 shall be no closer than 100 feet from a well, well, other than a monitoring well, and no closer than
27 200 feet from a dwelling not owned by the waste generator, generator at the time the land
28 application site is first put into use. Setback waivers related to distance of land application of waste
29 from a dwelling not owned by the waste generator shall be written, notarized, signed by all parties
30 involved and recorded with the county Register of Deeds.

31 (6) The waste shall not be applied on land that is flooded, saturated with water, frozen, or snow covered
32 at the time of land application.

33 (7) Land application of waste litter is prohibited during precipitation events.

34 (8) All waste application equipment must be tested and calibrated at least once every calendar year, and
35 the results must be documented on forms supplied by or approved by the Division as providing the
36 same information as required by the Division's forms.

1 (9) Highly visible waste-level gauges shall be installed and maintained to mark the level of the waste
2 in each animal waste lagoon or storage pond that does not gravity feed through a free flowing
3 transfer pipe into a subsequent waste storage structure. The gauge shall have readily visible
4 permanent markings.

5 ~~(5)~~(10) For animal waste management facilities desiring to increase their animal population beyond that
6 permitted, a new individual permit or new certificate of coverage to operate under a general permit
7 must be issued before the additional animals are stocked.

8 (d) For each change of ownership of the system, the new owner must notify the Division in writing within 60 days of
9 transfer of ownership.

10 (e) Systems shall meet all applicable requirements of 40 CFR Part 122 and 40 CFR Part 412.

11 (f) New and expanding swine facilities must demonstrate compliance with Rule .1307 of this Section prior to receiving
12 a permit from the Division.

13

14 *History Note: Authority G.S. 106-803; 143-215.1; 143-215.3(a); 143-215.10A; 143-215.10C; 143-215.10I;*
15 *Eff. September 1, 2006-2006;*
16 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .1306 is readopted as published in 32:06 NCR 585 as follows:

2

3 **15A NCAC 02T .1306 CLOSURE REQUIREMENTS**

4 (a) Any containment basin, such as a lagoon or a waste storage structure, permitted at an animal operation other than
5 a cattle facility under this Section shall continue to be subject to the conditions and requirements of the facility's permit
6 until closed to NRCS standards and the permit is rescinded by the Division. Closure shall include pre-notification to
7 the Division and submittal of closure form supplied by the Division or forms approved by the Division as providing
8 the same information as required by the Division's forms within 15 days of completion of closure.

9 (b) Any Containment basin, such as a lagoon or a waste storage structure, permitted at a cattle facility under this
10 Section shall continue to be subject to the conditions and requirements of the facility's permit until that permit is
11 rescinded by the Division. Upon request of the permittee, the permit may be rescinded by the Division prior to closure
12 of the containment basin if the cattle facility has not met the definition of an animal operation as established in G.S.
13 143-215.120B for the previous three years or longer. Upon permit rescission, the following requirements shall apply:

14 (1) The cattle facility shall be subject to the requirements of Rule .1303 of this Section and Rule .0113
15 of the Subchapter until the containment basin is closed to NRCS standards.

16 (2) The farm owner shall maintain records of land application and weekly records of containment basin
17 waste levels on forms provided by or approved by the Division.

18 (3) Closure shall include pre-notification to the Division and submittal of closure form supplied by the
19 Division or forms approved by the Division as providing the same information as required by the
20 Division's forms within 15 days of completion of closure.

21 (c) The Division shall have the authority to deny a request for permit rescission based on the factors set out in Rule
22 .0113(e) of this Subchapter.

23

24 *History Note: Authority G.S. 143-215.1; 143-215.3(a); 143-215.10A; S.L.2013-413;*

25 *Eff. September 1, ~~2006~~2006;*

26 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .1307 is readopted with changes as published in 32:06 NCR 586-587 as follows:

2

3 **15A NCAC 02T .1307 SWINE WASTE MANAGEMENT SYSTEM PERFORMANCE STANDARDS**

4 (a) This Rule applies to animal waste management systems subject to regulation under ~~G.S. 143-215.10I~~. G.S. 143-
5 215. 10I and S.L. 2015-263.

6 (b) An animal waste management system that serves a swine farm subject to regulation under G.S. 143-215.10I, shall
7 meet all of the following performance standards:

8 (1) Eliminate the discharge of animal waste to surface waters and groundwater through direct discharge,
9 seepage, or runoff. To meet this standard:

10 (A) Earthen structures must be designed and constructed with synthetic liners to eliminate
11 seepage.

12 (B) Solids storage structures shall meet applicable engineering practices and NRCS design
13 standards.

14 (C) The Certified Animal Waste Management Plan (CAWMP) must include all components as
15 listed in G.S. 143-215.10C(e) and meet current North Carolina NRCS 590 Nutrient
16 Management Conservation Practice Standard requirements standards for a and comply
17 with the NRCS national policy for Comprehensive Nutrient Management Plan Plans
18 (CNMP) as defined by Part [600] 600, Subpart E of the NRCS General Manual, Title 190,
19 Part 405, National Planning Procedures Handbook, which are hereby incorporated by
20 reference, including any subsequent additions or amendments. The handbook may be
21 downloaded at no cost from the NRCS website: <http://www.nres.usda.gov/technica>
22 [/afo/cnmp_guide_index.html](http://www.nres.usda.gov/wps/portal/nres/site/national/home/)

23 [\[http://www.nres.usda.gov/wps/portal/nres/site/national/home/\]](http://www.nres.usda.gov/wps/portal/nres/site/national/home/)

24 (D) Swine waste treatment structures that automatically convey swine waste using pumps must
25 have audible and visible high water alarms with an auto dialer device set to contact the
26 farm owner or farm manager; a gravity overflow to a basin that can contain the flow rate
27 of the largest pump in the system for the maximum amount of time that an operator will
28 not be on-site; or a secondary containment structure designed, constructed, and operated to
29 contain the volume of the largest animal waste treatment structure and the flow rate of the
30 largest pump in the system for the maximum amount of time that an operator will not be
31 on-site.

32 (E) No more than the equivalent volume of one month of design flow of untreated swine waste
33 shall be accumulated and stored prior to the initiation of treatment.

34 (2) Substantially eliminate atmospheric emission of ammonia. To meet this standard:

35 (A) Combined ammonia emissions from swine waste treatment and storage structures may shall
36 not exceed an annual average of 0.2 kg NH₃-N/wk/1,000 kg of steady-state live weight;

- 1 (B) Ammonia emissions from land application sites shall not exceed an annual average of 0.2
2 kg NH₃-N/wk/1,000 kg of steady-state live weight; and
- 3 (C) Ammonia emissions from the swine farm ~~must~~shall not exceed an annual average of 0.9
4 kg NH₃-N/wk/1,000 kg of steady-state live weight.
- 5 (3) Substantially eliminate the emission of odor that is detectable beyond the boundaries of the parcel
6 or tract of land on which the swine farm is located. To meet this standard, swine waste management
7 systems must reduce odor levels, frequency, and duration from the whole farm, such that the
8 requirements of 15A NCAC 02D .1808 are met at the property boundary.
- 9 (4) Substantially eliminate the release of disease-transmitting vectors and airborne pathogens. To meet
10 this standard:
- 11 (A) Swine waste management systems shall meet the vector attraction reduction requirements
12 in Rule .1107 of this Subchapter for the land application of separated solids and animal
13 waste ~~residuals~~residuals for operations subject to this Rule.
- 14 (B) Swine waste management systems shall meet the pathogen reduction requirements in Rule
15 ~~.1106~~.1106(a) of this Subchapter for Class A biosolids that are to be ~~land~~ applied to a lawn,
16 home garden, or public contact use site or sold or given away in a bag or container for land
17 application, pursuant to Rule .1106(a)(1) or meet the pathogen reduction requirements in
18 Rule .1106(b) for Class B biosolids that are to be otherwise applied to land.
- 19 (C) Fecal coliform concentrations in the final liquid effluent shall not exceed an annual average
20 of 7,000 Most Probable Number/100mL.
- 21 (5) Substantially eliminate nutrient and heavy metal contamination of soil and groundwater. To meet
22 this standard, swine waste management systems that land apply effluent shall:
- 23 (A) Meet the current North Carolina NRCS 590 Nutrient Management Conservation Practice
24 Standard requirements ~~for a~~ and comply with the NRCS national policy for Comprehensive
25 Nutrient Management ~~Plan~~ Plans (CNMP) as defined by ~~Part 600, Subpart E [600]~~ of the
26 ~~NRCS National Planning Procedures Handbook; NRCS General Manual, Title 190, Part~~
27 405; and
- 28 (B) Demonstrate through predictive calculations or modeling that land application of swine
29 waste at the proposed rate will not cause or contribute to a violation of groundwater
30 standards under 15A NCAC 02L.

31

32 *History Note:* Authority G.S. 143-215.1; 143-215.3(a); 143-215.10A; 143-215.10C; 143-215.10I; S.L.2015-263;
33 Eff. January 1, 2009-2009;
34 Readopted Eff. September 1, 2018.

1 15A NCAC 02T .1308 is readopted as published in 32:06 587 as follows:

2

3 **15A NCAC 02T .1308 EVALUATION AND APPROVAL OF SWINE WASTE MANAGEMENT**
4 **SYSTEMS**

5 (a) This Rule establishes requirements for the evaluation, approval and permitting of swine waste management
6 systems that are required to meet the performance standards in Rule .1307 of this Section.

7 (b) APPLICATION: The applicant shall submit a permit application in writing to the Division showing that a swine
8 waste management system meets the performance standards. The application shall include the following:

9 (1) operation and maintenance procedures, system classification, proposed management entity and
10 system operator requirements;

11 (2) a description of the swine waste management system, including materials used in construction, and
12 its proposed use;

13 (3) a summary of any literature, published research, and previous experience with and performance of
14 a waste management system of similar waste characteristics;

15 (4) results of 12 months of testing, research or monitoring of pilot- or full-scale operational system(s);
16 and shall identify whether the testing, research or monitoring provided was conducted by a third
17 party research or testing organization;

18 (5) documentation of the protocol used to evaluate the performance of the swine waste management
19 system;

20 (6) the identity and qualifications, if applicable, of any proposed research or testing organization and
21 the principal investigators, and an affidavit certifying that the organization and principal
22 investigators have no conflict of interest and do not stand to gain financially from the sale of the
23 technology;

24 (7) an affidavit certifying that the swine waste management system submitted for approval is the same
25 as the certified or listed product; or identify any modifications made to the submitted system;

26 (8) a procedure to address system malfunction and replacement;

27 (9) notification of any proprietary or trade secret information, system, component, or device;

28 (10) engineering design documents. If required by G.S. 89C, a professional engineer shall prepare these
29 documents. The following documents shall be provided to the Division by the applicant:

30 (A) engineering plans for the entire system, including treatment, storage, application, and
31 disposal facilities and equipment except those previously permitted unless those previously
32 permitted are directly tied into the new units or are critical to the understanding of the
33 complete process;

34 (B) specifications describing materials to be used, methods of construction, and means for
35 ensuring quality and integrity of the finished product including leakage testing; and

1 (C) engineering calculations including hydraulic and pollutant loading for each treatment unit,
2 treatment unit sizing criteria, hydraulic profile of the treatment system, total dynamic head
3 and system curve analysis for each pump, buoyancy calculations, and irrigation design;

4 (11) a complete permit application in accordance with Section .0100 of this Subchapter; and

5 (12) In lieu of the requirements of Subparagraphs (b)(3) through (b)(6), the applicant may submit data
6 from a full-scale facility previously permitted by the Division.

7 (c) APPROVAL OF NEW OR EXPANDING SWINE WASTE MANAGEMENT SYSTEMS: The Division shall
8 review all applications submitted in accordance with Rule .0107 of this Subchapter. The Division shall approve the
9 swine waste management system in accordance with Rule .0108 of this Subchapter, when the applicant can show that
10 the performance standards of Rule .1307 of this Section will be met.

11 (d) MONITORING REQUIREMENTS: Once the newly permitted system reaches full capacity or within six months,
12 whichever comes sooner, the permittee shall monitor system performance for two years with quarterly sampling to
13 assure that the treatment system is meeting performance standards. If, after two years the treatment system is
14 compliant with Rule .1307 of this Section, the permittee shall monitor for compliance with the performance standards
15 in Rule .1307 on the following schedule:

16 (1) Ammonia emissions monitoring from swine waste treatment and storage structures shall be as
17 follows:

18 (A) Ammonia air emissions from open-air structures shall be directly sampled once per
19 calendar year, with alternating years having sampling during the summer and winter
20 seasons, or

21 (B) Liquid from open-air waste treatment and storage structures shall be sampled at a minimum
22 of once per quarter.

23 (2) Monitoring of odor intensity shall be on an annual basis, with alternating years having sampling
24 during the summer and winter seasons.

25 (3) Effluent monitoring shall be at a minimum of once per quarter.

26

27 *History Note:* Authority G.S. 143-215.1; 143-215.3(a); 143-215.10A; 143-215.10I;

28 Eff. January 1, ~~2009~~-2009.

29 Readopted Eff. September 1, 2018.

1 15A NCAC 02T .1309 is readopted with changes as published in 32:06 NCR 587 as follows:

2

3 **15A NCAC 02T .1309 LAGOON CONVERSION REQUIREMENTS**

4 (a) This Rule applies to existing **swine** animal waste management systems that convert from anaerobic lagoons as the
5 primary method of treatment to an animal waste management system that meets the requirements of Rule .1307 of
6 this Section, and have not expanded the steady-state live weight of the swine farm.

7 (b) Upon approval by the Division, a permittee may abandon and close out an animal waste management system
8 permitted under Rules .1307 and .1308 of this Section and revert to the requirements of Rule .1304 or .1305 of this
9 Section. The Division shall approve the reversion if all of the following criteria are met:

10 (1) The animal waste management system is constructed according to the design and specifications
11 approved by the Division according to the rules in this section;

12 (2) The animal waste management system is operated and maintained in accordance with the rules in
13 this Section;

14 (3) The permit for the anaerobic lagoon animal waste management system issued prior to 1 September
15 2007 pursuant to S.L. 2007-523(1)(b) remains valid; and

16 (4) The anaerobic lagoon animal waste management system has been maintained and can operate in
17 compliance with the requirements of its permit.

18

19 *History Note: Authority G.S. 143-215.1; 143-215.3(a); 143-215.10A; 143-215.10I;*
20 *Eff. January 1, ~~2009~~2009;*
21 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .1310 is adopted with changes as published in 32:06 NCR 587-589 as follows:

2

3 **15A NCAC 02T .1310 ANIMAL WASTE RESIDUALS MANAGEMENT**

4 (a) This Rule applies to the treatment, storage, transportation, use, and disposal of animal waste residuals to be applied
5 to a lawn, home garden, or public contact use site or sold or given away in a bag or other container for application to
6 the land. Not regulated under this Rule is the treatment, storage, transportation, use, or disposal of:

7 (1) animal waste residuals applied to agricultural land in accordance with Rule .1303, Rule .1304, Rule
8 1305, Rule .1307 of this Section, or Rule .1403 of this Subchapter;

9 (2) up to four cubic yards of animal waste residuals distributed from a facility subject to regulation
10 under Rule .1303 or Rule .1304 of this Section per visit to individuals for personal use, with a
11 maximum of ten cubic yards per year per individual;

12 (3) oil, grease, grit and screenings from wastewater treatment facilities;

13 (4) septage from wastewater treatment facilities;

14 (5) ash that is regulated in accordance with Section .1200 of this Subchapter;

15 (6) residuals that are regulated in accordance with Section .1100 of this Subchapter;

16 (7) residuals that are prepared for land application, used, or disposed of in a solid waste management
17 facility permitted by the Division of Waste Management;

18 (8) residuals that are disposed of in an incinerator permitted by the Division of Air Quality;

19 (9) residuals that are transported out of state for treatment, storage, use, or disposal; ~~and~~

20 (10) residuals that meet the definition of a hazardous waste in accordance with 40 CFR 260.10 as adopted
21 by reference in 15A NCAC 13A .0102(b) or that have a concentration of polychlorinated biphenyls
22 equal to or greater than 50 milligrams per kilogram of total solids (i.e., dry weight ~~basis~~ basis) ~~and~~;

23 ~~(11) animal mortality.~~

24 (b) For new and modified sources of animal waste residuals, the application shall submit a permit application in
25 writing to the Division that includes the following:

26 (1) Site maps shall be provided to the Division by the applicant depicting the location of the source and
27 demonstrate compliance with siting setbacks applicable to animal waste management systems
28 established in G.S. 106-803, and NRCS standards at the time of construction;

29 (2) A complete analysis of the animal waste residuals. The analysis ~~may~~ shall include all pollutants
30 identified in Paragraph (c) in this Rule, nutrients and micronutrients, and proof of compliance with
31 pathogen and vector requirements in Paragraphs (f) and (g) of this Rule if applicable;

32 (3) A sampling/monitoring plan that describes how compliance with Paragraphs (c), ~~(f)~~, and ~~(g)~~ (d) of
33 this Rule if applicable shall be provided to the Division by the applicant;

34 (4) A marketability statement detailing destinations and approximate amounts of the final product to be
35 distributed; and

36 (5) A copy of the label/information sheet that complies with Paragraph ~~(h)~~ (e) of this Rule.

1 ~~(c) Bulk animal waste residuals shall not be applied to a lawn, home garden, or public contact use site nor shall animal~~
2 ~~waste residuals be sold or given away in a bag or other container for application to the land if the concentration of any~~
3 ~~pollutant in that residual exceeds the ceiling concentration for that pollutant as stipulated in the following (i.e., on a~~
4 ~~dry weight basis):~~

Pollutant	Ceiling Concentration
	(milligrams per kilogram)
Arsenic	75
Cadmium	85
Copper	4,300
Lead	840
Mercury	57
Molybdenum	75
Nickel	420
Selenium	100
Zinc	7,500

16 ~~(d)(c) Bulk animal~~ Animal waste residuals shall not be applied to a lawn, home garden, or public contact use site nor
17 shall animal waste residuals be sold or given away in a bag or other container for application to the land if the
18 concentration of any pollutant in that residual exceeds the concentration for that pollutant as stipulated in the following
19 (i.e., on a dry weight basis):

Pollutant	Monthly Average Ceiling Concentration
	(milligrams per kilogram)
Arsenic	41
Cadmium	39
Copper	1,500
Lead	300
Mercury	17
Nickel	420
Selenium	100
Zinc	2,800

30 ~~(e)(d) The Class A~~ Animal waste residuals shall meet the pathogen requirements of Rule .1106(a)(2) of this
31 Subchapter shall be met when bulk animal waste residuals are to be applied to a lawn, home garden, or public contact
32 use site or sold or given away in a bag or other container for application to the land.

33 ~~(f) For animal waste residuals to be classified as Class A with respect to pathogens, the requirements of Rule .1106(b)~~
34 ~~of this Subchapter shall be met.~~

35 ~~(g) Animal waste residuals shall not be applied to a lawn, home garden, or public contact use site or sold or given~~
36 ~~away in a bag or other container for application to the land unless the requirements of one of the vector attraction~~
37 ~~reduction alternatives have been met. The vector attraction reduction alternatives shall be as follows:~~

1 ~~(1) 38 Percent Volatile Solids Reduction. The mass of the volatile solids in the animal waste residuals~~
2 ~~shall be reduced by a minimum of 38 percent between the time that the animal waste residuals enter~~
3 ~~the digestion process and the time it is land applied.~~

4 ~~(2) 40 Day Bench Scale Test. A portion of previously anaerobically digested animal waste residuals~~
5 ~~shall be further anaerobically digested in the laboratory in a bench scale unit for 40 additional days~~
6 ~~at a temperature between 30 and 37 degrees Celsius. The volatile solids in the animal waste residuals~~
7 ~~shall be reduced by less than 17 percent as measured from the beginning to the end of the test.~~

8 ~~(3) 30 Day Bench Scale Test. A portion of previously aerobically digested animal waste residuals shall~~
9 ~~be further aerobically digested in the laboratory in a bench scale unit for 30 additional days at a~~
10 ~~temperature of 20 degrees Celsius. The previously aerobically digested animal waste residuals shall~~
11 ~~either have a concentration of two percent total solids or less or shall be diluted with effluent down~~
12 ~~to two percent total solids at the start of the test. The volatile solids in the animal waste residuals~~
13 ~~shall be reduced by less than 15 percent as measured from the beginning to the end of the test.~~

14 ~~(4) Specific Oxygen Uptake Rate Test. The specific oxygen uptake rate (SOUR) for animal waste~~
15 ~~residuals treated in an aerobic process shall be equal to or less than 1.5 milligrams of oxygen per~~
16 ~~hour per gram of total solids (i.e., dry weight basis) corrected to a temperature of 20 degrees Celsius.~~

17 ~~(5) 14 Day Aerobic Processes. The animal waste residuals shall be treated in an aerobic process for 14~~
18 ~~days or longer. During that time the temperature of the animal waste residuals shall be higher than~~
19 ~~40 degrees Celsius, and the average temperature of the animal waste residuals shall be higher than~~
20 ~~45 degrees Celsius.~~

21 ~~(6) Alkaline Stabilization. The pH of the animal waste residuals shall be raised to 12 or higher by alkali~~
22 ~~addition and, without the addition of more alkali, shall remain at 12 or higher for two hours and then~~
23 ~~at 11.5 or higher for an additional 22 hours.~~

24 ~~(7) Drying of Stabilized Residuals. The animal waste residuals shall be dried to 75 percent total solids~~
25 ~~if the animal waste residuals contain no unstabilized solids from a primary wastewater treatment~~
26 ~~process. Mixing of the animal waste residuals with other materials shall not be used to meet this~~
27 ~~alternative.~~

28 ~~(8) Drying of Unstabilized Residuals. The animal waste residuals shall be dried to 90 percent total solids~~
29 ~~if the animal waste residuals contain unstabilized solids from a primary wastewater treatment~~
30 ~~process. Mixing of the animal waste residuals with other materials shall not be used to meet this~~
31 ~~alternative.~~

32 ~~(b)(e)~~ For animal waste residuals that are sold or given away in a bag or other container for application to the land,
33 either a label shall be affixed to the bag or other container or an information sheet shall be provided to the person who
34 receives the animal waste residuals. The label/information sheet shall contain the following information:

- 35 (1) The name and address of the person who prepared the animal waste residuals;
- 36 (2) A statement that land application of the animal waste residuals shall be prohibited except in
37 accordance with the instructions on the label/information sheet;

- 1 (3) A statement that animal waste residuals shall be applied at agronomic rates and recommended rates
- 2 for intended uses;
- 3 (4) A statement that the animal waste residuals shall not be applied to any site that is flooded, frozen,
- 4 or snow covered;
- 5 (5) A statement that adequate procedures shall be provided to prevent surface runoff from carrying any
- 6 disposed or stored animal waste residuals into any surface waters;
- 7 (6) A statement which identifies that this material shall be prevented from entering any public or private
- 8 water supply source (including wells), stream, lake, or river;
- 9 (7) Pollutant concentration for pollutants listed in Paragraph (c) of this Rule; and
- 10 (8) Nitrogen and phosphorous concentration.

11 ~~(f)~~ Monitoring and Reporting.

- 12 (1) Animal waste residuals applied shall be monitored for pollutants as listed in Paragraph ~~(b)~~(c) of this
- 13 Rule ~~as well as~~ and for pathogens as described in Paragraph (e)(d) of this Rule and Paragraph (f) of
- 14 ~~this Rule~~ as applicable at the frequency as stipulated in the following for each residuals source
- 15 facility:

	Metric Tons per 365 day period	Monitoring Frequency
	(Dry Weight Basis)	
	Greater than zero but less than 290	Once per year
	Equal to or greater than 290 but less than 1,500	Once per quarter (four times per year)
	Equal to or greater than 1,500 but less than 15,000	Once per 60 days (six times per year)
	Equal to or greater than 15,000	Once per month (12 times per year)

- 22 (2) A report of all monitoring and reporting requirements as specified in the permit shall be submitted
- 23 to the Division by the permittee annually on or before March 1st of each calendar year.
- 24 (3) All records shall be retained for a minimum of five years.

25
26 History Note: Authority G.S. 143-215.1; 143-215.3(a); 143-215.10A;
27 Eff. September 1, 2018.

1 15A NCAC 02T .1401 is readopted as published in 32:06 NCR 589 as follows:

2

3

SECTION .1400 – MANURE HAULER OPERATIONS

4

15A NCAC 02T .1401 SCOPE

6 The rules in this Section apply to all manure hauler operations.

7

8 *History Note: Authority G.S. 143-215.1; 143-215.3(a);*

9

Eff. September 1, ~~2006~~2006;

10

Readopted Eff. September 1, 2018.

1 15A NCAC 02T .1402 is readopted as published in 32:06 NCR 589 as follows:

2

3 **15A NCAC 02T .1402 DEFINITIONS**

4 As used in this Section:

5 "Manure Hauler" means any person who accepts or purchases animal waste and land applies the animal waste
6 on land not covered by the generator's permit.

7

8 *History Note: Authority G.S. 143-215.1; 143-215.3(a);*

9 *Eff. September 1, ~~2006~~2006;*

10 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .1403 is readopted with changes as published in 32:06 NCR 589 as follows:

2

3 **15A NCAC 02T .1403 PERMITTING BY REGULATION**

4 (a) The following systems are deemed permitted pursuant to Rule .0113 of this Subchapter provided the system meets
5 the criteria in Rule .0113 of this Subchapter and all criteria required for the specific system in this Rule:

6 (1) Manure Hauler that land apply a total of 100 tons or less of animal waste per calendar year if:

7 (A) animal waste is applied at no greater than agronomic rates; and

8 (B) a ~~setback~~ vegetated buffer (separation) of at least 25 feet is maintained from a perennial
9 stream or perennial waterbody during land application.

10 (2) Manure Hauler that land apply a total of more than 100 tons of animal waste per calendar year if:

11 (A) animal waste is applied at no greater than agronomic rates;

12 (B) animal waste is not stockpiled uncovered for greater than 15 days;

13 (C) animal waste is not stockpiled within 100 feet of a perennial stream or perennial waterbody;

14 (D) a ~~setback~~ vegetated buffer (separation) of at least 25 feet is maintained from a perennial
15 stream or perennial waterbody during land application;

16 (E) ~~the Manure Hauler registers with the Division by one year from the effective date of this~~
17 ~~Rule. Manure Hauler that begin operation following the effective date of this Rule~~ must
18 register with the Division prior to accepting or purchasing manure, manure;

19 (F) the Manure Hauler ~~submits an annual report, as specified in this Section, to the Division~~
20 ~~by March 1 of each year; and~~ keeps records of land application activity including the date,
21 location and amount of all animal waste received, and the date locations, application rate,
22 acreage, waste analysis, and receiving crops of all animal waste land application; and];
23 and

24 (G) the field on which animal waste is applied has had a representative Standard Soil Fertility
25 Analysis within the last three years from a Division certified laboratory pursuant to 15A
26 NCAC 02H .0800.

27 (b) The Director may determine that a system should not be deemed permitted in accordance with this Rule and Rule
28 .0113 of this Subchapter. This determination shall be made in accordance with Rule .0113(e) of this Subchapter.

29

30 *History Note: Authority G.S. 143-215.1; 143-215.3(a);*

31 *Eff. September 1, 2006-2006;*

32 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .1404 was proposed for readoption as a repeal as published in 32:06 NCR 589 but instead is readopted
2 with changes as follows:

3

4 **15A NCAC 02T .1404 ANNUAL REPORTS**

5 (a) Manure Haulers that land apply more than 100 tons but less than 750 tons of animal waste per calendar year shall
6 submit to the Division a report of the activities for the calendar year that includes the following:

- 7 (1) Name, mailing address, and phone number of the Manure Hauler;
- 8 (2) ~~Date, Dates~~ location, and amount of all animal waste received; and
- 9 (3) ~~Date, Dates~~ location, amount, and acreage of all animal waste land application.

10 (b) Manure Haulers that land apply 750 tons or more of animal waste per calendar year shall submit to the Division
11 a report of the activities for the calendar year that includes the following:

- 12 (1) Name, mailing address, and phone number of the Manure Hauler;
- 13 (2) Dates, locations, and amounts of animal waste received; and
- 14 (3) Dates, locations, application rate, acreage, waste analysis, and receiving crop of all animal waste
15 land applied.

16 (c) Annual reports shall be submitted by March 1 for the preceding calendar year, on Division supplied forms or
17 forms approved by the Division as providing the same information as required by the Division's forms.

18

19 *History Note: Authority G.S. 143-215.1; 143-215.3(a);*
20 *Eff. September 1, ~~2006~~2006;*
21 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .1601 is readopted as published in 32:06 NCR 590 as follows:

2

3

SECTION .1600 –GROUNDWATER REMEDIATION SYSTEMS

4

15A NCAC 02T .1601 SCOPE

6 The rules in this Section apply to all persons proposing to construct, modify, expand, or operate a groundwater

7 treatment system that extracts and treats contaminated groundwater and reintroduces the treated groundwater. These

8 include closed-loop groundwater remediation systems as defined in G.S. 143-215.1A. Such systems typically use

9 infiltration galleries or injection wells. This Section does not apply to in-situ groundwater remediation wells, as

10 defined by ~~15A NCAC 02C .0209(e)(3)(C)~~; 15A NCAC 02C .0225(a), unless such a system includes the withdrawal,

11 treatment, and reintroduction of the treated groundwater.

12

13 *History Note: Authority G.S. 143-214.2(b); 143-215.1; 143-215.1A;*

14 *Eff. September 1, ~~2006~~2006;*

15 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .1602 is readopted as published in 32:06 NCR 590 as follows:

2

3 **5A NCAC 02T .1602 DEFINITIONS**

4 The terms used for the purpose of this Section shall be defined as follows:

5 (1) "Closed-loop groundwater remediation system" is as defined in G.S. 143-215.1A.

6 (2) "Contaminant" is as defined in 15A NCAC 02L .0102.

7 (3) "Infiltration gallery" means a subsurface ground absorption system expressly designed for the
8 introduction of wastewater into the subsurface environment.

9 (4) "Injection well" is as defined in 15A NCAC 02C .0204.

10 (5) "Oversight agency" means the state or local agency with jurisdiction over the contamination
11 incident.

12 (6) "Receptor" is as defined in 15A NCAC 02L .0102.

13 (7) "Water table" is as defined in 15A NCAC 02L .0102.

14

15 *History Note: Authority G.S. 143-214.2(b); 143-215.1; 143-215.1A;*

16 *Eff. September 1, ~~2006~~2006;*

17 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .1604 is readopted as published in 32:06 NCR 590 as follows:

2

3 **15A NCAC 02T .1604 APPLICATION SUBMITTAL**

4 (a) Site Description and Incident Information shall be provided by the applicant to the Division including the
5 following:

6 (1) The applicant must identify the site by name, address, permit number, and incident number assigned
7 by the oversight agency (if applicable).

8 (2) The applicant must briefly describe the site, noting pertinent site information including:

9 (A) contaminant(s) of concern,

10 (B) source(s) and date(s) of the contaminant release,

11 (C) remedial actions to date,

12 (D) current land use, and

13 (E) potential receptors.

14 (b) Soils Evaluation. For systems with proposed discharge within seven feet of land surface and above the seasonal
15 high water table, a soil evaluation of the disposal site shall be provided to the Division by the applicant. If required
16 by G.S. 89F, a soil scientist shall submit this evaluation. This evaluation shall be presented in a report that includes
17 the following components:

18 [Note: The North Carolina Board for Licensing of Soil Scientists has determined, via letter dated December 1, 2005,
19 that preparation of soils reports pursuant to this Paragraph constitutes practicing soil science under G.S. 89F.]

20 (1) Field description of soil profile. Based on examinations of excavation pits or auger borings, the
21 following parameters shall be described by individual diagnostic horizons to a depth of seven feet
22 below land surface or to bedrock:

23 (A) thickness of the horizon;

24 (B) texture;

25 (C) color and other diagnostic features;

26 (D) structure;

27 (E) internal drainage;

28 (F) depth, thickness, and type of restrictive horizon(s);

29 (G) pH;

30 (H) cation exchange capacity; and

31 (I) presence or absence and depth of evidence of any seasonal high water table.

32 Applicants shall dig pits when necessary for evaluation of the soils at the site.

33 (2) Recommendations concerning annual and instantaneous loading rates of liquids, solids, other
34 wastewater constituents and amendments. Annual hydraulic loading rates shall be based on in-situ
35 measurement of saturated hydraulic conductivity in the most restrictive horizon.

36 (c) Hydrogeologic Evaluation. A hydrogeologic evaluation prepared by a Licensed Geologist, License Soil Scientist,
37 or Professional Engineer if required by Chapters 89E, 89F, or 89C respectively of the disposal site shall be provided

1 to the Division by the applicant. This evaluation shall be conducted to a depth that includes the depth of existing
2 contamination and the total depth of the injection well(s) or infiltration gallery(ies). This evaluation shall be based on
3 borings for which the numbers, locations, and depths are sufficient to define the components of the hydrogeologic
4 evaluation. In addition to borings, other techniques may be used to investigate the subsurface conditions at the site.
5 These techniques may include geophysical well logs, surface geophysical surveys, and tracer studies. This evaluation
6 shall be presented in a report that includes the following components:

7 [Note: The North Carolina Board for Licensing of Geologists, via letter dated April 6, 2006, North Carolina Board
8 for Licensing of Soil Scientists, via letter dated December 1, 2005, and North Carolina Board of Examiners for
9 Engineers and Surveyors, via letter dated December 1, 2005, have determined that preparation of hydrogeologic
10 description documents pursuant to this Paragraph constitutes practicing geology under G.S. 89E, soil science under
11 G.S. 89F, or engineering under G.S. 89C.]

- 12 (1) a description of the regional and local geology and hydrogeology;
- 13 (2) a description, based on field observations of the site, of the site topographic setting, streams, springs
14 and other groundwater discharge features, drainage features, existing and abandoned wells, rock
15 outcrops, and other features that may affect the movement of the contaminant plume and treated
16 wastewater;
- 17 (3) changes in lithology underlying the site;
- 18 (4) depth to bedrock and occurrence of any rock outcrops;
- 19 (5) the hydraulic conductivity, transmissivity, and storativity (specific yield if unconfined aquifer) of
20 the affected aquifer(s);
- 21 (6) depth to the seasonal high water table;
- 22 (7) a discussion of the relationship between the affected aquifers of the site to local and regional
23 geologic and hydrogeologic features; and
- 24 (8) a discussion of the groundwater flow regime of the site focusing on the relationship of the plume
25 and remediation system to groundwater receptors, groundwater discharge features, and groundwater
26 flow media.

27 (d) Demonstration of Hydraulic Control. Computer modeling or predictive calculations based on site-specific
28 conditions shall be provided to the Division by the applicant to demonstrate that operation of the system will not cause
29 or contribute to:

- 30 (1) the migration of contaminants into previously uncontaminated areas, and
- 31 (2) a violation of the groundwater standards at the compliance boundary.

32 (e) Maps and Cross-Sections. If required by G.S. 89C, a professional land surveyor shall provide location information
33 on boundaries and physical features not under the purview of other licensed professions. Site plans or maps shall be
34 provided to the Division by the applicant depicting the location, orientation and relationship of facility components
35 including:

1 [Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via letter dated
2 December 1, 2005, that locating boundaries and physical features, not under the purview of other licensed professions,
3 on maps pursuant to this Paragraph constitutes practicing surveying under G.S. 89C.]

- 4 (1) a scaled map of the site, with site-specific topographic contour intervals and showing all facility-
5 related structures and fences within the treatment, storage and disposal areas;
- 6 (2) locations of all test auger borings or inspection pits;
- 7 (3) the location of all wells (including usage and construction details if available), designated wellhead
8 protection areas, streams (ephemeral, intermittent, and perennial), springs, lakes, ponds, other
9 surface drainage features, and any other site activities or features that may involve possible exposure
10 to contamination within 500 feet of all waste treatment, storage, and disposal site(s);
- 11 (4) setbacks as required by Rule .1606 of this Section;
- 12 (5) delineation of the property boundary(ies), review boundary(ies), and compliance boundary(ies);
- 13 (6) the horizontal and vertical extent of the contaminant plume for each of the contaminants of concern,
14 including isoconcentration lines and plume cross-sections;
- 15 (7) cross-section(s) depicting soil and rock layers and features to a depth including the depth of existing
16 contamination and the total depth of the injection well(s) or infiltration gallery(ies); and
- 17 (8) hydrologic features such as potentiometric surface / water table contours and the direction of
18 groundwater flow.

19 (f) Engineering design documents. If required by G.S. 89C, a professional engineer shall prepare these documents.
20 The following documents shall be provided to the Division by the applicant:

21 [Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via letter dated
22 December 1, 2005, that preparation of engineering design documents pursuant to this Paragraph constitutes practicing
23 engineering under G.S. 89C.]

- 24 (1) engineering plans for the entire system, including treatment, storage, application, and disposal
25 facilities and equipment except those previously permitted unless they are directly tied into the new
26 units or are critical to the understanding of the complete process;
- 27 (2) specifications describing materials to be used, methods of construction, and means for ensuring
28 quality and integrity of the finished product; and
- 29 (3) plans that include construction details of recovery, injection, and monitoring wells and infiltration
30 galleries.

31 (g) Operating and Monitoring Plans. An operation and monitoring plan shall be provided to the Division by the
32 applicant. These documents shall be specific to the site and include:

- 33 (1) The operating plan shall include:
 - 34 (A) the operating schedule including any periodic shut-down times,
 - 35 (B) required maintenance activities for all structural and mechanical elements,
 - 36 (C) all consumable and waste materials with their intended source and disposal locations,
 - 37 (D) restrictions on access to the site and equipment, and

- 1 (E) compliance with Rule .1605(b) of this Section.
- 2 (2) The monitoring plan shall include:
- 3 (A) the monitoring well(s) that will be sampled,
- 4 (B) the constituent(s) for which those samples will be analyzed, and
- 5 (C) the schedule for sampling.
- 6

7 *History Note: Authority G.S. 143-214.2(b); 143-215.1; 143-215.1A;*
8 *Eff. September 1, ~~2006-2006~~;*
9 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .1605 is readopted as published in 32:06 NCR 590 as follows:

2

3 **15A NCAC 02T .1605 DESIGN CRITERIA**

4 (a) The infiltration gallery(ies) or injection well(s) must be designed such that the infiltration gallery(ies) or injection
5 well(s) shall not cause or contribute to:

6 (1) the migration of contaminants into previously uncontaminated areas;

7 (2) a violation of the groundwater standards at the compliance boundary (if discharge is within the
8 compliance boundary of the disposal facility); and

9 (3) a violation of the groundwater standards at the point of discharge (if discharge is not within the
10 compliance boundary of the disposal facility).

11 (b) There shall be provisions in the operating plan to ensure the quality of the treated effluent and hydraulic control
12 of the system at all times when any portion of the system ceases to function (e.g. standby power capability, complete
13 system-off status, or duplicity of system components).

14 (c) Design shall include a minimum elevation protection of two feet above the 100-year flood elevation.

15 (d) Flow equalization of at least 25 percent of the facility's permitted hydraulic capacity must be provided for facilities
16 with fluctuations in influent flow which may adversely affect the performance of the system.

17

18 *History Note: Authority G.S. 143-214.2(b); 143-215.1; 143-215.1A;*

19 *Eff. September 1, ~~2006~~2006;*

20 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .1606 is readopted as published in 32:06 NCR 590 as follows:

2

3 **15A NCAC 02T .1606 SETBACKS**

4 The location of the infiltration gallery or injection well(s) must meet the setback requirements specified below unless
5 it can be demonstrated that these requirements cannot be met, and that operation of the infiltration gallery(ies) or
6 injection well(s) at the proposed location(s) will not result in the migration of contaminants into previously
7 uncontaminated areas, and a contravention of groundwater standards beyond the compliance boundary. The following
8 setbacks (in feet) are applicable to these systems:

9

10	any well with the exception of an approved groundwater monitoring well	100
11	surface waters streams – intermittent and perennial, perennial waterbodies, and wetlands)	100
12	any property under separate ownership	50
13	structures – above-ground (e.g. buildings, retention walls)	10
14	structures – subsurface (e.g. utilities, basements, swimming pools)	15
15	any water line	10
16	rock outcrops	50
17	top of slope of embankments or cuts of two feet or more in vertical height	15
18	groundwater lowering ditches (where the bottom of the ditch intersects the SHWT)	100
19	surface water diversions (ephemeral streams, waterways, ditches)	25
20	subsurface groundwater lowering drainage systems	100

21

22 *History Note: Authority G.S. 143-214.2(b); 143-215.1; 143-215.1A;*

23 *Eff. September 1, ~~2006-2006~~;*

24 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .1607 is readopted as published in 32:06 NCR as follows:

2

3 **15A NCAC 02T .1607 MONITORING AND REPORTING REQUIREMENTS**

4 (a) A monitoring system plan shall be established to assess the impact of the discharge on groundwater quality. The
5 monitoring plan shall:

6 (1) be based on reaction rates, discharge rates, likelihood of secondary impacts, and site-specific
7 hydrogeologic information,

8 (2) track the performance of the permitted remediation system and verify that the intended remediation
9 processes are occurring, and

10 (3) include water level and flow meter measurements to ensure the system is operating properly.

11 (b) All sampling results shall be reported by the permittee to the Division on a frequency determined by the reaction
12 rates, discharge rates, likelihood of secondary impacts, and site-specific hydrogeologic information.

13 (c) A report of the summarized results of related groundwater, influent, and effluent monitoring shall be submitted
14 by the permittee to the Division annually.

15

16 *History Note: Authority G.S. 143-214.2(b); 143-215.1; 143-215.1A;*

17 *Eff. September 1, ~~2006~~2006;*

18 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02T .1608 is readopted as published in 32:06 NCR 590 as follows:

2

3 **15A NCAC 02T .1608 REQUIREMENTS FOR CLOSURE**

4 (a) 30 days prior to initiation of closure of a groundwater remediation system, the permittee shall submit the following
5 documentation to the Division:

- 6 (1) the reason(s) for closure,
- 7 (2) a letter from the oversight agency authorizing closure of the system, and
- 8 (3) a description of the proposed closure procedure.

9 (b) The following closure procedures shall be followed:

- 10 (1) injection well closure procedures as specified in 15A NCAC 02C .0214, and
- 11 (2) infiltration galleries shall be closed such that the infiltration gallery will be rendered permanently
12 unusable for the disposal or infiltration of fluids and will not serve as a source or channel of
13 contamination.

14 (c) Within 30 days following upon completion of the closure of a groundwater remediation system, the permittee
15 shall submit the following documentation to the Division:

- 16 (1) a description of the completed closure procedure;
- 17 (2) the dates of all actions taken relative to the procedure; and
- 18 (3) a written certification that the closure has been accomplished, and that the information submitted is
19 complete, factual and accurate.

20

21 *History Note: Authority G.S. 143-214.2(b); 143-215.1; 143-215.1A;*
22 *Eff. September 1, ~~2006~~2006;*
23 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02U .0101 is readopted with changes as published in 32:06 NCR 590 as follows:

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SUBCHAPTER 02U – RECLAIMED WATER

SECTION .0100 – GENERAL REQUIREMENTS

15A NCAC 02U .0101 PURPOSE

(a) The rules in this Subchapter shall apply to reclaimed water systems. This includes the generation and utilization of reclaimed water ~~tertiary treated wastewater effluent meeting the standards in Rule .0301 of this Subchapter,~~ used in a beneficial manner and for the purpose of conservation of the State's water resources by reducing the use of a potable water ~~water, surface water, and groundwater resource (potable water, surface water, groundwater).~~

(b) The disposal of treated wastewater effluent that does not serve in place of the use of a water resource is ~~covered~~ governed by Subchapter 02T of this Chapter. ~~Chapter 02 of Title 15A.~~

(c) Reclaimed water utilization systems permitted pursuant to this Subchapter ~~do~~ shall not exempt any discharge to waters of the State from meeting the permitting requirements established by the National Pollutant Discharge Elimination System (NPDES) permitting program pursuant to G.S. 143-215.1 and 15A NCAC 02H .0100.

~~(d)~~ (d) Any use of reclaimed water for Aquifer Storage and Recovery shall be in accordance with G.S. 143-214.2.

~~(e) Requirements for closed loop recycle systems are provided in Section .1000 of Subchapter 02T of this Chapter.~~

(e) The reuse or return of wastewater from a permitted animal waste facility for waste flushing is governed by 15A NCAC 02T .1300.

(f) The recycling of wastewater from groundwater remediation systems through an Injection Well or Infiltration Gallery is governed by 15A NCAC 02T .1600.

~~(g)~~ (g) The rules in this subchapter set forth the requirements and procedures for application and issuance of permits for the following reclaimed water systems:

- (1) treatment works; generation systems;
- (2) utilization systems;
- (3) distribution systems;
- ~~(3)~~(4) bulk distribution programs; and
- ~~(4)~~(5) local program approval.

*History Note: Authority G.S. 143-215.1; 143-215.1(f); 143-215.3(a)(1); 143-355.5;
Eff. June 18, 2011-2011;
Readopted Eff. September 1, 2018.*

1 15A NCAC 02U .0102 is readopted with changes as published in 32:06 NCR 590 as follows:

2

3 **15A NCAC 02U .0102 SCOPE**

4 The rules in this Subchapter shall apply to all persons proposing to construct, alter, extend, or operate any reclaimed
5 water treatment works generation, distribution or utilization system. The rules in this Section are general requirements
6 that apply to all program rules (~~found in individual sections~~) in this Subchapter.

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8 *History Note: Authority G.S. 143-215.1; 143-215.3(a)(1);*

9 *Eff. June 18, ~~2011~~, 2011;*

10 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02U .0103 is readopted as published in 32:06 NCR 590-591 as follows:

2

3 **15A NCAC 02U .0103 DEFINITIONS**

4 The terms used in this Subchapter shall have the meanings set forth ~~are defined~~ in G.S. 143-212 and 143-213, ~~and~~
5 ~~15A NCAC 02T .0103~~ 15A NCAC 02T .0103, in this Rule, and in program-specific rules in this Subchapter: ~~except~~
6 ~~as provided in this Rule as follows:~~

7 (1) "Beneficial manner" means the use of water as a necessary part of an activity or process ~~to which~~
8 that the water is being added.

9 (2) "Beneficial Reuse" means the utilization of reclaimed water in a beneficial manner and for the
10 purpose of conservation of the State's water resources by reducing the use of other potable water
11 water, surface water, and groundwater resources. ~~resources (potable water, surface water,~~
12 ~~groundwater).~~

13 (3) "Conjunctive system" means a system where the reclaimed water option is in addition to ~~not~~
14 ~~necessary to meet the wastewater disposal needs of the facility and where~~ other wastewater
15 utilization or disposal methods ~~(e.g., NPDES permit)~~ that are available to the facility at all times.
16 times, and reclaimed water utilization is not necessary to meet the wastewater disposal needs of the
17 facility.

18 (4) "Dedicated system" means a system where the reclaimed water utilization is necessary to meet the
19 wastewater disposal needs of the facility and where other wastewater utilization or disposal methods
20 to accommodate the entire wastewater flow generated at the facility are not available.

21 (5) "Closed-loop recycle facility" means a system in which non-domestic wastewater is repeatedly
22 recycled back through the process in which the waste was generated.

23 ~~(4)(6)~~ "Direct contact irrigation" means application methods that result in the direct contact of reclaimed
24 water on the portion of the crop intended for human consumption.

25 ~~(5)(7)~~ "Five-day side stream detention pond" means a basin capable of holding five days worth of treatment
26 plant effluent based on the (permitted flow capacity) permitted flow capacity in the event that the
27 reclaimed water does not meet the required quality standards for the approved use.

28 ~~(6)(8)~~ "Indirect contact irrigation" means application methods that ~~will~~ preclude direct contact of
29 reclaimed water on the portion of the crop intended for human consumption.

30 ~~(7)(9)~~ "Net environmental benefit" associated with wetlands augmentation sites is documented evidence
31 supporting continued maintenance of natural conditions, and the protection of endangered species
32 as required in Rule .0105(c)(10) of this Section. Wetland augmentation systems shall provide
33 documentation of the protection of existing wetland uses in accordance with 15A NCAC 02B
34 .0201(f) and ~~0231~~ .0231, and shall not result in net degradation of the wetland.

35 ~~(8)(10)~~ "Reclaimed Water" means treated wastewater ~~effluent,~~ effluent meeting effluent standards
36 established pursuant to Rule .0301 of this Subchapter, and used for beneficial reuse.

37

- 1 *History Note: Authority G.S. 143-213; 143-215.3(a)(1);*
- 2 *Eff. June 18, ~~2011~~, 2011;*
- 3 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02U .0104 is repealed through readoption as published 32:06 NCR 591 as follows:

2

3 **15A NCAC 02U .0104 ACTIVITIES WHICH REQUIRE A PERMIT**

4

5 *History Note: Authority G.S. 143-215.1; 143-215.3(a)(1);*

6 *Eff. June 18, ~~2011~~2011;*

7 *Repealed Eff. September 1, 2018.*

1 15A NCAC 02U .0105 is readopted as published in 32:06 NCR 591 as follows:

2

3 **15A NCAC 02U .0105 GENERAL REQUIREMENTS**

4 General requirements shall be in accordance with 15A NCAC 02T .0105.

5

6 *History Note: Authority G.S. 143-215.1; 143-215.3(a);*

7 *Eff. June 18, ~~2011~~2011;*

8 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02U .0106 is readopted as published in 32:06 NCR 591 as follows:

2

3 **15A NCAC 02U .0106 SUBMISSION OF PERMIT APPLICATIONS**

4 Submission of permit applications shall be in accordance with 15A NCAC 02T .0106.

5

6 *History Note: Authority G.S. 143-215.3(a)(1); 143-215.1;*

7 *Eff. June 18, ~~2011~~2011;*

8 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02U .0107 is readopted as published in 32:06 NCR 591 as follows:

2

3 **15A NCAC 02U .0107 STAFF REVIEW AND PERMIT PREPARATION**

4 Staff review and permit preparation shall be in accordance with 15A NCAC 02T .0107.

5

6 *History Note: Authority G.S. 143-215.1(b); 143-215.1(d); 143-215.3(a)(1); 143-215.3(a)(4);*

7 *Eff. June 18, ~~2011~~2011;*

8 *Readopted Eff. September 1, 2018*

1 15A NCAC 02U .0108 is readopted as published in 32:06 NCR 591 as follows:

2

3 **15A NCAC 02U .0108 FINAL ACTION ON PERMIT APPLICATIONS TO THE DIVISION**

4 Final action on permit applications to the Division shall be in accordance with 15A NCAC 02T .0108.

5

6 *History Note: Authority G.S. 143-215.1(a); 143-215.1(b); 143-215.1(d); 143-215.3(a)(1);*

7 *Eff. June 18, ~~2011~~2011;*

8 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02U .0109 is readopted with changes as published in 32:06 NCR 591 as follows:

2

3 **15A NCAC 02U .0109 PERMIT RENEWALS**

4 ~~Requests for permit renewals shall be submitted to the Director at least 180 days prior to expiration unless the permit~~
5 ~~has been revoked by the Director in accordance with Rule .0110 of this Section or a request has been made to~~
6 ~~rescind the permit. Renewal requests shall be made in accordance with Rule .0105 and Rule .0106 of this~~
7 ~~Section.~~Permit renewals shall be in accordance with 15A NCAC 02T .0109.

8

9 *History Note: Authority G.S. 143-215.3(a)(1);*

10 *Eff. June 18, ~~2011~~, 2011;*

11 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02U .0110 is readopted as published in 32:06 NCR 591 as follows:

2

3 **15A NCAC 02U .0110 MODIFICATION AND REVOCATION OF PERMITS**

4 Modification and revocation of permits shall be in accordance with 15A NCAC 02T .0110.

5

6 *History Note: Authority G.S. 143-215.1(b)(2.); 143-215.3(a)(1);*

7 *Eff. June 18, ~~2011~~2011;*

8 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02U .0111 is readopted as published in 32:06 NCR 591 as follows:

2

3 **15A NCAC 02U .0111 CONDITIONS FOR ISSUING GENERAL PERMITS**

4 Conditions for issuing general permits are established in 15A NCAC 02T .0111.

5

6 *History Note: Authority G.S. 143-215.1; 143-215.3(a)(1); 143-215.10C;*

7 *Eff. June 18, ~~2011~~2011;*

8 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02U .0112 is readopted as published in 32:06 NCR 591 as follows:

2

3 **15A NCAC 02U .0112 DELEGATION OF AUTHORITY**

4 Delegation of authority shall be in accordance with 15A NCAC 02T .0112.

5

6 *History Note: Authority G.S. 143-215.3(a)(1); 143-215.3(a)(4);*

7 *Eff. June 18, ~~2011~~2011;*

8 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02U .0113 is readopted with changes as published in 32:06 NCR 591-593 as follows:

2

3 **15A NCAC 02U .0113 PERMITTING BY REGULATION (SEE S.L. 2011-48)**

4 (a) The following utilizations of reclaimed water and closed-loop recycle activities ~~are~~ shall be deemed to be permitted
5 pursuant to ~~G.S. 143-215.1(b)~~ G.S. 143-215.1(b), and it is not necessary for the Division to issue individual permits or
6 coverage under a general permit for construction or operation of the following utilization systems provided the system
7 does not result in any violations of surface water or groundwater standards, there is no unpermitted direct discharge
8 to surface waters, and all criteria required for the specific system ~~is~~ are met:

9 (1) Discharges to the land surface from flushing and hydrostatic testing water associated with utility
10 distribution systems, new ~~sewer extensions~~ sewer extensions, or new reclaimed water distribution
11 lines;

12 (2) Overflow from elevated and covered or enclosed reclaimed water storage facilities ~~where~~ if no
13 viable alternative exists and all ~~possible~~ reasonable measures are taken to reduce the risk of
14 overflow;

15 (3) Any de minimus runoff from reclaimed water used during fire fighting or extinguishing, dust
16 control, soil compaction for construction purposes, street sweeping, overspray on yard inlets,
17 overspray on golf cart paths, or vehicle washing provided the use is approved in a permit issued by
18 the Division;

19 (4) Incidental discharge to a municipal separate storm sewer system (MS4) that occurs as a result of
20 reclaimed water utilization activities provided ~~the use~~ such activity is approved in a reclaimed water
21 utilization permit issued by the Division, and the discharge does not violate water quality standards.
22 This does not exempt the reclaimed water user from complying with any applicable local ordinances
23 that may prohibit such discharges;

24 (5) Rehabilitation, repair, or replacement of reclaimed water lines in kind (~~i.e., size~~) with the same
25 horizontal and vertical alignment;

26 (6) In accordance with 15A NCAC 02H .0106(f)(5), ~~flushing~~ flushing, (~~including air release valve~~
27 ~~discharge~~) including air release valve discharge, and hydrostatic testing water discharges associated
28 with reclaimed water distribution systems ~~provided that~~ if no water quality standards are violated;

29 (7) Utilization of reclaimed water received from a reclaimed water bulk distribution program permitted
30 under Rule .0601 of this Subchapter;

31 (8) Irrigation of residential lots or commercial (~~non-residential~~) application areas less than ~~one-acre~~ two
32 acres in size that are supplied with reclaimed water as part of a conjunctive ~~use~~ reclaimed water
33 system meeting the requirements of Rules .0301, .0401, .0403, .0501, and .0701 of this Subchapter;
34 Chapter 89G of the General Statutes; approved by the local building inspection department; and
35 installed by a North Carolina Licensed Irrigation Contractor pursuant to G.S. 89G. A scaled site
36 map showing the location of the reclaimed water irrigation system and all features necessary to show

- 1 compliance with applicable setbacks in Rule .0701 of this Subchapter shall be submitted to the
2 reclaimed water provider;
- 3 (9) Irrigation of agricultural ~~erops~~ crops, including irrigation of ornamental crops by field nurseries and
4 aboveground container nurseries, supplied with reclaimed water as part of a conjunctive ~~use~~
5 reclaimed water system meeting the requirements of this Subchapter and approved by the reclaimed
6 water provider;
- 7 (10) Drip irrigation sites supplied with reclaimed water as part of a conjunctive ~~use~~ reclaimed water
8 system generated from an onsite wastewater treatment facility meeting the criteria of this Subchapter
9 and ~~where~~ the conjunctive system has been approved by the Department of Health and Human
10 Services and is permitted under 18A .1900; ~~and~~
- 11 (11) Reuse of produced waters and flowback waters from oil and gas wells regulated by Article 27 of
12 G.S. 113 for reuse in accordance with water and waste management plans approved pursuant to
13 rules of the Mining and Energy Commission as set forth in ~~15A NCAC 05H.~~ 15A NCAC 05H;
- 14 (12) Toilet and urinal flushing systems supplied by reclaimed water as part of a conjunctive reclaimed
15 water system meeting the applicable requirements of Rules .0301, .0401, .0403, .0501, and .0701 of
16 this Subchapter; Chapter 89G of the General Statutes; approved by the local building inspection
17 department; and installed by a North Carolina Licensed Plumbing Contractor pursuant to G.S. 89;
- 18 (13) Return of wastewater within an industrial or commercial process where there is no anticipated
19 release of wastewater provided the facility develops and maintains a spill control plan in the event
20 of a release, no earthen basins are used, and the system is contained and under roof;
- 21 (14) Recycling of rinse water at concrete mixing facilities for concrete mix removal from equipment
22 provided the wastewater is contained within concrete structures, there is sufficient storage capacity
23 to contain the runoff from a 24-hour, 25-year storm event plus one foot freeboard and the facility
24 develops and maintains a spill control plan in the event of a wastewater release. The facility shall
25 notify the appropriate Division regional office in writing noting the owner, location, and that the
26 design complies with the above criteria;
- 27 (15) Recycling of wash and rinse water at vehicle wash facilities provided the wastewater is contained
28 within concrete, steel or synthetic structures, all vehicle washing is conducted under roof or there
29 are no direct or indirect precipitation inputs, and the facility develops and maintains a spill control
30 plan in the event of a wastewater release;
- 31 (16) The reuse or return of wastewater within the treatment works of a permitted wastewater treatment
32 system;
- 33 (17) Recycle systems that are part of a stormwater management systems permitted under 15A NCAC
34 02H .1000, and the wastewater is recycled back through the process in which the waste was
35 generated; and
- 36 (18) Recycling of rinse water for separating gems from gravel, sand, or rock in a flume at commercial
37 gem mine facilities with total system flow of less than 100,000 gpd, provided the wastewater is

1 contained within storage structures, no biological or chemical additives are used, and the facility
2 develops and maintains a spill control plan in the event of a wastewater release. The facility shall
3 notify the appropriate Division regional office in writing noting the owner, location, and that the
4 design complies with the required criteria.

5 (b) Nothing in this Rule shall be deemed to allow the violation of any ~~assigned~~ surface water, groundwater, or air
6 quality standards, and in addition any such violation is a violation of a condition of a permit.

7 (c) The reclaimed water user shall report any violation of this Rule or any discharge to surface waters from the
8 utilization systems listed in Paragraph (a) of this ~~Rule.~~ Rule to the Division and in accordance with 15A NCAC 02B
9 .0506.

10 (d) Utilization systems deemed permitted under this Subchapter shall remain deemed permitted, notwithstanding any
11 violations of surface water or groundwater standards or violations of this Rule or other Permitted By Regulation rules
12 in this Subchapter, until such time as the Director determines that they ~~should~~ shall not be deemed permitted in
13 accordance with the criteria established in this Rule.

14 (e) The Director may determine that a utilization system ~~should~~ shall not be deemed to be permitted in accordance
15 with this Rule and require the utilization system to obtain an individual permit or a certificate of coverage under a
16 general permit. This determination shall be made based on existing or projected environmental impacts, compliance
17 with the provisions of this Rule and the compliance history of the facility owner.

18
19 *History Note:* *Authority G.S. 130A-300; 143-215.1(a)(1); 143-215.1(b)(4)(e); 143-215.3(a),(d);*
20 *Eff. June 18, 2011 (See S.L. 2011-48);*
21 *Amended Eff. March 19, ~~2015~~2015;*
22 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02U .0114 is readopted as published in 32:06 NCR 593 as follows:

2

3 **15A NCAC 02U .0114 WASTEWATER DESIGN FLOW RATES**

4 Wastewater design flow rates shall be determined pursuant to 15A NCAC 02T .0114.

5

6 *History Note: Authority G.S. 143-215.1; 143-215.3(a)(1);*

7 *Eff. June 18, ~~2011~~2011;*

8 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02U .0115 is readopted as published in 32:06 NCR 593 as follows:

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3 **15A NCAC 02U .0115 OPERATIONAL AGREEMENTS**

4 Operational agreements shall be completed pursuant to 15A NCAC 02T .0115.

5

6 *History Note: Authority G.S. 143-215.1(d1);*

7 *Eff. June 18, ~~2011~~2011;*

8 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02U .0116 is readopted as published in 32:06 NCR 593 as follows:

2

3 **15A NCAC 02U .0116 CERTIFICATION OF COMPLETION**

4 Certification of completion shall be completed pursuant to 15A NCAC 02T .0116.

5

6 *History Note: Authority G.S. 143-215.1;*

7 *Eff. June 18, ~~2011~~2011;*

8 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02U .0117 is readopted as published in 32:06 NCR 593 as follows:

2

3 **15A NCAC 02U .0117 TREATMENT FACILITY OPERATION AND MAINTENANCE**

4 Treatment facility operation and maintenance shall be completed pursuant to 15A NCAC 02T .0117.

5

6 *History Note: Authority G.S. 143-215.3;*

7 *Eff. June 18, ~~2011~~2011;*

8 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02U .0118 is adopted as published in 32:06 NCR 593 as follows:

2

3 **15A NCAC 02U .0118 DEMONSTRATION OF FUTURE WASTEWATER TREATMENT CAPACITIES**

4 Demonstration of future wastewater treatment capacities shall be completed pursuant to 15A NCAC 02T .0118.

5

6 History Note: Authority G.S. 143-215.3;

7 Eff. September 1, 2018.

1 15A NCAC 02U .0120 is readopted as published in 32:06 NCR 593 as follows:

2

3 **15A NCAC 02U .0120 HISTORICAL CONSIDERATION IN PERMIT APPROVAL**

4 Historical consideration in permit approval shall be in accordance with 15A NCAC 02T .0120.

5

6 *History Note: Authority G.S. 143-215.1(b); 143-215.3(a);*

7 *Eff. June 18, ~~2011~~2011;*

8 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02U .0201 is readopted with changes as published in 32:06 NCR 593-594 as follows:

2

3

SECTION .0200 - APPLICATION REQUIREMENTS

4

15A NCAC 02U .0201 APPLICATION SUBMITTAL —~~CONJUNCTIVE SYSTEMS~~

6 (a) The requirements in this Rule shall apply to all new and expanding ~~conjunctive~~ reclaimed water and closed-loop
7 recycle facilities, as applicable, facilities.

8 (b) A soil evaluation of the utilization site where the reclaimed water is applied to the land surface or otherwise used
9 in a ground absorption manner shall be provided to the Division by the Applicant, ~~applicant~~. Evaluations shall include
10 recommended loading rates of liquids, solids, and other constituents. For systems that utilize reclaimed water through
11 irrigation, the evaluation shall also include recommended maximum irrigation precipitation rates. If required by G.S.
12 89F, a soil scientist shall prepare this evaluation.

13 [Note: The North Carolina Board for Licensing of Soil Scientists has determined, via letter dated December 1, 2005,
14 that preparation of soils reports pursuant to this Paragraph constitutes practicing soil science ~~under~~ pursuant to G.S.
15 89F.]

16 (c) Engineering design documents. If required by G.S. 89C, a professional engineer shall prepare engineering design
17 documents. The following documents shall be provided to the Division by the Applicant; ~~applicant~~:

18 (1) engineering plans for the entire system, including treatment, storage, application, and utilization
19 facilities and equipment except those previously permitted unless those previously permitted are
20 directly tied into the new units or are ~~critical~~ necessary to the understanding of the complete process;

21 (2) specifications describing materials to be used, methods of construction, and means for ensuring
22 quality and integrity of the finished ~~product~~ product, including leakage testing; ~~and~~

23 (3) engineering ~~calculations~~ calculations, including hydraulic and pollutant loading for each treatment
24 unit, treatment unit sizing criteria, hydraulic profile of the treatment system, total dynamic head and
25 system curve analysis for each pump, buoyancy calculations, and irrigation ~~design~~ design; and

26 (4) closed-loop facilities utilizing storage ponds shall provide a water balance calculation documenting
27 all inputs and losses.

28 [Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via letter dated December
29 1, 2005, that preparation of engineering design documents pursuant to this Paragraph constitutes practicing
30 engineering under G.S. 89C. In addition, the North Carolina Board of Examiners for Engineers and Surveyors has
31 determined that design of residential reclaimed irrigations systems owned by the property owner does not constitute
32 engineering ~~under~~ pursuant to G.S. 89C.]

33 (d) Site plans. If required by G.S. 89C, a professional land surveyor shall provide location information on boundaries
34 and physical features not under the purview of other licensed professions. The Applicant ~~applicant~~ shall provide site
35 plans or maps for treatment and storage facilities and where the reclaimed water is applied to the land surface or
36 otherwise used in a ground absorption manner, except where reclaimed water is utilized for irrigation to single-family
37 residential lots, showing the location, orientation and relationship of facility components including:

- 1 (1) a scaled map of the ~~site~~ site, with topographic contour intervals not exceeding 10 feet or 25 percent
2 of total site relief and showing all facility-related structures and fences within 500 feet of the
3 treatment, storage, and utilization ~~areas;~~ areas, soil mapping units shown on all utilizations sites;
- 4 (2) for land application sites and other ground absorption uses, the site map shall include topography;
5 ~~and~~
- 6 (3) to the extent needed to determine compliance with setbacks, the location of all features included in
7 Rule .0701 of this ~~Subchapter.~~ Subchapter; ~~[and]~~
- 8 (4) setbacks as required by Rule .0701 of this Subchapter and delineation of the review and compliance
9 [boundaries.]boundaries; and
- 10 (5) site property boundaries within 500 feet of all waste treatment, storage, and utilization sites.

11 [Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via letter dated
12 December 1, 2005, that locating boundaries and physical features, not under the purview of other licensed professions,
13 on maps pursuant to this Paragraph constitutes practicing surveying ~~under~~ pursuant to G.S. 89C.]

- 14 (e) The Applicant ~~applicant~~ shall provide property ownership documentation to the Division consisting of:
- 15 (1) legal documentation of ownership (e.g., contract, deed or article of incorporation);
 - 16 (2) ~~written notarized intent to purchase agreement~~ an agreement of an intent to purchase the property
17 that is written, notarized, and signed by both parties, accompanied by a plat or survey map;
 - 18 (3) an easement running with the land indicating the intended use of the property and meeting the
19 condition of 15A NCAC 02L .0107(f); or
 - 20 (4) ~~written notarized lease agreement~~ an agreement to lease the property that is written, notarized, and
21 signed by both parties, indicating the intended use of the property, as well as accompanied by a plat
22 or survey map. When this Subparagraph is utilized to document property ownership, groundwater
23 standards must be met across the entire site and a compliance boundary need not be provided. Lease
24 agreements shall adhere to the requirements of 15A NCAC 02L .0107.

25 (f) Public utilities shall submit a Certificate of Public Convenience and Necessity or a letter from the NC Utilities
26 Commission to the Division stating that it has received a franchise ~~application has been received.~~ application.

27 (g) For reclaimed or recycled water generated from industrial wastewater, the ~~The~~ Applicant ~~applicant~~ shall provide
28 a ~~complete~~ chemical analysis of the typical reclaimed water to be ~~utilized~~ utilized, and a listing of any toxic pollutant
29 that the Applicant currently uses or manufactures as an intermediate or final product or byproduct (the Director may
30 wave or modify this requirement for any Applicant if the Applicant demonstrates that it would be unduly burdensome
31 to identify each toxic pollutant and the Director has adequate information to issue the permit). ~~for industrial waste.~~
32 The Director may determine that subsequent toxicity testing is required based on the provided information. New
33 facilities may provide chemical analysis of the source water along with predictive calculations for chemical
34 characteristics prior to utilization. The analysis shall include:

- 35 (1) Total Organic Carbon;
- 36 (2) 5-day Biochemical Oxygen Demand (BOD5);
- 37 (3) Chemical Oxygen Demand (COD);

- 1 (4) Nitrate Nitrogen (NO₃-N);
- 2 (5) Ammonia Nitrogen (NH₃-N);
- 3 (6) Total Kjeldahl Nitrogen (TKN);
- 4 (7) pH;
- 5 (8) Chloride;
- 6 (9) Total Phosphorus;
- 7 (10) Phenol;
- 8 (11) Total Volatile Organic Compounds;
- 9 (12) Escherichia coli (E.coli) or Fecal Coliform;
- 10 (13) Coliphage (Type 2 reclaimed water only);
- 11 (14) Clostridium perfringens (Type 2 reclaimed water only);
- 12 (15) Calcium;
- 13 (16) Sodium;
- 14 (17) Magnesium;
- 15 (18) Sodium Adsorption Ratio (SAR);
- 16 (19) Total Trihalomethanes; and
- 17 ~~(20) Toxicity Test Parameters; and~~
- 18 ~~(21)~~(20) Total Dissolved Solids.

19 (h) For irrigation sites, the Applicant ~~applicant~~ shall provide to the Division a project evaluation and a receiver site
20 agronomic management plan and recommendations concerning cover crops and their ability to accept the proposed
21 application rates of liquid, solids, minerals and other constituents of the wastewater.

22

23 *History Note: Authority G.S. 143-215.1; 143-215.3(a);*
24 *Eff. June 18, ~~2011~~2011;*
25 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02U .0202 is readopted as published in 32:06 NCR 594-596 as follows:

2

3 **15A NCAC 02U .0202 APPLICATION SUBMITTAL FOR ~~NON-CONJUNCTIVE~~ DEDICATED**
4 **RECLAIMED WATER SYSTEMS**

5 (a) In addition to the Application Submittal Requirements established Rule .0201 of this Section, the ~~The~~ requirements
6 in this Rule shall apply to all new and expanding ~~non-conjunctive~~ dedicated reclaimed water facilities, as applicable.
7 facilities.

8 (b) Soils Report-report. A soil evaluation of the utilization site shall be provided to the Division by the Applicant.
9 ~~applicant.~~ If required by G.S. 89F, a soil scientist shall prepare this evaluation. This evaluation shall be presented in
10 a report that includes the following:

11 (1) A field ~~Field~~ description of the soil profile, based on examinations of excavation pits and auger
12 borings, within seven feet of land surface or to bedrock describing the following parameters by
13 individual diagnostic horizons:

14 (A) the thickness of the horizon;

15 (B) the texture;

16 (C) the color and other diagnostic features;

17 (D) the structure;

18 (E) the internal drainage;

19 (F) the depth, thickness, and type of restrictive ~~horizon(s); horizons;~~ and

20 (G) presence or absence and depth of evidence of any seasonal high water ~~table (SHWT); table;~~
21 Applicants shall dig pits when necessary for proper evaluation of the soils at the site;

22 (2) Recommendations concerning loading rates of liquids, solids, other wastewater constituents and
23 ~~amendments; amendments.~~ Annual ~~annual~~ hydraulic loading rates shall be based on in-situ
24 measurement of saturated hydraulic conductivity in the most restrictive horizon for each soil
25 mapping ~~unit; unit.~~ Maximum ~~maximum~~ irrigation precipitation rates shall be provided for each soil
26 mapping unit;

27 (3) A field-delineated soil map delineating soil mapping units within each land application site and
28 showing all physical features, location of pits and auger borings, legends, scale, and a north ~~arrow;~~
29 arrow. The legends shall also include dominant soil series name and family or higher taxonomic
30 class for each soil mapping unit; and

31 (4) A ~~representative soils analysis (i.e., Standard Soil Fertility Analysis)~~ Standard Soil Fertility Analysis
32 conducted on each land application site. The Standard Soil Fertility Analysis shall include the
33 following parameters:

34 (A) Acidity; ~~acidity;~~

35 (B) Base Saturation (by calculation); ~~base saturation (by calculation);~~

36 (C) Calcium; ~~calcium;~~

37 (D) Cation Exchange Capacity; ~~cation exchange capacity;~~

- 1 (E) Copper; ~~eopper~~;
- 2 (F) Exchangeable Sodium Percentage (by calculation); ~~exchangeable sodium percentage (by~~
3 ~~calculation)~~;
- 4 (G) Magnesium; ~~magnesium~~;
- 5 (H) Manganese; ~~manganese~~;
- 6 (I) Percent Humic Matter; ~~percent humic matter~~;
- 7 (J) pH; ~~pH~~;
- 8 (K) Phosphorus; ~~phosphorus~~;
- 9 (L) Potassium; ~~potassium~~;
- 10 (M) Sodium; ~~sodium~~; and
- 11 (N) Zinc; ~~zinc~~.

12 [Note: The North Carolina Board for Licensing of Soil Scientists has determined, via letter dated December 1, 2005,
13 that preparation of soils reports pursuant to this Paragraph constitutes practicing soil science ~~under~~ pursuant to G.S.
14 89F.]

15 ~~(e) Engineering design documents. If required by G.S. 89C, a professional engineer shall prepare these documents.~~
16 ~~The applicant shall provide the following documents to the Division:~~

- 17 ~~(1) — engineering plans for the entire system, including treatment, storage, application, and utilization~~
18 ~~facilities and equipment except those previously permitted unless those previously permitted are~~
19 ~~directly tied into the new units or are critical to the understanding of the complete process;~~
- 20 ~~(2) — specifications describing materials to be used, methods of construction, and means for ensuring~~
21 ~~quality and integrity of the finished product including leakage testing; and~~
- 22 ~~(3) — engineering calculations including hydraulic and pollutant loading for each treatment unit, treatment~~
23 ~~unit sizing criteria, hydraulic profile of the treatment system, total dynamic head and system curve~~
24 ~~analysis for each pump, buoyancy calculations, and irrigation design.~~

25 ~~[Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via letter dated~~
26 ~~December 1, 2005, that preparation of engineering design documents pursuant to this Paragraph constitutes practicing~~
27 ~~engineering under G.S. 89C. In addition, the North Carolina Board of Examiners for Engineers and Surveyors has~~
28 ~~determined that design of residential reclaimed irrigations systems owned by the property owner does not constitute~~
29 ~~engineering under G.S. 89C.]~~

30 ~~(d) Site plans. If required by G.S. 89C, a professional land surveyor shall provide location information on boundaries~~
31 ~~and physical features not under the purview of other licensed professions. The applicant shall provide site plans or~~
32 ~~maps to the Division where the reclaimed water is applied to the land surface or otherwise used in a ground absorption~~
33 ~~manner depicting the location, orientation and relationship of facility components including:~~

- 34 ~~(1) — a scaled map of the site, with topographic contour intervals not exceeding 10 feet or 25 percent of~~
35 ~~total site relief and showing all facility related structures and fences within the treatment, storage~~
36 ~~and utilization areas, soil mapping units shown on all utilization sites;~~

- 1 ~~(2) the location of all wells (including usage and construction details if available), streams (ephemeral,~~
2 ~~intermittent, and perennial), springs, lakes, ponds, and other surface drainage features within 500~~
3 ~~feet of all waste treatment, storage, and utilization site(s) and delineation of the review and~~
4 ~~compliance boundaries;~~
- 5 ~~(3) setbacks as required by Rule .0701 of this Subchapter; and~~
- 6 ~~(4) site property boundaries within 500 feet of all waste treatment, storage, and utilization site(s).~~

7 ~~[Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via letter dated~~
8 ~~December 1, 2005, that locating boundaries and physical features, not under the purview of other licensed professions,~~
9 ~~on maps pursuant to this Paragraph constitutes practicing surveying under G.S. 89C.]~~

10 ~~(e)(c) Hydrogeologic report.~~ A hydrogeologic description of the subsurface, prepared by a Licensed Geologist,
11 Licensed Soil Scientist, or Professional Engineer if required by Chapters 89E, 89F, or ~~89C~~89C, respectively
12 respectively, of the subsurface to a depth of 20 feet or bedrock, whichever is less, shall be provided to the Division by
13 the Applicant ~~applicant~~ for systems treating industrial waste and any system reclaimed water land application sites
14 with a design flow of over 25,000 gallons per day. Industrial facilities generating less than 25,000 gallons per day of
15 wastewater, and can demonstrate that the effluent will be of quality similar to domestic wastewater, including effluent
16 requirements established in 15A NCAC 02U .0301(b), shall, upon request, be exempted from this requirement. A
17 ~~greater depth of investigation is required if the respective depth is used in predictive calculations. This evaluation shall~~
18 ~~be based on borings for which the numbers, locations, and depths are sufficient to define the components of the~~
19 ~~hydrogeologic evaluation. In addition to borings, other techniques may be used to investigate the subsurface~~
20 ~~conditions at the site. These techniques may include geophysical well logs, surface geophysical surveys, and tracer~~
21 ~~studies.~~ This evaluation shall be presented in a report that includes a mounding analysis to predict the level of the
22 seasonal high water table after reclaimed water application, if the seasonal high water table is within six feet of the
23 surface. The report shall also consider that includes the following components:

- 24 (1) ~~a description of the regional and local geology and hydrogeology based on research of literature for~~
25 ~~the area;~~
- 26 (2) ~~a description, based on field observations of the site, of the site topographic setting, streams, springs~~
27 ~~and other groundwater discharge features, drainage features, existing and abandoned wells, rock~~
28 ~~outcrops, and other features that may affect the movement of the reclaimed water; contaminant~~
29 ~~plume and treated wastewater;~~
- 30 (3) changes in the lithology underlying the site;
- 31 (4) the depth to bedrock and the occurrence of any rock outcrops;
- 32 (5) the hydraulic conductivity and transmissivity of the affected ~~aquifer(s);~~ aquifer;
- 33 (6) the depth to the seasonal high water table;
- 34 (7) ~~a discussion of the relationship between the affected aquifers of the site to local and regional~~
35 ~~geologic and hydrogeologic features; and~~

1 (8) ~~a discussion of the~~ groundwater flow regime of the site prior to the operation of the proposed facility
2 and the post operation of the proposed facility focusing on the relationship of the system to
3 groundwater receptors, groundwater discharge features, and groundwater flow ~~media; and media.~~

4 ~~(9) if the SHWT is within six feet of the surface, a mounding analysis to predict the level of the SHWT~~
5 ~~after wastewater reclaimed water application.~~

6 [Note: The North Carolina Board for Licensing of Geologists, via letter dated April 6, 2006, North Carolina Board
7 for Licensing of Soil Scientists, via letter dated December 1, 2005, and North Carolina Board of Examiners for
8 Engineers and Surveyors, via letter dated December 1, 2005, have determined that preparation of hydrogeologic
9 description documents pursuant to this Paragraph constitutes practicing geology ~~under~~ pursuant to G.S. 89E, soil
10 science ~~under~~ pursuant to G.S. 89F, or engineering ~~under~~ pursuant to G.S. 89C.]

11 ~~(f) The applicant shall provide property ownership documentation to the Division consisting of:~~

12 ~~(1) legal documentation of ownership (i.e., contract, deed or article of incorporation);~~

13 ~~(2) written notarized intent to purchase agreement signed by both parties, accompanied by a plat or~~
14 ~~survey map;~~

15 ~~(3) an easement running with the land specifically indicating the intended use of the property and~~
16 ~~meeting the condition of 15A NCAC 02L .0107(f); or~~

17 ~~(4) written notarized lease agreement signed by both parties, indicating the intended use of the property,~~
18 ~~as well as a plat or survey map. Groundwater standards shall be met across the entire site, and a~~
19 ~~compliance boundary shall not be provided.~~

20 ~~(g) Public utilities shall submit a Certificate of Public Convenience and Necessity or a letter from the NC Utilities~~
21 ~~Commission stating that a franchise application has been received.~~

22 ~~(h) The applicant shall provide to the Division a complete chemical analysis of the typical reclaimed water to be~~
23 ~~utilized for industrial waste. The analysis shall include:~~

24 ~~(1) Total Organic Carbon;~~

25 ~~(2) 5 day Biochemical Oxygen Demand (BOD5);~~

26 ~~(3) Chemical Oxygen Demand (COD);~~

27 ~~(4) Nitrate Nitrogen (NO₃ N);~~

28 ~~(5) Ammonia Nitrogen (NH₃ N);~~

29 ~~(6) Total Kjeldahl Nitrogen (TKN);~~

30 ~~(7) pH;~~

31 ~~(8) Chloride;~~

32 ~~(9) Total Phosphorus;~~

33 ~~(10) Phenol;~~

34 ~~(11) Total Volatile Organic Compounds;~~

35 ~~(12) Escherichia coli (E. coli) or Fecal Coliform;~~

36 ~~(13) Coliphage (Type 2 reclaimed water only);~~

37 ~~(14) Clostridium perfringens (Type 2 reclaimed water only);~~

- 1 ~~(15) — Calcium;~~
- 2 ~~(16) — Sodium;~~
- 3 ~~(17) — Magnesium;~~
- 4 ~~(18) — Sodium Adsorption Ratio (SAR);~~
- 5 ~~(19) — Total Trihalomethanes;~~
- 6 ~~(20) — Toxicity Test Parameters; and~~
- 7 ~~(21) — Total Dissolved Solids.~~

8 ~~(i) For irrigation sites, the applicant shall provide to the Division a project evaluation and a receiver site agronomic~~
9 ~~management plan and recommendations concerning cover crops and their ability to accept the proposed application~~
10 ~~rates of liquid, solids, minerals and other constituents of the wastewater.~~

11 ~~(j)(d) The Applicant applicant shall provide to the Division a residuals management plan as required by Rule .0802~~
12 ~~Rule .0802(a) of this Subchapter. A written commitment is not required at the time of application; however, it shall~~
13 ~~be provided prior to operation of the permitted system.~~

14 (e) The Applicant shall provide to the Division a water balance that determines the required effluent storage based on
15 the following most limiting factor:

- 16 (1) hydraulic loading based on the most restrictive horizon;
- 17 (2) hydraulic loading based on the groundwater mounding analysis;
- 18 (3) nutrient management based on agronomic rates for the specified cover crop; or
- 19 (4) nutrient management based on crop management.

20 ~~(k) The shall provide a water balance to the Division that determines required storage based upon the most limiting~~
21 ~~factor of the hydraulic loading based on either the most restrictive horizon or groundwater mounding analysis; or~~
22 ~~nutrient management based on either agronomic rates for a specified cover crop or crop management requirements.~~

23

24 *History Note: Authority G.S. 143-215.1; 143-215.3(a);*
25 *Eff. June 18, 2011-2011;*
26 *Readopted Eff. September 1, 2018.*

3 **SECTION .0300 - EFFLUENT STANDARDS**

4
5 **15A NCAC 02U .0301 RECLAIMED WATER EFFLUENT STANDARDS**

6 (a) Reclaimed water treatment processes classified as Type 2 by the rules in this Subchapter shall produce an effluent quality a
7 tertiary quality effluent (filtered or equivalent) prior to storage, distribution, or utilization that meets the parameter limits listed below:

- 8 (1) monthly average BOD₅ of less than or equal to 5 ~~mg/l~~ mg/L and a daily maximum BOD₅ of less than or equal to 10
9 ~~mg/l~~ mg/L;
- 10 (2) monthly average TSS of less than or equal to 5 ~~mg/l~~ mg/L and a daily maximum TSS of less than or equal to 10
11 ~~mg/l~~ mg/L;
- 12 (3) monthly average ~~NH₃~~ NH₃-N of less than or equal to 1 ~~mg/l~~ mg/L and a daily maximum ~~NH₃~~ NH₃-N of less than or
13 equal to 2 ~~mg/l~~ mg/L;
- 14 (4) monthly geometric mean Escherichia coli (E. coli) or fecal coliform level of less than or equal to 3/100 ~~ml~~ mL and a
15 daily maximum E. coli or fecal coliform level of less than or equal to 25/100 ~~ml~~ mL;
- 16 (5) monthly geometric mean Coliphage level of less than or equal to 5/100 ~~ml~~ mL and a daily maximum Coliphage
17 level of less than or equal to 25/100 ~~ml~~ mL;
- 18 (6) monthly geometric mean Clostridium perfringens level of less than or equal to 5/100 ~~ml~~ mL and a daily maximum
19 Clostridium perfringens level of less than or equal to 25/100 ~~ml~~ mL; and
- 20 (7) maximum Turbidity of 5 Nephelometric Turbidity Units (NTUs).

21 (b) Reclaimed water treatment processes classified as Type 1 by the rules in this Subchapter shall produce an effluent quality a
22 tertiary quality effluent (filtered or equivalent) prior to storage, distribution, or utilization that meets the parameter limits listed below:

- 23 (1) monthly average BOD₅ of less than or equal to 10 ~~mg/l~~ mg/L and a daily maximum BOD₅ of less than or equal to 15
24 ~~mg/l~~ mg/L;
- 25 (2) monthly average TSS of less than or equal to 5 ~~mg/l~~ mg/L and a daily maximum TSS of less than or equal to 10
26 ~~mg/l~~ mg/L;
- 27 (3) monthly average ~~NH₃~~ NH₃-N of less than or equal to 4 ~~mg/l~~ mg/L and a daily maximum ~~NH₃~~ NH₃-N of less than or
28 equal to 6 ~~mg/l~~ mg/L;
- 29 (4) monthly geometric mean E. coli or fecal coliform level of less than or equal to 14/100 ~~ml~~ mL and a daily maximum
30 E. coli or fecal coliform level of less than or equal to 25/100 ~~ml~~ mL; and
- 31 (5) maximum Turbidity of 10 NTUs.

32 (c) Reclaimed water produced by industrial facilities are not required to meet the criteria in this Rule if the reclaimed water is used at
33 the facility in an industrial process and the area of use has no public access and does not result in employee exposure.

34
35 *History Note: Authority G.S. 143-215.1; 143-215.3(a.);*
36 *Eff. June 18, 2011-2011;*
37 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02U .0401 is readopted as published in 32:06 NCR 597 as follows:

2

3

SECTION .0400 - DESIGN STANDARDS

4

5 **15A NCAC 02U .0401 DESIGN CRITERIA FOR RECLAIMED WASTEWATER WATER TREATMENT**
6 **FACILITIES CONJUNCTIVE SYSTEMS**

7 (a) The requirements in this Rule shall apply to all new and expanding ~~conjunctive reclaimed water treatment~~
8 ~~facilities, as applicable.~~ facilities.

9 (b) Continuous on-line monitoring and recording for turbidity or particle count and flow shall be provided prior to
10 storage, distribution or utilization.

11 (c) Effluent from the treatment facility shall not be discharged to the storage, distribution or utilization system if either
12 the turbidity exceeds 10 NTUs or if the permitted pathogen levels cannot be met. The facility shall have the ability to
13 ~~utilize~~ use alternate wastewater management options when the effluent quality is not sufficient.

14 (d) An automatically activated standby power source or other means to prevent improperly treated wastewater from
15 entering the storage, distribution or utilization system shall be provided.

16 (e) The permit shall require an operator certified by the Water Pollution Control System Operators Certification
17 Commission (WPCSOCC) of a grade equivalent or greater than the facility classification to be on call 24 hours per
18 day.

19 (f) No storage facilities are required ~~as long as~~ if it can be demonstrated that other permitted means of disposal are
20 available if 100 percent of the reclaimed water cannot be ~~utilized.~~ used. When provided, storage basins shall meet the
21 design requirements in Rule .0402 ~~(e)~~(f) of this Section.

22 (g) Reclaimed water irrigation system design shall not exceed the recommended precipitation rates in the soils report
23 prepared pursuant to ~~Rule .0204~~ Section .0200 of this Subchapter. ~~Single-family~~ Single-family residential irrigation
24 systems and commercial ~~(non-residential)~~ irrigation systems ~~less than one acre in size that are~~ permitted by regulation
25 under Rule .0113(8) of this Subchapter do not require preparation of a soils report.

26 (h) All open-atmosphere treatment lagoons and ponds, and open-atmosphere storage units shall have at least two feet
27 of freeboard.

28 ~~(h)~~(i) Type 2 reclaimed water treatment facilities shall provide dual disinfection systems containing UV disinfection
29 and chlorination or equivalent dual disinfection processes to meet pathogen control requirements.

30 ~~(i)~~(j) Type 2 reclaimed water treatment facilities shall provide documentation that the combined treatment and
31 disinfection processes are capable of the following:

- 32 (1) log 6 or greater reduction of E. coli;
33 (2) log 5 or greater reduction of Coliphage; and
34 (3) log 4 or greater reduction of Clostridium perfringens.

35 (k) Automatically activated irrigation systems shall be connected to a rain or moisture sensor to prevent irrigation
36 during precipitation events, or wet conditions that would cause runoff.

37

- 1 *History Note: Authority G.S. 143-215.1; 143-215.3(a);*
- 2 *Eff. June 18, ~~2011~~, 2011;*
- 3 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02U .0402 is readopted with changes as published in 32:06 NCR 598 as follows:

2

3 **15A NCAC 02U .0402 DESIGN CRITERIA FOR DEDICATED RECLAIMED WATER TREATMENT**
4 **FACILITIES**

5 (a) In addition to the Design Criteria established in Rule .0401 of this Section, The the requirements in this Rule shall
6 apply to all new and expanding ~~non-conjunctive~~ dedicated reclaimed water facilities, as applicable, unless specified
7 otherwise.

8 (b) Each facility, except for those using septic tanks or lagoon treatment, shall provide flow equalization with either
9 a capacity based upon a representative diurnal hydrograph or a capacity of 25 percent of the daily system design flow.
10 ~~Aerated flow equalization facilities shall be provided with a capacity based upon either a representative diurnal~~
11 ~~hydrograph or at least 25 percent of the daily system design flow.~~

12 (c) Dual facilities shall be provided for all essential treatment units.

13 ~~(d) Continuous on line monitoring and recording for turbidity or particle count and flow shall be provided prior to~~
14 ~~storage, distribution, or utilization.~~

15 ~~(e)~~(d) Effluent from the treatment facility shall be discharged to a five-day side-stream detention ~~pond~~ unit if either
16 the turbidity exceeds 10 NTUs or if the permitted pathogen levels cannot be met. The facility shall have the ability to
17 return the effluent in the five-day side-stream detention ~~pond~~ unit back to the head of the treatment facility.

18 ~~(f)~~(e) There shall be no The public shall be prohibited access to the wastewater treatment facility or the five-day side-
19 stream detention ~~pond.~~ unit. ~~The five day side stream detention pond shall have either a liner of natural material at~~
20 ~~least one foot in thickness and having a hydraulic conductivity of no greater than 1×10^{-6} centimeters per second when~~
21 ~~compacted, or a synthetic liner of sufficient thickness to exhibit structural integrity and an effective hydraulic~~
22 ~~conductivity no greater than that required of the natural material liner. Liner requirements of the five day side stream~~
23 ~~detention pond or separation distances between the bottom of the five day side stream detention pond and the~~
24 ~~groundwater table may be reduced if it can be demonstrated by predictive calculations or modeling methods that~~
25 ~~satisfy the Director, that construction and use of the five day side stream detention pond will not result in~~
26 ~~contravention of assigned groundwater standards at the compliance boundary.~~

27 ~~(g)~~(f) The storage ~~basin~~ and five-day side-stream detention units shall have either a liner of natural material at least
28 one foot in thickness and having a hydraulic conductivity of no greater than 1×10^{-6} centimeters per second when
29 compacted, or a synthetic liner of sufficient thickness to exhibit structural integrity and an effective hydraulic
30 conductivity no greater than that required of the natural material liner. Liner requirements of the ~~storage basin~~ unit or
31 separation distances between the bottom of storage basin and the groundwater table may be reduced if it can be
32 demonstrated by predictive calculations or modeling methods that satisfy the Director, that construction and use of
33 the ~~storage basin~~ unit will not result in contravention of assigned groundwater standards at the compliance boundary.

34 ~~(h) Automatically activated standby power supply onsite, capable of powering all essential treatment units under~~
35 ~~design conditions shall be provided.~~

1 ~~(i) The permit shall require an operator certified by the Water Pollution Control System Operators Certification~~
2 ~~Commission (WPCSOCC) of a grade equivalent or greater than the facility classification to be on call 24 hours per~~
3 ~~day.~~

4 ~~(j)(g) By-pass and overflow lines are shall be prohibited.~~

5 ~~(k)(h) Multiple pumps shall be provided if wherever pumps are used.~~

6 ~~(l)(i) A water-tight seal on all treatment/storage treatment and storage units or minimum of two feet of protection~~
7 ~~from the 100-year flood elevation shall be provided.~~

8 ~~(m) Reclaimed water irrigation system design shall not exceed the recommended precipitation rates in the soils report~~
9 ~~prepared pursuant to Rule .0202 of this Subchapter.~~

10 ~~(n)(j) A minimum of 30 days of residual storage shall be provided.~~

11 ~~(o)(k) Utilization areas shall be designed to maintain a one-foot vertical separation between the seasonal high water~~
12 ~~table and the ground surface.~~

13 ~~(p)(l) Influent pump stations shall meet the sewer minimum design criteria as provided set forth in 15A NCAC 02T~~
14 ~~.0300.~~

15 ~~(q) Type 2 reclaimed water treatment facilities shall provide dual disinfection systems containing UV disinfection or~~
16 ~~equivalent and chlorination or equivalent to provide pathogen control.~~

17 ~~(r) Type 2 reclaimed water treatment facilities shall provide documentation that the combined treatment and~~
18 ~~disinfection processes are capable of the following:~~

19 (1) log 6 or greater reduction of E. coli;

20 (2) log 5 or greater reduction of Coliphage; and

21 (3) log 4 or greater reduction of Clostridium perfringens.

22 ~~(m) Domestic, commercial, or industrial dedicated reclaimed water systems, including single-family residence~~
23 ~~facilities, with flow less than 1,000 gallons per day (gpd), are exempt from meeting Paragraphs (c) and (h) of this~~
24 ~~Rule, if repair or replacement of essential treatment units can be completed within five days.~~

25 ~~(n) Facilities shall be provided with a flow meter to measure the volume of treated reclaimed water applied to each~~
26 ~~field.~~

27

28 *History Note: Authority G.S. 143-215.1; 143-215.3(a);*

29 *Eff. June 18, 2011-2011;*

30 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02U .0403 is readopted with changes as published in 32:06 NCR 598-599 as follows:

2

3 **15A NCAC 02U .0403 DESIGN CRITERIA FOR DISTRIBUTION LINES (~~SEE S.L. 2011-218~~)**

4 (a) The requirements in this Rule shall apply to all new distribution lines.

5 (b) All reclaimed water valves, storage ~~facilities~~ facilities, and outlets shall be tagged or labeled to warn the public or
6 employees that the water is not intended for drinking.

7 (c) All reclaimed water piping, valves, ~~outlets~~ outlets, and other appurtenances shall be color-coded, taped, or
8 otherwise marked to identify the source of the water as being reclaimed water as follows:

9 (1) All reclaimed water piping and appurtenances shall be either colored purple (Pantone 522 or
10 equivalent) and embossed or integrally stamped or marked "CAUTION: RECLAIMED WATER -
11 DO NOT DRINK" or be installed with a purple (Pantone 522 or equivalent) identification tape or
12 polyethylene vinyl wrap. The warning shall be stamped on opposite sides of the pipe and repeated
13 every three feet or less;

14 (2) Identification tape shall be at least three inches wide and have white or black lettering on purple
15 (Pantone 522 or equivalent) field stating "CAUTION: RECLAIMED WATER - DO NOT DRINK".
16 Identification tape shall be installed on top of reclaimed water pipelines, fastened at least every 10
17 feet to each pipe length and run continuously the entire length of the pipe; and

18 (3) Existing underground distribution systems retrofitted for the purpose of ~~utilizing~~ conveying
19 reclaimed water shall be taped or otherwise identified as in Subparagraphs (1) or (2) of this
20 Paragraph. This identification need not extend the entire length of the distribution system but shall
21 be incorporated within 10 feet of crossing any potable water supply line or sanitary sewer line.

22 (d) All reclaimed water valves and outlets shall be of a type, or secured in a manner, that permits operation by
23 personnel authorized by the entity that operates the reclaimed water system.

24 (e) Hose bibs shall be located in locked, below grade vaults that shall be labeled as being of nonpotable quality. As
25 an alternative to the use of locked vaults with standard hose bib services, other locking mechanisms such as hose bibs
26 ~~which that~~ can only be operated by a tool may be placed above ground and labeled as nonpotable water.

27 (f) ~~Cross-Connection Control~~ There shall be no direct cross-connections between the reclaimed water and potable
28 waters systems, unless such connection has been approved by the Department pursuant to 15A NCAC 18C .0406.

29 (1) ~~There shall be no direct cross-connections between the reclaimed water and potable waters systems;~~

30 (2) ~~Where both reclaimed water and potable water are supplied to a reclaimed water use area in~~
31 ~~residential or commercial (irrigation) applications, a dual check valve device (or a device providing~~
32 ~~equal or better protection) shall be installed at the potable water service connection to the use area;~~

33 (3) ~~Where both reclaimed water and potable water are supplied to a reclaimed water use area in~~
34 ~~industrial or commercial (non-irrigation) applications, a reduced pressure principle backflow~~
35 ~~prevention device or an approved air gap separation pursuant to 15A NCAC 18C shall be installed~~
36 ~~at the potable water service connection to the use area; and~~

1 ~~(4) — Where potable water is used to supplement a reclaimed water system, there shall be an air gap~~
2 ~~separation, approved and regularly inspected by the potable water supplier, between the potable~~
3 ~~water and reclaimed water systems.~~

4 (g) Irrigation system piping shall be considered part of the distribution system for the purposes of this Rule.

5 (h) Reclaimed water distribution lines shall be located ~~40~~ at least 25 feet horizontally from and 18 inches below any
6 water line ~~where~~ if practicable. ~~Where~~ If these separation distances cannot be met, the piping and integrity testing
7 procedures shall meet water main standards in accordance with 15A NCAC 18C.

8 (i) Reclaimed water distribution lines shall not be less than 50 feet from a well unless the piping and integrity testing
9 procedures meet water main standards in accordance with 15A NCAC 18C, but in no case shall they be less than 25
10 feet from a private well.

11 (j) Reclaimed water distribution lines shall meet the separation distances to sewer lines in accordance with 15A NCAC
12 02T .0305.

13

14 *History Note: Authority G.S. 143-215.1; 143-215.3(a);*
15 *Eff. June 18, 2011 (S.L. 2011-218); 2011 (S.L. 2011-218);*
16 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02U .0404 is adopted with changes as published in 32:06 NCR 599-600 as follows:

2

3 **15A NCAC 02U .0404 DESIGN CRITERIA FOR CLOSED-LOOP RECYCLE SYSTEMS**

4 (a) The requirements in this Rule shall apply to all new and expanding closed-loop recycle facilities.

5 (b) Design criteria related to closed-loop recycle systems in general.

6 (1) ~~There shall be no~~The public shall be prohibited access to the wastewater treatment equipment,
7 wastewater storage structures, or to the wastewater within a closed-loop recycle facility.

8 (2) If potable water is used to supplement a closed-loop recycle water system, there shall be no direct
9 cross-connections between the closed-loop system and potable water systems, unless such
10 connection has been approved by the Department pursuant to 15A NCAC 18C .0406.

11 (c) Design criteria related to treatment and storage units used in closed-loop recycle systems.

12 (1) The facility shall have the ability to stop production of effluent, return the effluent back to the
13 treatment facility, store the effluent, or discharge the effluent to another permitted wastewater
14 treatment facility when recycling cannot be conducted.

15 (2) Essential treatment units shall be provided in duplicate if proper operation of the treatment unit is
16 essential to the operation of the closed-loop recycle system and the operation cannot safely or
17 efficiently be immediately stopped or altered to operate without the closed-loop recycle system.

18 (3) An automatically activated standby power source, system shutdown, or other means shall be
19 employed to prevent improperly treated wastewater from entering a treated waste water storage
20 structure or from being recycled if loss of power would create an unsafe condition.

21 (4) If they are suitable for reuse, residues recovered during the treatment process may be recycled
22 through the processes that generated the wastewater rather than disposed of as a waste.

23 (5) A water tight seal on all treatment and storage units or two feet of protection from the 100-year
24 flood elevation shall be provided.

25 (6) Storage units in a closed-loop recycle system shall be designed to contain the accumulation of water
26 from a 25-year, 24-hour storm event with 1 foot freeboard, unless the system is protected from
27 rainfall and runoff.

28 (7) The bottoms of earthen impoundments, trenches or other similar excavations shall be at least four
29 feet above the bedrock surface, except that the bottom of excavations that are less than four feet
30 above bedrock shall have a liner with a hydraulic conductivity no greater than 1×10^{-7} centimeters
31 per second. Liner thickness shall be that thickness necessary to achieve a leakage rate consistent
32 with the sensitivity of classified groundwaters. Liner requirements may be reduced if the Applicant
33 demonstrates through predictive calculations or modeling methods that construction and use of these
34 treatment and disposal units will not result in contravention of surface water or groundwater
35 standards.

36 (8) Treatment works and disposal systems using earthen basins, lagoons, ponds or trenches, excluding
37 holding ponds containing non-industrial treated effluent prior to irrigation, for treatment, storage or

1 disposal shall have either a liner of natural material at least one foot in thickness and having a
2 hydraulic conductivity of no greater than 1×10^{-6} centimeters per second when compacted, or a
3 synthetic liner of sufficient thickness to exhibit structural integrity and an effective hydraulic
4 conductivity no greater than that of the natural material liner.

5

6 History Note: Authority G.S. 143-215.1; 143-215.3(a);

7 Eff. September 1, 2018.

1 15A NCAC 02U .0501 is readopted as published in NCR 32:06 600-601 as follows:

2

3

SECTION .0500 - GENERAL UTILIZATION REQUIREMENTS

4

15A NCAC 02U .0501 RECLAIMED WATER UTILIZATION (~~SEE S.L. 2011-48~~)

6 (a) Reclaimed water utilized in a manner that includes application to the land surface shall meet the following criteria:

7 (1) The reclaimed water shall meet requirements for Type 1 reclaimed water in Rule .0301(b) of this
8 Subchapter;

9 (2) Notification shall be provided by the Permittee ~~permittee~~ or its representative to inform the public
10 and employees of the use of reclaimed water (~~Non Potable Water~~) and that the reclaimed water is
11 not intended for drinking. Notification material shall be provided to employees in a language they
12 understand;

13 (3) The reclaimed water generator shall develop and maintain a record keeping program for distribution
14 of reclaimed water;

15 (4) The reclaimed water generator shall develop and maintain an education and approval program for
16 all use of reclaimed water. Educational material shall be provided to employees in a language they
17 understand;

18 (5) The reclaimed water generator shall develop and maintain a routine review and inspection program
19 for all uses of reclaimed water on property not owned by the generator;

20 (6) The compliance boundary and the review boundary for groundwater are established at the irrigation
21 area boundaries. No deed restrictions or easements shall be required to be filed on adjacent
22 properties. Land application of effluent shall be on property controlled by the generator unless an
23 easement is provided in accordance with ~~15A NCAC 02L .0107~~ 15A NCAC 02L .0107, except in
24 cases where a compliance boundary is not established; and

25 (7) Reclaimed water irrigated on designed soil matrix, such as artificial or natural turf athletic fields
26 with subsurface drainage shall meet the following conditions:

27 (A) Annual hydraulic loading and maximum precipitation rates shall be designed to irrigate a
28 volume not to exceed the design water capacity of the designed soil matrix above the
29 drainage system; and

30 (B) Outlets of the drainage system shall not be allowed to discharge directly to surface waters
31 (intermittent or perennial) or to storm water conveyance systems that do not allow for
32 infiltration prior to discharging to surface waters.

33 (b) Reclaimed water used for activities ~~other than land application (such as industrial and commercial uses)~~ industrial
34 and commercial uses shall meet the criteria below:

35 (1) The reclaimed water shall meet requirements for Type 1 reclaimed water;

36 (2) Notification shall be provided by the Permittee ~~permittee~~ or its representative to inform the public
37 and employees of the use of reclaimed water (~~Non Potable Water~~) and that the reclaimed water is

- 1 not intended for drinking, and notification material shall be provided to employees in a language
2 they understand;
- 3 (3) The reclaimed water generator shall develop and maintain an education and approval program for
4 all reclaimed water users, and educational material shall be provided to employees in a language
5 they understand;
- 6 (4) The reclaimed water generator shall develop and maintain a record keeping program for distribution
7 of reclaimed water;
- 8 (5) The reclaimed water generator shall develop and maintain a routine review and inspection program
9 for all reclaimed water users; and
- 10 (6) Reclaimed water used for activities other than land application shall not be used in a manner that
11 causes exposure to aerosols.

12 ~~(e) Reclaimed water used in commercial or industrial facilities for the purposes of urinal and toilet flushing or fire~~
13 ~~protection in sprinkler systems shall be approved by the Director if the applicant can demonstrate to the Division that~~
14 ~~public health and the environment will be protected.~~

15 ~~(d)(c)~~ Reclaimed water shall not be used for swimming pools, hot-tubs, spas or similar uses.

16 ~~(e) Reclaimed water shall not be used for direct reuse as a raw potable water supply.~~

17

18 *History Note: Authority G.S. 143-215.1; 143-215.3(a);*
19 *Eff. June 18, 2011 (S.L. 2011-48);(S.L. 2011-48);*
20 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02U .0601 is readopted as published in 32:06 NCR 601 as follows:

2

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SECTION .0600 - BULK DISTRIBUTION OF RECLAIMED WATER

4

15A NCAC 02U .0601 BULK DISTRIBUTION OF RECLAIMED WATER

6 (a) Tank trucks and other equipment used to distribute reclaimed water shall be identified with advisory signs.

7 (b) Tank trucks used to transport reclaimed water shall not be used to transport potable water that is used for drinking
8 or other potable purposes.

9 (c) Tank trucks used to transport reclaimed water shall not be filled through on-board piping or removable hoses that
10 may subsequently be used to fill potable water tanks.

11 (d) The reclaimed water generator shall develop and maintain an education and approval program for all reclaimed
12 water users.

13 (e) The reclaimed water generator shall develop and maintain a record keeping program for bulk distribution of
14 reclaimed water.

15 (f) The reclaimed water generator shall develop and maintain a routine review and inspection program for reclaimed
16 water users.

17

18 *History Note: Authority G.S. 143-215.1; 143-215.3(a);*

19 *Eff. June 18, ~~2011~~, 2011;*

20 *Readopted Eff. September 1, 2018.*

3 **SECTION .0700 - SETBACKS**

4
5 **15A NCAC 02U .0701 SETBACKS**

6 (a) Treatment and storage facilities associated with systems permitted under this Subchapter shall adhere to the setback requirements
7 in 15A NCAC 02T ~~.0500~~ .0500, except as provided in this Rule.

8 (b) Final effluent storage facilities shall meet all setback requirements for riparian buffer rules pursuant to 15A NCAC ~~02B~~ 02B, as
9 well as the following setbacks:

	feet
11 Any private or public water supply source	100
12 Surface waters (streams – intermittent and perennial, perennial waterbodies, 13 and wetlands)	50
14 Any well with exception of monitoring wells	100
15 Any property line <u>for facilities constructed on or after June 18, 2011</u>	50
16 <u>Any property line for facilities constructed prior to June 18, 2011</u>	0

17 Otherwise storage facilities shall meet the provisions of Paragraph (a) of this Rule.

18 (c) The setbacks for utilization areas sites where reclaimed water is discharged to the ground land applied shall be as follows:

	feet
20 Surface waters (streams – intermittent and perennial, perennial waterbodies, 21 and wetlands) not classified SA	25
22 <u>Surface waters (streams – intermittent and perennial, perennial waterbodies, and wetlands)</u> 23 <u>not classified SA, provided that the reclaimed water to be utilized contains no</u> 24 <u>more than 10 mg/L of Total Nitrogen and no more than 2 mg/L of Total Phosphorus</u> 25 <u>in addition to applicable requirements of Section .0300 of this Subchapter</u>	0
26 Surface waters (streams – intermittent and perennial, perennial waterbodies, 27 and wetlands) classified SA	100
28 Any well with exception <u>to of</u> monitoring wells	100

29 (d) No setback between the application area and property lines is required.

30 (e) Setbacks between reclaimed water storage ponds and property lines or wells under separate ownership may be waived by the
31 adjoining property owner. A copy of the signed waiver shall be provided to the Department.

32 (f) Setbacks between reclaimed water storage ponds and wells under the same ownership as the reclaimed water storage pond may be
33 waived by the property owner.

34 (g) Setback waivers, other than those allowed in Paragraphs (e) and (f) of this Rule, shall be written, notarized, signed by all parties
35 involved and recorded with the County Register of Deeds. Setback waivers involving the compliance boundary shall be in accordance
36 with 15A NCAC 02L .0107.

37 (h) Setbacks to property lines established in ~~Paragraph~~ Paragraphs (a) and (b) of this Rule shall not be applicable when the Permittee,
38 or the entity from which the Permittee is leasing, owns both parcels creating said property line.

39 ~~(f)~~ Habitable residences or places of ~~public~~ assembly under separate ownership constructed after the non-discharge facilities were
40 originally permitted or subsequently modified, are exempt from the setback requirements in Paragraph (a) of this Rule.

41
42 *History Note: Authority G.S. 143-215.1; 143-215.3(a);*
43 *Eff. June 18, 2011-2011;*
44 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02U .0801 is readopted with changes as published in 32:06 NCR 601-602 as follows:

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3

SECTION .0800 – OPERATIONAL PRACTICES (~~PLANS~~)

4

15A NCAC 02U .0801 OPERATION AND MAINTENANCE PLAN

6 (a) An Operation and Maintenance Plan shall be maintained by the Permittee ~~permittee~~ for all reclaimed water
7 ~~systems, generators and closed-loop recycle systems.~~ The plan shall:

8 (1) describe the operation of the system in sufficient detail to show what operations are necessary for
9 the system to function and by whom the ~~functions~~ operations are to be conducted;

10 (2) include a sampling and monitoring plan to evaluate quality of reclaimed water within the distribution
11 system to provide quality assurance at the time of reuse, and specify actions to be taken in response
12 to unsatisfactory monitoring results;

13 (3) provide a map of all reclaimed water distribution lines and record drawings of all reclaimed water
14 utilization systems under the Permittee's ~~permittee's~~ control;

15 (4) describe anticipated maintenance of the system;

16 (5) include provisions for safety ~~measures~~ measures, including restriction of access to the site and
17 equipment, as required in this Subchapter; and

18 (6) include spill control ~~provisions~~ provisions, including:

19 ~~(a)~~(A) response to upsets and ~~bypasses~~ bypasses, including control, containment, and
20 remediation; and

21 ~~(b)~~(B) contact information for plant personnel, emergency responders, and regulatory agencies.

22 (b) Irrigation areas shall have a year-round vegetative cover.

23 (c) Irrigation shall not result in ponding or runoff of treated effluent.

24 (d) Irrigation and metering equipment shall be tested and calibrated annually, or as established by permit.

25 (e) ~~Automobiles~~ **Vehicles** and heavy machinery shall not be allowed on the irrigation area, except during installation
26 or maintenance activities.

27 (f) Water level gauges shall be provided for all open-atmosphere treatment lagoons and ponds, and open-atmosphere
28 storage units.

29 (g) Vegetative cover shall be maintained on all earthen embankments.

30 (h) The Permittee shall keep a log of maintenance activities that occur at the facility.

31 (i) The Permittee shall perform inspections and maintenance to ensure proper operation of the facility.

32

33 *History Note: Authority G.S. 143-215.1; 143-215.3(a);*

34 *Eff. June 18, ~~2011~~ 2011;*

35 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02U .0802 is readopted as published in 32:06 NCR 602 as follows:

2

3 **15A NCAC 02U .0802 RESIDUALS MANAGEMENT PLAN**

4 (a) A Residuals Management Plan shall be maintained for all reclaimed water and closed-loop recycle systems that
5 generate residuals. The plan shall include the following:

6 (1) an explanation as to how the residuals will be collected, handled, processed, stored and disposed;

7 (2) an evaluation of the residuals storage requirements for the treatment ~~facility~~ facility, based upon the
8 maximum anticipated residuals production rate and the ability to remove residuals;

9 (3) a permit for residuals ~~disposal or utilization, utilization or~~ utilization or a written commitment to the Permittee of
10 a ~~Department-approved~~ Department-approved residuals ~~disposal/utilization~~ disposal or utilization
11 program accepting the residuals ~~which that~~ that demonstrates that the approved program has adequate
12 capacity to accept the ~~residuals, residuals~~ residuals or that an application for approval has been submitted;
13 and

14 (4) if oil, grease, grit, or screenings removal and collection is a designed unit process, an explanation
15 as to how ~~the oil/grease~~ these materials will be collected, handled, processed, stored and disposed.

16 (b) The Permittee shall maintain a record of all residuals removed from the facility.

17

18 *History Note: Authority G.S. 143-215.1; 143-215.3(a);*

19 *Eff. June 18, 2011, 2011;*

20 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02U .0901 is readopted as published in 32:06 NCR 602-603 as follows:

2

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SECTION .0900 - LOCAL PROGRAM APPROVAL

4

15A NCAC 02U .0901 LOCAL PROGRAM APPROVAL

6 (a) Municipalities, counties, local boards or commissions, water and sewer authorities, or groups of municipalities
7 and counties may apply to the Division for approval of programs for permitting construction, modification, and
8 operation of reclaimed water distribution lines and permitting users under their authority, unless prohibited by other
9 rules in this Subchapter. Construction of and modifications to treatment works, including pump stations for reclaimed
10 water distribution, require Division approval. Permits issued by approved local programs shall serve in place of
11 permits issued by the Division. Local program approval shall not be granted for ~~non-conjunctive~~ dedicated reclaimed
12 water ~~systems, uses.~~

13 (b) Applications. Applications for approval of local programs shall provide ~~adequate~~ information to assure compliance
14 with the requirements of this Subchapter and the following:

15 (1) Include two copies of the permit application forms, intended ~~permits~~ permits, including types of
16 uses, ~~minimum~~ design ~~criteria~~ criteria, (~~specifications~~), flow chart of permitting, inspection and
17 certification procedures, and other relevant documents to be used in administering the local
18 program; and

19 (2) Certification that the local authority has procedures in place for processing permit applications,
20 setting permit requirements, enforcement, and penalties that are compatible with those for permits
21 issued by the Division.

22 (c) Any amendments to the requirements of this Subchapter shall be incorporated into the local program within 60
23 days of the effective date of the amendments.

24 (d) If required by G.S. 89C, a North Carolina registered Professional Engineer shall be on the staff of the local program
25 or retained as a consultant to review unusual situations or designs and to answer questions that arise in the review of
26 proposed projects. The local program shall also provide staff or retain a consultant to review all other non-engineering
27 related program areas.

28 (e) Each project permitted by the local program shall be inspected for compliance with the requirements of the local
29 program at least once during construction.

30 (f) Approval of Local Programs. The Division staff shall acknowledge receipt of an application for a local ~~program~~
31 program, ~~in writing~~, review the application, notify the Applicant ~~applicant~~ of additional information that may be
32 required, and make a recommendation to the Commission on the acceptability of the proposed local program.

33 (g) All permitting actions, ~~bypasses from distribution lines~~, enforcement actions, and monitoring of the distribution
34 system shall be summarized and submitted to the Division ~~at a minimum~~ on an annual basis on Division-approved
35 forms ~~provided by the Division~~. The report shall also provide a listing and summary of all enforcement actions taken
36 or pending during the year. The report shall be submitted within 30 days after the end of each year.

1 (h) ~~A copy of all program documents such as specifications, permit applications, permit shells and shell certification~~
2 ~~forms shall be submitted to the Division on an annual basis along with a summary of any other program changes. A~~
3 summary of any program changes shall be submitted to the Division on an annual basis. Program changes to note
4 include staffing, processing fees, and ordinance revisions.

5 (i) Modification of a Local Program. After a local program has been approved by the Commission, any modification
6 of the program procedures or requirements specified in this Rule shall be approved by the Director to assure that the
7 procedures and requirements remain at least as stringent as the state-wide requirements in this Subchapter.

8 (j) Appeal of Local Decisions. Appeal of individual permit denials or issuance with conditions the permit Applicant
9 ~~applicant~~ finds unacceptable shall be made according to the approved local ordinance. The Commission shall not
10 consider individual permit denials or issuance with conditions to which a Permittee ~~permittee~~ objects. This Paragraph
11 does not alter the enforcement authority of the Commission as specified in G.S. 143-215.1(f).

12

13 *History Note: Authority G.S. 143-215.1; 143-215.1(f); 143-215.3(a);*

14 *Eff. June 18, ~~2011~~ 2011;*

15 *Readopted Eff. September 1, 2018.*

1 15A NCAC 02U .1101 is readopted as published in 32:06 NCR 603-604 as follows:
2

3 **SECTION .1100 - WETLANDS AUGMENTATION**
4

5 **15A NCAC 02U .1101 WETLANDS AUGMENTATION**

6 (a) Wetland augmentation shall be limited as follows:

- 7 (1) Wetland augmentation shall be limited to pine flat and hardwood flat wetlands as defined in the
8 most current version of the N.C. Wetland Assessment Method (NC WAM) User Manual developed
9 by the N.C. Wetland Functional Assessment Team (NC WFAT), excluding riparian ~~zones~~. ~~The NC~~
10 ~~WAM User Manual can be accessed at the following web address:~~
11 ~~<http://portal.ncdenr.org/web/wq/swp/ws/pdu/newam>; ~~zones~~;~~
12 (2) Reclaimed water discharge to Salt Water Wetlands (SWL) or Unique Wet Lands (UWL), as defined
13 in 15A NCAC 02B .0101, is not permitted under the rules in this Subchapter; and
14 (3) Reclaimed water discharge to wetlands areas shall be limited to times when the depth to groundwater
15 is greater than or equal to one foot.

16 (b) In addition to the requirements established in Rule .0201 or Rule .0202 of this ~~Subchapter~~ Subchapter, ~~as~~
17 ~~applicable~~, all new and expanding wetlands augmentation ~~facilities~~, facilities as applicable, shall:

- 18 (1) Identify the classification of the existing wetlands according to the most current version of the N.C.
19 Wetlands Assessment Method (NC WAM) User Manual and information provided by the North
20 Carolina Natural Heritage Program (NC NHP);
21 (2) Identify the existing beneficial uses of the reclaimed water to the wetlands in accordance with 15A
22 NCAC 02B .0231, and support any demonstration of net environmental benefit;
23 (3) Determine the hydrologic regime of the wetlands, including depth and duration of inundation, and
24 average monthly water level fluctuations. An estimated monthly water budget shall be provided by
25 the Applicant ~~applicant~~ and compared to actual conditions during operation;
26 (4) Identify class of reclaimed water to be discharged, associated parameter concentrations, and annual
27 loading rates to the wetlands;
28 (5) Determine whether the wetland occurs in a ground water recharge or discharge area;
29 (6) Provide baseline monitoring information for wetlands sufficient to allow determination of reference
30 conditions, to be performed for at least one representative year prior to initiation of discharge;
31 (7) Provide a project evaluation and receiver site agronomic plan that includes a hydraulic loading
32 recommendation based on the soils report, hydrogeologic description, agronomic investigation,
33 wetland type, local topography, aquatic life, wildlife, and all other investigative results to support
34 that there will be no negative effects on the uses of the ~~wetlands~~, wetlands including the biological
35 criteria and net environmental benefits will be gained. Hydraulic loading recommendations shall
36 reflect seasonal changes to ~~wetlands~~ wetlands, including restrictions during times of high water table
37 levels;

- 1 (8) For ~~non-conjunctive~~ dedicated wetlands augmentation systems, provide 200 percent of the land
2 requirements based on the recommended hydraulic loading rate. After five years of operation the
3 Permittee may request and receive a reduction in the additional land requirement ~~provided that if~~
4 operational data supports that sufficient utilization capacity exists for the reclaimed water generator;
- 5 (9) 10 percent of the land requirements shall remain in a natural state to be used as a basis of comparison
6 to the wetlands receiving reclaimed water;
- 7 (10) For application of reclaimed water exhibiting parameter concentrations greater than 100 percent of
8 the groundwater standards, provide a site-specific hydrogeologic investigation (i.e., evaluation of
9 wetlands/groundwater interaction, groundwater recharge/discharge, gradient, project proximity to
10 water supply wells) to show that hydrogeologic conditions are adequate to prevent degradation of
11 groundwater quality and demonstrate through hydrogeological modeling that groundwater standards
12 will not be exceeded at the compliance boundary; and
- 13 (11) Provide documentation that any applicable NPDES program requirements have been met, pursuant
14 to 15A NCAC 02H .0100.
- 15 (c) All renewal applications for wetlands augmentation facilities, shall submit documentation that the project
16 continues to function as designed and that the net environmental benefit aspects remain applicable.
- 17 (d) Reclaimed water utilized for wetlands augmentation shall meet the following reclaimed water effluent standards:
- 18 (1) Reclaimed water discharged to natural wetlands shall be treated to Type 1 reclaimed water
19 standards;
- 20 (2) In addition to water quality requirements associated with Type 1 reclaimed water, reclaimed water
21 discharged to wetlands shall not exceed the following concentrations, unless net environmental
22 benefits are provided:
- 23 (A) Total Nitrogen (as Nitrogen) of 4.0 ~~mg/L~~; mg/L; and
24 (B) Total Phosphorus (as Phosphorus) of 1 ~~mg/L~~; mg/L;
- 25 (3) Metal concentrations in reclaimed water discharged to wetlands shall not exceed North Carolina
26 surface water quality standards, unless acute whole effluent toxicity testing demonstrates absence
27 of toxicity.
- 28 (e) Reclaimed water facilities utilizing wetlands augmentation, shall meet the criteria below:
- 29 (1) Notification shall be provided by the Permittee ~~permittee~~ or its representative to inform the public
30 of the use of reclaimed water (~~Non Potable Water~~) and that the reclaimed water is not intended for
31 drinking;
- 32 (2) The reclaimed water generator shall develop and maintain a wetlands monitoring program. This
33 monitoring will be conducted during the first five growing seasons after initiation of the application
34 of reclaimed water, after which the Applicant ~~applicant~~ may apply for ~~and receive~~ reduced
35 monitoring. The monitoring requirements ~~must~~ shall include the following items:
- 36 (A) vegetation, macroinvertebrates, amphibians, fish, birds, and threatened or endangered
37 species surveys;

- 1 (B) water chemistry;
2 (C) surface water and ground water depth readings; and
3 (D) groundwater monitoring plan except for those projects receiving reclaimed water
4 characterized by average annual parameter concentrations less than or equal to 50 percent
5 of ground water quality criteria, and less than 50 percent of required surface water
6 discharge concentrations;
- 7 (3) The reclaimed water generator shall develop and maintain an education program for all users of
8 reclaimed water on property not owned by the generator;
- 9 (4) The reclaimed water generator shall develop and maintain a routine review and inspection program
10 for the wetlands augmentation system; and
- 11 (5) The compliance boundary and the review boundary for groundwater shall be established at the
12 property line. No deed restrictions or easements are required to be filed on adjacent properties. Land
13 application of reclaimed water shall be on property controlled by the generator unless a contractual
14 agreement is provided in accordance with ~~15A NCAC 02L .0107~~ 15A NCAC 02L .0107, except
15 when in cases where a compliance boundary is not established.
- 16 (f) Permitting of wetlands augmentation uses shall not be delegated to local programs.

17

18 *History Note: Authority G.S. 143-215.1; 143-215.3(a); S.L. 2006-250;*
19 *Eff. June 18, ~~2011~~, 2011;*
20 *Readopted Eff. September 1, 2018*

1 15A NCAC 02U .1401 is readopted as published in 32:06 NCR 604-606 as follows:

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3

SECTION .1400 - IRRIGATION TO FOOD CHAIN CROPS

4

5 15A NCAC 02U .1401 IRRIGATION TO FOOD CHAIN CROPS

6 (a) Irrigation to food chain crops shall be limited as follows:

7 (1) Reclaimed water utilized for direct or indirect contact irrigation of food chain crops that will be
8 peeled, skinned, cooked or thermally processed before consumption shall be treated to Type 1
9 reclaimed water standards;

10 (2) For the purposes of this Rule, tobacco is not considered a food chain crop;

11 (3) Reclaimed water shall not be utilized for direct contact irrigation of food chain crops that will not
12 be peeled, skinned, cooked or thermally processed before consumption except as approved in
13 Subparagraph (5) of this Paragraph;

14 (4) Reclaimed water utilized for indirect contact irrigation of food chain crops that will not be peeled,
15 skinned, cooked or thermally processed before consumption shall be treated to Type 2 reclaimed
16 water standards; and

17 (5) If requested, the Department shall authorize demonstration projects to collect and present data
18 related to the direct application of reclaimed water on crops that are not peeled, skinned, cooked, or
19 thermally processed before consumption. Crops produced during such demonstration projects may
20 be used as animal feed or may be thermally processed, cooked, or otherwise prepared for human
21 consumption in a manner approved by the North Carolina Department of Agriculture and Consumer
22 Services. If the Applicant, ~~applicant~~, based on the data collected, demonstrates to the Department
23 that public health will be protected if their reclaimed water is directly applied to crops ~~which~~ that
24 are not peeled, skinned, cooked, or thermally processed, the Department shall waive the prohibition
25 described in Subparagraph (3) of this Paragraph for that project. When considering such
26 demonstration projects, the Department shall seek the advice of the North Carolina Department of
27 Agriculture and Consumer Services.

28 (b) In addition to the requirements established in Rule .0201 or Rule .0202 of this ~~Subchapter~~ Subchapter, as
29 ~~applicable~~, all new and expanding irrigation to food chain crops systems shall submit a ~~representative soil analysis for~~
30 ~~standard soil fertility~~ Standard Soil Fertility Analysis for each field to be irrigated. ~~A~~ The Standard Soil Fertility
31 Analysis shall include the following parameters:

32 (1) Acidity;

33 (2) Base Saturation (by calculation);

34 (3) Calcium;

35 (4) Cation Exchange Capacity;

36 (5) Copper;

37 (6) Exchangeable Sodium Percentage (by calculation);

- 1 (7) Magnesium;
- 2 (8) Manganese;
- 3 (9) Percent Humic Matter;
- 4 (10) pH;
- 5 (11) Phosphorus;
- 6 (12) Potassium;
- 7 (13) Sodium; and
- 8 (14) Zinc.

9 (c) When a water balance is required by Rule .0202(k) of this ~~Subchapter~~ Subchapter, the water balance shall include
10 seasonal water requirements for the crops.

11 (d) For irrigation sites not owned by the Permittee, ~~permittee~~, a ~~notarized~~ land owner agreement shall be provided to
12 the Division. The land owner agreement shall include the following:

- 13 (1) a description of the approved uses and conditions for use of the reclaimed water consistent with the
14 requirements of this Rule;
- 15 (2) a condition requiring the reclaimed water supplier shall provide the landowner with the results of
16 sampling performed to document compliance with the reclaimed water effluent standards; and
- 17 (3) a condition requiring the landowner to report to the Permittee ~~permittee~~ any use of the reclaimed
18 water inconsistent with the uses in the agreement.

19 (e) All renewal Applicants ~~applicants~~ for dedicated irrigation to food chain crop systems shall submit:

- 20 (1) A ~~representative soil analysis for standard soil fertility~~ Standard Soil Fertility Analysis for each field
21 to be irrigated. A Standard Soil Fertility Analysis shall include the following parameters:
 - 22 (A) Acidity;
 - 23 (B) Base Saturation (by calculation);
 - 24 (C) Calcium;
 - 25 (D) Cation Exchange Capacity;
 - 26 (E) Copper;
 - 27 (F) Exchangeable Sodium Percentage (by calculation);
 - 28 (G) Magnesium;
 - 29 (H) Manganese;
 - 30 (I) Percent Humic Matter;
 - 31 (J) pH;
 - 32 (K) Phosphorus;
 - 33 (L) Potassium;
 - 34 (M) Sodium; and
 - 35 (N) Zinc;
- 36 (2) The inventory of commercial agricultural operations using reclaimed water to irrigate food chain
37 crops required in Subparagraph (d)(7) of this Rule; and

1 (3) For irrigation sites not owned by the Permittee, ~~permittee~~, a ~~notarized~~ land owner agreement
2 pursuant to Paragraph (d) of this Rule.

3 (f) Reclaimed water facilities providing reclaimed water for the irrigation of food chain crops shall meet the criteria
4 below:

5 (1) Crops irrigated by direct contact with reclaimed water shall not be harvested within 24 hours of
6 irrigation with reclaimed water;

7 (2) Notification at the utilization site shall be provided by the Permittee ~~permittee~~ or its representative
8 to inform the public of the use of reclaimed water (~~Non-Potable Water~~) and that the reclaimed water
9 is not intended for drinking;

10 (3) The reclaimed water generator shall develop and maintain a record keeping program for distribution
11 of reclaimed water;

12 (4) The Permittee ~~permittee~~ shall develop and maintain an education program for users of reclaimed
13 water for irrigation to food chain crops;

14 (5) The reclaimed water generator shall provide all landowners receiving reclaimed water for irrigation
15 of food chain crops a summary of all reclaimed water system performance as required in G.S. 143-
16 215.1C;

17 (6) The reclaimed water generator shall develop and maintain a routine review and inspection program
18 for all irrigation to food chain crop systems; and

19 (7) The Permittee ~~permittee~~ shall maintain an inventory of commercial agricultural operations using
20 reclaimed water to irrigate food chain crops for each year of operation. The inventory shall be
21 maintained for five years. The inventory of food chain crop irrigation shall include the following:

22 (A) name of the agricultural operation;

23 (B) name and telephone number of the owner or operator of the agricultural operation;

24 (C) address of the agricultural operation;

25 (D) food chain crops irrigated with reclaimed water;

26 (E) type of application (~~e.g., irrigation~~) method used; and

27 (F) approximate irrigation area ~~where under irrigation on which~~ food chain crops are grown.

28

29 *History Note: Authority G.S. 143-215.1; 143-215.3(a); S.L. 2006-250;*

30 *Eff. June 18, ~~2011-2011.~~*

31 *Readopted Eff. September 1, 2018.*



PART V – ATTACHMENTS AND SUPPORTING DOCUMENTATION

ENVIRONMENTAL MANAGEMENT COMMISSION

**NORTH CAROLINA
DEPARTMENT OF ENVIRONMENTAL QUALITY**

John D. Solomon
Chairman
Julie A. Wilsey
Vice Chairman

Roy Cooper, Governor
Michael S. Regan, Secretary

David W. Anderson
Gerard P. Carroll
Charles Carter
Marion Deerhake
Charles B. Elam
Mitch Gillespie
Steve Keen

Dr. Suzanne Lazorick
Dr. Stan Meiburg
Manning Puette
Dr. Albert R. Rubin
Clyde E. Smith, Jr.
Richard Whisnant

July 13, 2017

To: Ms. Julie A. Wilsey
Ms. Marion Deerhake
Dr. Albert R. Rubin

From: John D. Solomon 

Subject: Hearing Officer Appointment

I am hereby appointing you to serve as Hearing Officers for three public hearings to receive public comments on proposed amendments to 15A NCAC 02T and 02U rules.

The Division of Water Resources (DWR) implements these rules. Jeff Manning's staff (919-807-6415) will be in touch with you about coordinating the public hearing dates with your schedules. If you have questions about the program components for any of these rules, please feel free to contact staff directly:

- 02T .0100, .0500, .0600, .0700, .0800, .1000, and .1200 (Nathaniel Thornburg, Non-Discharge Permitting, 919-807-6453),
- 02T .0200, .0300, and .0400 (Ms. Deborah Gore, Pretreatment, Emergency Response & Collection Systems, 919-807-6383),
- 02T .1300 and .1400 (Ms. Christine Lawson, Animal Feeding Operations, 919-807-6354),
- 02T .1600 (Ms. Debra Watts, Groundwater Protection, 919-807-6338), and
- 02U .0100 through .1400 (Nathaniel Thornburg, Non-Discharge Permitting, 919-807-6453).

Staff will provide support to develop the Hearing Officers' Report of Proceedings. Please receive all relevant public comments and report your findings and recommendation to the Environmental Management Commission.

JDS/aw

Cc: Lois Thomas

State of North Carolina | Environmental Quality
1611 Mail Service Center | Raleigh, North Carolina 27699-1611
919-707-9023

An Equal Opportunity Affirmative Action Employer



NOTICE OF TEXT

[Authority G.S. 150B-21.2(c)]

OAH USE ONLY

VOLUME:

ISSUE:

file
8/24/17

CHECK APPROPRIATE BOX:

- Notice with a scheduled hearing
- Notice without a scheduled hearing
- Republication of text. Complete the following cite for the volume and issue of previous publication, as well as blocks 1 - 4 and 7 - 13. If a hearing is scheduled, complete block 5.
Previous publication of text was published in Volume: Issue:

1. Rule-Making Agency: Environmental Management Commission
2. Link to agency website pursuant to G.S. 150B-19.1(c): https://deq.nc.gov/news/events/public-notices-hearings
<p>3. Proposed Action -- Check the appropriate box(es) and list <u>rule citation(s)</u> beside proposed action:</p> <p><input checked="" type="checkbox"/> ADOPTION: 15A NCAC 02T .0608, .0807 - .0808, .1310. 15A NCAC 02U .0118, .0404</p> <p><input checked="" type="checkbox"/> READOPTION <u>with</u> substantive changes: 15A NCAC 02T .0101 -.0103, .0105 -.0108, .0110 - .0118, .0120, .0203- .0204, .0302 -.0306, .0401 -.0405, .0501, .0504 -.0508, .0601, .0604 -.0607, .0701 -.0702, .0704 -.0708, .0801, .0804 -.0805, .1101 -.1111, .1201 -.1209, .1302 -.1307, .1403 -.1404, .1601. 15A NCAC 02U .0101 -.0103, .0113, .0201 -.0202, .0301, .0401 - .0403, .0501, .0701, .0801 - .0802, .0901, .1101, .1401.</p> <p><input checked="" type="checkbox"/> READOPTION <u>without</u> substantive changes: 15A NCAC 02T .0109, .0201, .0301, .0806, .1301, .1308 -.1309, .1401 - .1402, .1602, .1604 -.1608. 15A NCAC 02U .0104 -.0112, .0114 -.0117, .0120, .0601.</p> <p><input type="checkbox"/> AMENDMENT:</p> <p><input type="checkbox"/> REPEAL:</p>
4. Proposed effective date: May 1, 2018
<p>5. Is a public hearing planned? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If yes: Public Hearing date: See attachment. Public Hearing time: Public Hearing Location:</p>
6. If no public hearing is scheduled, provide instructions on how to demand a public hearing: NA

FILED
 2017 AUG 24 PM 3: 54
 OFFICE OF ADMIN HEARINGS

7. Explain Reason For Proposed Rule(s):

To adopt rules that establish the following: operation and maintenance requirements for single family residences wastewater irrigation systems; operation and maintenance and residual management requirements for other non-discharge wastewater systems; animal waste residuals management; design criteria for closed-loop recycle systems; and demonstration of future wastewater treatment capacities.

To readopt rules pursuant to G.S. 150B-21.3A.

8. Procedure for Subjecting a Proposed Rule to Legislative Review: If an objection is not resolved prior to the adoption of the rule, a person may also submit written objections to the Rules Review Commission. If the Rules Review Commission receives written and signed objections in accordance with G.S. 150B-21.3(b2) from 10 or more persons clearly requesting review by the legislature and the Rules Review Commission approves the rule, the rule will become effective as provided in G.S. 150B-21.3(b1). The Commission will receive written objections until 5:00 p.m. on the day following the day the Commission approves the rule. The Commission will receive those objections by mail, delivery service, hand delivery, or facsimile transmission. If you have any further questions concerning the submission of objections to the Commission, please call a Commission staff attorney at 919-431-3000.

Rule(s) is automatically subject to legislative review. Cite statutory reference:

9. The person to whom written comments may be submitted on the proposed rule(s):

Name: Attn: 2T 2U Rule Comments

Address: Department of Environmental Quality, Division of Water Resources, Water Planning Section
1611 Mail Service Center
Raleigh, NC 27699-1611

Phone:

E-Mail (optional): 15ANCAC2T2URule_Comments@ncdenr.gov

10. Comment Period Ends: November 22, 2017

11. Fiscal impact (check all that apply).

If this form contains rules that have different fiscal impacts, list the rule citations beside the appropriate impact.

- State funds affected
- Environmental permitting of DOT affected
Analysis submitted to Board of Transportation
- Local funds affected
- Substantial economic impact (≥\$1,000,000)
- Approved by OSBM
- No fiscal note required by G.S. 150B-21.4
- No fiscal note required by G.S. 150B-21.3A(d)(2)

12. Rule-making Coordinator: Jennifer Everett

Address: 1601 Mail Service Center
Raleigh, NC 27699-1601

Phone: 919-707-8614

E-Mail: Jennifer.Everett@ncdenr.gov

Agency contact, if any: Jeff Manning

Phone: 919-807-6415

E-mail: jeff.manning@ncdenr.gov

13. The Agency formally proposed the text of this rule(s) on Date: July 13, 2017

14. Signature of Agency Head* or Rule-making Coordinator:



*If this function has been delegated (reassigned) pursuant to G.S. 143B-10(a), submit a copy of the delegation with this form.

Typed Name: Jennifer Everett

Title: DEQ Rulemaking Coordinator

~~04 NCAC 06C .1302 OTHER RESERVES~~

~~(a) Regular reserves shall be maintained as set forth in G.S. 54-109.86. ~~54-109.86~~ of the North Carolina Credit Union laws.~~

~~(b) Special reserves for delinquent loans and reserves for line of credit shall be maintained as required in Rules .0401 and .0404(b) of these Rules and Regulations. ~~this Subchapter.~~~~

~~Authority G.S. 54-109.12; ~~54-109.86(a)(b)(c).~~~~

TITLE 15A – DEPARTMENT OF ENVIRONMENTAL QUALITY

Notice is hereby given in accordance with G.S. 150B-21.2 and G.S. 150B-21.3A(c)(2)g. that the Environmental Management Commission intends to adopt the rules cited as 15A NCAC 02T .0608, .0807-.0808, .1310; 02U .0118, .0404, readopt with substantive changes the rules cited as 15A NCAC 02T .0101-.0108, .0110-.0118, .0120, .0203-.0204, .0302-.0306, .0401-.0405, .0501, .0504-.0508, .0601, .0604-.0607, .0701-.0702, .0704-.0708, .0801, .0804-.0805, .1101-.1111, .1201-.1209, .1302-.1307, .1403-.1404, .1601; 02U .0101-.0104, .0113, .0201-.0202, .0301, .0401-.0403, .0501, .0701, .0801-.0802, .0901, .1101, .1401, and readopt without substantive changes the rules cited as 15A NCAC 02T .0109, .0201, .0301, .0806, .1301, .1308, .1309, .1401-.1402, .1602, .1604-.1608; 02U .0105-.0112, .0114-.0117, .0120, and .0601.

Pursuant to G.S. 150B-21.2(c)(1), the text of the rule(s) proposed for readoption without substantive changes are not required to be published. The text of the rules are available on the OAH website: <http://reports.oah.state.nc.us/ncac.asp>.

Link to agency website pursuant to G.S. 150B-19.1(c): <https://deq.nc.gov/news/events/public-notices-hearings>

Proposed Effective Date: May 1, 2018

Public Hearing:

Date: October 10, 2017.

Time: 6:00 p.m.

Location: DCR Battleship-Auditorium, 1 Battleship Road, Wilmington, NC 28401

Public Hearing:

Date: October 17, 2017

Time: 6:00 p.m.

Location: Northview Middle School, 302 28th Ave NE, Hickory, NC 28601

Public Hearing:

Date: October 24, 2017

Time: 6:00 p.m.

Location: Ground Floor Hearing Room, Archdale Building, 512 N. Salisbury St., Raleigh, NC 27604

Reason for Proposed Action: To adopt rules that establish the following: operation and maintenance requirements for single family residences wastewater irrigation systems; operation and

maintenance and residual management requirements for other non-discharge wastewater systems; animal waste residuals management; design criteria for closed-loop recycle systems; and demonstration of future wastewater treatment capacities. To readopt rules pursuant to G.S. 150B-21.3A.

Comments may be submitted to: Attn: 2T 2U Rule Comments, Department of Environmental Quality, Division of Water Resources, Water Planning Section, 1611 Mail Service Center, Raleigh, NC 27699-1611; email 15ANCAC2T2URule_Comments@ncdenr.gov

Comment period ends: November 22, 2017

Procedure for Subjecting a Proposed Rule to Legislative Review:

If an objection is not resolved prior to the adoption of the rule, a person may also submit written objections to the Rules Review Commission after the adoption of the Rule. If the Rules Review Commission receives written and signed objections after the adoption of the Rule in accordance with G.S. 150B-21.3(b2) from 10 or more persons clearly requesting review by the legislature and the Rules Review Commission approves the rule, the rule will become effective as provided in G.S. 150B-21.3(b1). The Commission will receive written objections until 5:00 p.m. on the day following the day the Commission approves the rule. The Commission will receive those objections by mail, delivery service, hand delivery, or facsimile transmission. If you have any further questions concerning the submission of objections to the Commission, please call a Commission staff attorney at 919-431-3000.

Fiscal impact (check all that apply).

- State funds affected
- Environmental permitting of DOT affected Analysis submitted to Board of Transportation
- Local funds affected
- Substantial economic impact (≥\$1,000,000)
- Approved by OSBM
- No fiscal note required by G.S. 150B-21.4
- No fiscal note required by G.S. 150B-21.3A(d)(2)

CHAPTER 02 - ENVIRONMENTAL MANAGEMENT

SUBCHAPTER 02T – WASTE NOT DISCHARGED TO SURFACE WATERS

SECTION .0100 – GENERAL REQUIREMENTS

15A NCAC 02T .0101 PURPOSE

The rules in this Subchapter set forth the requirements and procedures for application and issuance of permits shall govern application for and issuance of permits for the following systems which that do not discharge to surface waters of the state:

- (1) sewer systems;
- (2) disposal systems;
- (3) treatment works;
- (4) residual and residue disposal/utilization systems;
- (5) animal waste management systems;

PROPOSED RULES

<u>Cancelled Checks, Money Orders, Cancelled Checks</u>	<u>10 years</u>
<u>Bank Statements</u>	<u>10 years</u>
<u>Bank Deposit Slips</u>	<u>10 years</u>
<u>Invoices for Sale or Purchase of Securities</u>	<u>10 years</u>

or sell government securities at a future date, which date that are merely speculative in nature, are considered unsafe and unsound practices.

Authority G.S. 54-109.12; 54-109.82; 54-109.92(a).

ADMINISTRATIVE

<u>Certificates and Licenses to Operate Under Programs of Various Government Agencies</u>	
<u>After the Term of the Program Expires</u>	<u>10 years</u>
<u>Minutes of the Credit Committee Meetings</u>	<u>10 years</u>
<u>Charged off Loans (Note and Application)(after the date of the charge off)</u>	<u>10 years</u>
<u>Charge off Ledger Sheet</u>	<u>10 years</u>

04 NCAC 06C .1204 FEDERAL FUNDS (READOPTION WITHOUT SUBSTANTIVE CHANGES)

SECTION .1300 - RESERVES

04 NCAC 06C .1301 SPECIAL RESERVES FOR LIQUIDITY

(a) Credit unions shall have a Liquidity Policy and Contingency Funding Plan as set forth in 12 C.F.R. Part 741.12, including any subsequent amendments, which are incorporated by reference and can be found at no cost on the Code of Federal Regulations website www.ecfr.gov.

LEGAL JUDICIAL AUTHORIZATION

<u>Attachments or Garnishments</u>	<u>10 years</u>
<u>Bond Claims</u>	<u>10 years</u>
<u>Court Orders</u>	<u>10 years</u>

(a)(b) Credit unions with assets of two million (\$2,000,000) or more and credit unions which that offer share draft accounts shall maintain a reserve of liquid assets (liquidity reserve) equal to a minimum of five percent (5 percent) of the total dollar value amount of the Credit credit Union's union's liability base.

MEMBER RECORDS

<u>Transaction Records</u>	<u>10 years</u>
<u>Members Periodic Statements</u>	<u>10 years</u>
<u>Month End Trial Balance</u>	<u>2 years</u>
<u>Signature Cards (after the account is closed)</u>	<u>10 years</u>

(b)(c) The liability base shall consist of shares, deposits, and notes payable with a maturity of less than one year. Specifically pledged Pledged shares or deposits or both are shall be exempted up to the amount of the loans.

LOANS (COMMERCIAL, CONSUMER, AND MORTGAGE)

<u>Subsidiary Loan Ledgers</u>	<u>10 years</u>
<u>Delinquent Loan Schedules</u>	<u>5 years</u>
<u>Loan Applications (after the loan is paid)</u>	<u>2 years</u>

(e)(d) The liquidity reserve shall consist of cash, shares shares, and deposits in the National Credit Union Administration Central Liquidity Facility, corporate credit unions, or other financial institutions, and investments with a maturity of less than one year as authorized under G.S. 54-109.82(3)(4)(5)(9)(10) and (12) of the North Carolina Credit Union laws, by G.S. 54-109.82 (3),(4),(5),(9),(10), and (12). Government securities with a maturity of more than one year may be included included, provided securities are carried at the lower of cost or market and adjusted monthly on a consistent regular basis. Documentary evidence must shall be kept on file supporting the adjustments for a period of 18 months.

OTHER

<u>Tax Records</u>	<u>10 years</u>
<u>Personnel Records</u>	<u>10 years</u>
<u>Expense Reimbursement Forms</u>	<u>5 years</u>
<u>Reports: Statistical Reports submitted to NCUA or Credit Union Division</u>	<u>10 years</u>
<u>Escheat records, including communications between the credit union and the NC Department of State Treasurer and records containing the information required to be included in the report filed with the State Treasurer</u>	<u>10 years</u>

(d)(e) The liquidity reserve shall be determined monthly, not later than the tenth day of each month, and shall be based on the Credit credit Union's union's liability base as the last day of business of the preceding month.

Authority G.S. 54-109.12; 54-109.17.

SECTION .1200 - INVESTMENTS

04 NCAC 06C .1201 INVESTMENT ACTIVITIES
The North Carolina Credit Union Law, Article 14 I, specifies the investments which credit unions are authorized to make, which includes loans to members and the purchase of securities guaranteed by the U.S. government. Investments shall be made pursuant to G.S. 54, Article 14 I. Transactions The Administrator shall consider transactions, such as agreements or options to buy

(e)(f) The liquidity reserve can only shall be used to satisfy contractual line of credit agreements, share and deposit withdrawals. In the event the liquidity reserve falls below the required amount the Credit credit Union union must shall immediately notify the Administrator of Credit Unions. The Credit credit Union union will shall have 60 days to replenish the liquidity reserve.

(f)(g) In any special case, the Administrator shall have the authority to require a liquidity reserve for credit unions with assets of less than two million dollars (\$2,000,000) if deemed necessary to meet the liquidity needs of its creditors, creditors, as set forth in G.S. 54-109.86 (c).

Authority G.S. 54-109.12; 54-109.86 (b); 54-109.86(c)(2).

- (6) treatment of contaminated soils; and
- (7) stormwater management systems pursuant to 15A NCAC ~~2H~~ 02H .1000.

Authority G.S. 143-215.1; 143-215.3(a)(1)

15A NCAC 02T .0102 SCOPE

The rules in this Subchapter shall apply to all persons proposing to construct, alter, extend, or operate any sewer system, treatment works, disposal system, ~~contaminates~~ contaminated soil treatment system, animal waste management system, stormwater management system or residual disposal/utilization system ~~which system, that~~ does not discharge to surface waters of the state, state, including systems which discharge waste onto or below land surface. However, these Rules ~~do~~ shall not apply to sanitary sewage systems or solid waste management facilities ~~which that~~ are permitted under the authority of the Commission for Public Health. The provisions for stormwater NPDES systems that discharge to waters of the State are codified management systems can be found in 15A NCAC 02H .1000. The rules in this Section are general requirements that shall apply to all program rules ~~(found in individual sections)~~ in this Subchapter.

Authority G.S. 130A-335; 143-215.1; 143-215.3(a)(1).

15A NCAC 02T .0103 DEFINITIONS

The terms used in this Subchapter ~~shall be as defined~~ shall have the meanings set forth in G.S. 143-212 and ~~143-213~~ G.S. 143-213, in this Rule, and except as provided in this Rule and in definitions provided in program-specific program specific rules in this Subchapter: Subchapter and as follows:

- (1) "Agronomic rate" is defined as the amount of waste and other materials applied to soil to meet the nitrogen needs of the crop, but does not overload the soil with nutrients or other constituents that cause or contribute to a contravention of surface water or groundwater standards, limit crop growth, or adversely impact soil quality. Nitrogen needs of the crop shall be based on realistic yield expectations (RYE) established for a soil series through published Cooperative Extension Service bulletins, Natural Resources Conservation Service publications, county soil surveys, or site specific agronomist reports.
- (2) "Animal waste" means livestock or poultry excreta or a mixture of excreta with feed, bedding, litter or other materials generated at a feedlot.
- (3) "Bedrock" is as defined in 15A NCAC 02L .0102.
- (4) "Buffer" means a natural or vegetated area as defined in 15A NCAC 02B .0202.
- (5) "CFR" means Code of Federal Regulations. ~~All CFRs cited herein may be obtained at Government Institutes, Inc., 4 Research Place, Suite 200, Rockville, Md, 20850-1714 for a cost of thirty six dollars (\$36.00) each plus four dollars (\$4.00) shipping and handling or at~~

- (6) ~~http://www.gpoaccess.gov/cfr/. Copies are also available for review at 512 North Salisbury Street, Raleigh, North Carolina 27604.~~ "Commission" as is defined in G.S. 143-212 or their delegate.
- (7) "Compliance boundary" is as defined in 15A NCAC 02L .0102.
- (8) "Deemed permitted" means that a facility is considered ~~as having to have~~ to have a needed permit and ~~being to be~~ to be compliant with the permitting requirements of G.S. 143-215.1(a), 143-215.1(a) even though it has not received an individual permit for its construction or operation.
- (9) "Department" as is defined in G.S. 143-212.
- (10) "Director" means the Director of the Division or its delegate.
- (11) "Division" means the Division of Water Quality Resources in the Department. ~~All rules cited in this Section under the authority of the Division may be obtained at 512 North Salisbury Street, Raleigh, North Carolina 27604 or at the Division's web page at www.newaterquality.org at no charge.~~
- (12) "Effluent" means wastewater discharged ~~following all treatment processes~~ from a water pollution control facility following all treatment processes or from other point source whether treated or untreated.
- (13) "Engineer" is means an individual who is currently licensed by the North Carolina Board of Examiners For Engineers and Land Surveyors or is authorized to practice under G.S. 89C as an engineer.
- (14) "EPA" means the United States Environmental Protection Agency.
- (15) "Ephemeral (stormwater) stream" ~~means a stream as~~ is defined in 15A NCAC 02B .0233.
- (16) "Essential treatment unit" means any unit associated with the wastewater treatment process whose loss would likely render the facility incapable of meeting the required performance ~~criteria~~ criteria, including aeration units or other main treatment units, clarification equipment, filters, disinfection equipment, pumps and blowers.
- (17) "General Permit" means a permit issued ~~under~~ pursuant to G.S. 143-215.1(b)(3), 143-215.1(b)(4) or 143-215.10C.
- (18) "Groundwaters" ~~means those waters in the saturated zone of the earth as~~ is defined in 15A NCAC 02L .0102.
- (19) "Groundwater standards" means groundwater standards as established in 15A NCAC 02L .0200.
- (20) "Industrial wastewater" means all wastewater other than sewage or animal waste waste, and includes:

PROPOSED RULES

- (a) wastewater resulting from any process of industry or manufacture, or from the development of any natural resource;
- (b) wastewater resulting from processes of trade or business, including wastewater from laundromats and ~~vehicle/equipment~~ vehicle or equipment washes, but ~~not~~ excluding wastewater from restaurants;
- (c) stormwater that is contaminated with an industrial wastewater;
- (d) any combination of sewage and industrial wastewater;
- (e) municipal ~~wastewater~~ wastewater, unless it can be demonstrated ~~to the satisfaction of the Division~~ that the wastewater contains no industrial wastewater;
- (f) contaminated groundwater extracted as part of an approved groundwater remediation system approved by the Division in accordance with 15A NCAC 02L .0100.
- (21) "Intermittent stream" ~~means a stream as is~~ defined in 15A NCAC 02B .0233.
- (22) "NPDES" means National Pollutant Discharge Elimination System.
- (23) "Perennial stream" ~~means a stream as is~~ defined in 15A NCAC 02B .0233.
- (24) "Perennial waterbody" ~~means a waterbody as is~~ defined in 15A NCAC 02B .0233.
- (25) "Pollutant" means waste as defined in G.S. 143-213.
- (26) "Potable waters" ~~means water as is~~ defined in 15A NCAC 02L .0102.
- (27) "Private well" means any potable or irrigation well not directly controlled by a public authority or a public utility authorized by the North Carolina Public Utilities Commission. This may include a private individual or community well as defined in the public water supply rules ~~contained~~ codified in 15A NCAC 18C.
- (28) "Professional engineer" means a person who is presently registered and licensed as a professional engineer by the North Carolina Board of Examiners For Engineers and Land Surveyors.
- (29) "Public or community sewage system" means a single system of sewage collection, treatment, or disposal owned and operated by a sanitary district, a metropolitan sewage district, a water and sewer authority, a county, a municipality or a public utility authorized to operate by the North Carolina Utilities Commission.
- (30) "Residuals" means any solid, semisolid, or liquid waste, other than effluent or residues from agricultural products and processing, generated from a wastewater treatment facility, water supply treatment facility or air pollution control facility permitted under the authority of the Commission.
- (31) "Residues from agricultural products and processing" means solids, semi-solids or liquid residues from food and beverage processing and ~~handling; silviculture; agriculture;~~ handling, silviculture, agriculture, and aquaculture operations permitted under the authority of the Commission that are non-toxic, non-hazardous and contain no domestic wastewater.
- (32) "Restrictive horizon" is the layer in a soil profile that is capable of reducing the downward water movement to the minimum rate, as evidenced by lowest saturated hydraulic conductivity among all the soil layers. Restrictive horizon is often capable of perching ground water or wastewater effluent and is characterized by accumulation of finer soil particles (such as aluminum, clay, iron, silica, organic matter, or other compounds) or compaction due to heavy ~~equipments-~~ equipment.
- (33) "Review boundary" is as defined in 15A NCAC 02L .0102.
- (34) "Seasonal High Water Table" or "SHWT" is the highest level to which the soil is saturated, as may be determined through the identification of redoximorphic features in the soil ~~profile~~ profile, including low chroma mottling. This does not include temporary perched conditions. Alternatively, the SHWT can also be determined from water level measurements or via soil/groundwater modeling.
- (35) "Secretary" ~~as is~~ defined in G.S. 143-212 ~~or its~~ delegate, and includes the Secretary's delegate.
- (36) "Setback" means the ~~minimum~~ separation in linear feet, measured on a horizontal plane, required between a treatment works, disposal system, or utilization system and includes physical features such as building buildings, roads, property lines, or water bodies.
- (37) "Sewage" means the liquid and solid human ~~waste, waste~~ and liquid waste generated by domestic water-using fixtures and ~~appliances,~~ appliances from any residence, place of business, or place of public assembly. Sewage does not include wastewater that is totally or partially industrial ~~wastewater,~~ wastewater or any other wastewater not considered to be domestic waste.
- (38) "Soil scientist" means an individual who is currently licensed or authorized to practice soil science ~~under pursuant to~~ G.S. 89F by the North Carolina Board for Licensing of Soil Scientists.
- (39) "Staff" means the staff of the Division.

- (40) "Surface waters" means all waters as defined in G.S. 143-212 except underground waters.
- (41) "Surface water standards" means surface water standards as established in 15A NCAC 02B .0200.
- (42) "Technical specialist" means an individual designated by the Soil and Water Conservation Commission, pursuant to rules adopted by that Commission, to certify animal waste management plans or specific parts of a certified animal waste management plan.
- (43) "Toxicity test" means a test for toxicity conducted using the procedures contained in 40 CFR 261, Appendix H II, which is hereby incorporated by reference including any subsequent amendments and editions.
- (44) "Treatment works or disposal system ~~which that~~ does not discharge to surface waters" means any treatment works, facility, utilization system, or disposal system which is designed to:
 - (a) operate as closed system with no discharge to waters of the ~~state, state;~~ or
 - (b) ~~dispose/utilize of~~ dispose of or use wastes, including residuals, residues, contaminated soils and animal waste, ~~to on~~ on the surface of the ~~land, land;~~ or
 - (c) dispose of wastes through a subsurface disposal system pursuant to G.S. 143-215.1(b)(4).
- (45) "Waste oil" means any used nonhazardous petroleum product other than crankcase oil. Crankcase oil mixed with other used nonhazardous petroleum products shall be considered as waste oil.
- (46) "Wetlands" are "waters" as defined in G.S. 143-212 and are areas that are inundated or saturated by an accumulation of surface or ground water as defined in 15A NCAC 02B .0202.

accordance with the requirements of the ~~Division approved~~ Division-approved program.

(b) Applications. Application for a permit ~~must shall~~ be made on ~~Division~~ Division-approved forms completely filled out, where applicable, and fully executed in the manner set forth in Rule .0106 of this Section. A processing fee as described in G.S. 143-215.3D ~~must shall~~ be submitted with each application in the form of a check or money order made payable to the Department. Applications shall be returned if incomplete. ~~Sewer~~ Permits for sewer line extensions shall be applied for separately from treatment, utilization, and disposal systems. The Applicant applicant shall provide adequate documentation to the Division to ensure that the proposed system will meet all design and performance criteria as required under this Subchapter and other applicable rules, be operated as a non-discharge system, and protect surface water and groundwater standards. Variances to this Subchapter or adopted design criteria ~~must shall~~ be specifically requested in the application and, if approved pursuant to Paragraph (n) of this Rule, incorporated into the permit. The Division may accept certification from a licensed or certified professional (e.g. Professional Engineers, Licensed Soil Scientist, Licensed Geologist, Technical Specialist) that the design meets or exceeds minimum design criteria applicable to the project. ~~Division acceptance of certifications by the applicant or by licensed or certified professionals preparing reports for the application shall not constitute approval of a variance to this Subchapter or applicable minimum design and performance criteria unless specifically requested in the application and approved in the permit. Division acceptance of certifications that were specifically requested by the Division to be provided with the application from the Applicant or from licensed or certified professionals preparing reports for the application and that were approved in the permit shall constitute approval of a variance to this Subchapter or to applicable minimum design and performance criteria.~~

(c) Application packages for new and expanding facilities shall include the following items:

- (1) The number of executed copies shall include the number necessary for each review office and one additional copy. Additional copies shall be required if needed for federal and state grant and loan projects.
- (2) Reports, engineering plans, specifications, and calculations as required by the applicable rules of this Subchapter. If prepared by licensed or certified professionals these reports shall be submitted in accordance with the respective statutes and rules governing that profession.
- (3) Operational agreements as required by Rule .0115 of this Section.
- (4) For projects that require environmental documentation pursuant to the North Carolina Environmental Policy Act, a final environmental document (Finding of No Significant Impact or Record of Decision).
- (5) A general scaled location map, showing orientation of the facility with reference to at least two geographic references ~~(e.g. numbered~~

Authority G.S. 130A-335; 143-213; 143-215.3(a)(1).

15A NCAC 02T .0104 ACTIVITIES WHICH REQUIRE A PERMIT

~~No person shall do any of the things or carry out any of the activities contained in G.S. 143-215.1(a) until or unless the person shall have applied for and received a permit from the Division (or if appropriate a local program approved by the Division pursuant to this Subchapter) and shall have complied with the conditions prescribed in the permit or is deemed permitted by rules in this Subchapter.~~

Authority G.S. 130A-335; 143-215.1; 143-215.3(a)(1).

15A NCAC 02T .0105 GENERAL REQUIREMENTS

(a) Jurisdiction. Applications for permits from the Division shall be made in accordance with this Rule. Applications for permits under the jurisdiction of a local program shall be made in

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~~roads, named streams/rivers). (e.g. numbered roads, named streams or rivers).~~

(6) ~~Documentation that other directly related (i.e. needed to properly construct and operate the facilities permitted under this Subchapter) environmental permit or certification applications are being prepared, have been applied for, or have been obtained (e.g. 401 certifications, erosion and sedimentation control plans, stormwater management plans).~~ Documentation that other environmental permit or certification applications that are needed to properly construct and operate the facilities permitted under this Subchapter are being prepared, have been applied for, or have been obtained (e.g. 401 certifications, erosion and sedimentation control plans, and stormwater management plans). The Division shall consider the application incomplete or issue the permit contingent on issuance of the dependent permits if issuance of other permits or certifications impact the system permitted under this Subchapter.

(7) A description of the project including the origin, type and flow of waste to be treated. For industrial processing facilities, a waste analysis extensive enough to allow a complete evaluation of the system's capability to treat the waste and any potential impacts on the waters of the state shall be included.

(8) Documentation of compliance with Article 21 Part 6 (Floodway Regulations) of Chapter 143 of the General Statutes.

(9) Documentation as required by other applicable ~~rule(s)~~ rules in this Subchapter.

(10) Documentation of the presence or absence of threatened or endangered aquatic species utilizing information provided by the Natural Heritage Program of the Department. This shall only apply to the area whose boundary is encompassed ~~by~~ by, and for the purpose ~~of~~ of, the installation, operation, and maintenance of facilities permitted herein (wastewater collection, treatment, storage, utilization, or disposal). This documentation shall provide information on the need for permit conditions pursuant to Paragraph (i) of this Rule. ~~The Natural Heritage Program can be contacted at <http://www.ncnhp.org> or write to Natural Heritage Program, 1601 Mail Service Center, Raleigh, NC 27699-1601.~~

(d) Application packages for renewals shall include updated site ~~plans, (if required as part of original submittal).~~ plans, if required as part of the original submittal.

(e) Application and Annual Fees.

(1) Application Fee. For every application for a new or major modification of a permit under this Section, a nonrefundable application processing fee in the amount provided in G.S.

143-215.3D shall be submitted to the Division by the ~~Applicant~~ applicant at the time of application. For a facility with multiple treatment units under a single permit, the application fee shall be set by the total design treatment capacity. Modification fees shall be based on the projected annual fee for the facility.

(2) Annual Fees. An annual fee for administering and compliance monitoring shall be charged in each year of the term of every renewable permit according to the schedule in G.S. 143-215.3D(a). Annual fees ~~must~~ shall be paid for any facility operating on an expired permit that has not been rescinded or revoked by the Division. Permittees shall be billed annually by the Division. A change in the facility which changes the annual fee shall result in the revised annual fee being billed effective with the next anniversary date.

(3) Failure to pay an annual fee within 30 days after being billed shall be cause for the Division to revoke the permit.

(f) Designs for facilities permitted under this Section shall use the practicable waste treatment and disposal alternative with the least adverse impact on the environment in accordance with G.S. 143-215.1(b)(2).

(g) ~~In order to protect Publicly Owned Treatment Works, the~~ The Division shall incorporate pretreatment requirements under 15A NCAC ~~2H 02H~~ .0900 into the permit.

(h) Setbacks and required separation distances shall be provided as required by ~~individual~~ rules in this Subchapter. Setbacks to ~~streams (perennial and intermittent), perennial and intermittent streams,~~ perennial waterbodies, and wetlands shall be determined using the methodology set forth in 15A NCAC 02B .0233(4)(a). Setbacks to wells ~~are for~~ shall apply to those wells outside the compliance boundary. ~~Where~~ If wells and subsurface groundwater lowering drainage systems would otherwise be inside the compliance boundary as established in 15A NCAC 02L .0107, the ~~Applicant~~ applicant may request the compliance boundary be established closer to the waste disposal area and this shall be granted provided the groundwater standards can be met at the newly established compliance boundary.

(i) Permits ~~may~~ shall provide specific conditions to address the protection of threatened or endangered aquatic species as provided in plans developed pursuant in 15A NCAC 02B .0110 if the construction and operation of the facility directly impacts such species.

(j) The ~~Permittee~~ permittee shall ~~keep permits active~~ comply with all permit conditions and requirements until the waste treatment systems authorized by the permit are properly closed or subsequently permitted under another permit issued by the appropriate permitting authority for that activity.

(k) Monitoring of waste and surface waters shall be in accordance with 15A NCAC 02B .0505 except as otherwise provided by ~~specific~~ applicable rules in this Subchapter.

(l) Reporting shall be in accordance with 15A NCAC 02B .0506 except as otherwise provided by ~~specific~~ applicable rules in this Subchapter.

(m) Monitoring of groundwater shall be in accordance with Sections 15A NCAC 02L .0100 and 15A NCAC 02C .0100 except as otherwise provided by ~~specific~~ applicable rules in this Subchapter.

(n) The Director shall approve alternative Design Criteria and Application Submittal requirements in cases where the Applicant applicant can demonstrate that the alternative ~~design criteria~~ will ~~provide the following:~~ provide:

- (1) equal or better treatment of the waste;
- (2) equal or better protection of the waters of the state; and
- (3) no increased potential for nuisance conditions from noise, odor or vermin.

(o) The Permittee shall retain the Division approved plans and specifications for the life of the facility.

Authority G.S. 143-215.1; 143-215.3(a).

15A NCAC 02T .0106 SUBMISSION OF PERMIT APPLICATIONS

(a) Permit applications, supporting information, and processing fee for permits issued by the Division shall be filed with the Division. Applications for permits from a ~~Division approved~~ Division-approved local permitting program shall be submitted directly to the local program director. Division permit processing fees ~~are not~~ shall not be required for permits issued by delegated local permitting programs.

(b) Permit applications shall be signed as follows:

- (1) in the case of corporations, by a principal executive officer of at least the level of ~~vice-president,~~ vice-president or his authorized representative;
- (2) in the case of a partnership or a limited partnership, by a general partner;
- (3) in the case of a sole proprietorship, by the proprietor;
- (4) in the case of a municipal, state, or other public ~~entity~~ entity, by either an executive officer, elected official in the highest level of elected office, or other authorized employee.

(c) Delegation of authority to sign permit applications to other authorized employees or any employee in a specific position (~~i.e. signing officials~~) shall be provided in letter format writing to the Division and signed by an authorized person pursuant to Paragraph (b) of this Rule. The delegation may be for a specific permit application or more general for certain or all types of water quality permits. The letter shall identify the extent of delegation.

Authority G.S. 143-215.3(a)(1); 143-215.1.

15A NCAC 02T .0107 STAFF REVIEW AND PERMIT PREPARATION

(a) The staff of the Division shall conduct a review of plans, specifications and other project data accompanying the application and shall determine if the application and required information are complete. The staff shall acknowledge receipt of a complete application except for fast-track sewer applications. The local government unit or units having jurisdiction over

specific residential projects shall be notified of permit applications in accordance with G.S. 143-215.1(d1).

(b) If the application ~~is not complete with~~ does not include all required information and the application fee, the application shall be returned to the Applicant applicant. The staff shall advise the ~~applicant by mail:~~ Applicant:

- (1) how the application or accompanying supporting information may be modified to make it acceptable ~~or complete;~~ for review; and
- (2) that the 90 day processing period required in G.S. 143-215.1 and Rule .0108 of this Section begins upon receipt of a corrected ~~or complete~~ application with required supporting information.

(c) ~~Pursuant to G.S. 143-215.67(a), the staff of the Division shall determine for sewer system construction or sewer system extensions, whether the treatment works or the sewer system to which the proposed system will discharge is adequate to receive waste which will be discharged from the proposed system. In reviewing a permit application for sewer system construction or sewer system extensions, the staff of the Division shall determine whether the treatment works or the sewer system to which the proposed system will discharge is adequate to receive waste which will be discharged from the proposed system, pursuant to G.S. 143-215.67(a).~~

(d) In reviewing a permit application for ~~For~~ new and expanding treatment works and disposal systems, the staff shall make a site-specific evaluation to determine the potential impacts of the proposed project on surface and ground water quality. The Applicant shall ~~applicant must~~ make the site accessible to the Division.

(e) If an application is accepted and later found to be incomplete, the Applicant applicant shall be advised how the application or accompanying supporting information may be modified to make it ~~acceptable or complete.~~ The staff shall advise the ~~applicant by mail:~~ Applicant:

- (1) that the 90 day processing period required in G.S. 143-215.1(d) and Rule .0108 of this Section begins on the date the additional information is received; and
- (2) that if all required information is not submitted within 30 days, the project will be returned as incomplete. Any resubmittal of a returned application ~~must~~ shall be accompanied with a new application fee.

Authority G.S. 143-215.1(b); 143-215.1(d); 143-215.3(a)(1); 143-215.3(a)(4).

15A NCAC 02T .0108 FINAL ACTION ON PERMIT APPLICATIONS TO THE DIVISION

(a) The Director shall take final action on all applications not later than 90 days following receipt of a complete application and with ~~together with all~~ required information. All ~~permits or permits,~~ renewals of ~~permits~~ permits, and decisions denying permits or renewals shall be in writing.

(b) The Director ~~may:~~ shall:

- (1) issue a permit permit:

- (A) containing such conditions as are necessary to effectuate the purposes of Article 21, Chapter 143 of the General Statutes; and
- (2)(B) ~~issue a permit~~ containing time schedules for achieving compliance with applicable effluent standards and limitations, surface water or groundwater standards and other legally applicable requirements;
- (2)(3) deny a permit application ~~where~~ if necessary to effectuate:
 - (A) the purposes of Article 21, Chapter 143;
 - (B) the purposes of G.S. 143-215.67(a); or
 - (C) ~~rules on coastal waste treatment, disposal, found in Section 15A NCAC 02H .0400;~~
 - (C)(D) rules on groundwater quality standards found in Subchapter 02L of this Chapter; Chapter; or
- (3)(4) hold public meetings when necessary to obtain additional information needed to complete the review of the application. The application shall be considered as incomplete until the close of the meeting record.

(c) The Division may require any monitoring and reporting requirements, including groundwater, surface water or wetlands, waste, wastewater, ~~sludge, residuals,~~ soil, treatment process, lagoon/storage pond, and plant tissue, necessary to determine the source, quantity and quality of the waste and its effect upon the surface water, ground waters or wetlands. All reports ~~must~~ shall be submitted on ~~Division-supplied~~ Division-supplied forms or forms approved by the Division as providing the same information as required by the Division's forms.

(d) If a permit is denied, the letter of denial shall state the ~~reason(s)~~ reason for denial and any reasonable measures which the Applicant ~~applicant~~ may take to make the application approvable.

(e) All permits requiring an annual fee shall be issued for a time period not to exceed ~~five~~ eight years.

Authority G.S. 143-215.1(a); 143-215.1(b); 143-215.1(d); 143-215.3(a)(1).

**15A NCAC 02T .0109 PERMIT RENEWALS
(READOPTION WITHOUT SUBSTANTIVE CHANGES)**

**15A NCAC 02T .0110 MODIFICATION AND
REVOCATION OF PERMITS**

Any ~~A~~ permit issued by the Division pursuant to this Subchapter is subject to revocation, or modification upon 60 days notice by the Director in whole or part ~~for~~ the following reasons:

- (1) violation of any terms or conditions of the ~~permit;~~ permit or this Subchapter;
- (2) obtaining a permit by misrepresentation or failure to disclose ~~fully~~ all relevant facts;

- (3) refusal of the ~~Permittee~~ permittee to allow authorized employees of the Department upon presentation of credentials:
 - (a) to enter upon Permittee's ~~permittee's~~ premises on which a system is located in which any records are required to be kept under terms and conditions of the permit;
 - (b) to have access to any documents and records required to be kept under terms and conditions of the permit;
 - (c) to inspect any monitoring equipment or method required in the permit; or
 - (d) to sample any ~~pollutants,~~ pollutants;
- (4) failure to pay the annual fee for administering and compliance ~~monitoring,~~ monitoring; or
- (5) a determination by the Division that the conditions of the permit are in conflict with Administrative Code or Statute.

Authority G.S. 143-215.1(b)(2.); 143-215.3(a)(1).

**15A NCAC 02T .0111 CONDITIONS FOR ISSUING
GENERAL PERMITS**

(a) ~~In accordance with the provisions of G.S. 143-215.1(b), (c) and (d), general permits may be developed by the Division and issued by the Director for categories of activities covered by this Subchapter. General permits may be written for categories of activities that involve the same or substantially similar operations, have similar treated waste characteristics, require the same limitations or operating conditions, and require the same or similar monitoring. After issuance of a general permit by the Director, persons operating facilities described by the general permit may request coverage under it, and the Director or his designee may grant appropriate certification. All individual operations which receive a "Certificate of Coverage" under a general permit are permitted under the specific general permit for which the coverage was issued. A Certificate of Coverage shall mean that approval is given to facilities that meet the requirements of coverage under the general permit. Persons operating facilities covered under general permits developed in accordance with this Rule shall be subject to the same limits, conditions, management practices, enforcement authorities, and rights and privileges as specified in the general permit. After issuance of a general permit by the Director pursuant to G.S. 143-215.1(b), (c) or (d), persons operating facilities described by the general permit may request coverage under it. An operation that receives a "Certificate of Coverage" under a general permit shall be permitted under the general permit for which the coverage was issued. A Certificate of Coverage shall mean that approval is given to facilities that meet the requirements of coverage under the general permit. Persons operating facilities covered under general permits developed in accordance with this Rule shall be subject to the same limits, conditions, management practices, enforcement authorities, and rights and privileges specified in the general permit.~~

(b) Upon development of a draft general permit, the Director shall publicly notice under G.S. 143-215.4 (b)(1) and (2), at least 30 days prior to final action, an intent to issue the general permit.

Upon development of a draft general permit, the Director shall publicly notice an intent to issue the general permit, pursuant to G.S. 143-215.4 (b)(1) and (2), at least 30 days prior to final action. ~~A one-time publication of the notice in a newspaper having general circulation in the geographic areas affected by the proposed permit shall be required.~~ The notice shall provide the name, address and phone number of the Division, a brief description of the intended action, and a brief description of the procedures for the formulation of final determinations, including a 30-day comment period and other means by which interested persons may comment upon the determinations.

(c) No provisions in any general permit issued under this Rule shall be interpreted as allowing to allow the Permittee permittee to violate state surface water standards, groundwater standards outside a Compliance Boundary established in accordance with 15A NCAC 02L .0107, or other applicable environmental Rules. Construction of new water supply wells for human consumption shall be prohibited within Compliance Boundaries for facilities covered under general permits issued under this Section. General permits issued pursuant to this Rule shall be considered individual permits for purposes of Compliance Boundaries established under 15A NCAC 02L .0107.

(d) To obtain ~~an individual~~ a Certificate of Coverage, a Notice of Intent to be covered by the general permit ~~must~~ shall be given by the ~~Applicant applicant~~ to the Division using ~~forms provided by the Division. Division-approved forms.~~ Coverage under the general permit shall be granted unless the Director makes a determination under Paragraph (h) of this Rule that an individual permit is required. If all requirements of Paragraph (h) are not met, an individual permit application and full application review procedure shall be required.

(e) ~~General permits~~ A general permit shall be effective for a term not to exceed ~~five years~~ eight years, at the end of which the Division may renew ~~them.~~ it. The Division shall satisfy public notice requirements specified in Paragraph (b) of this Rule prior to renewal of a general permit. ~~permits.~~ If the Division does not renew a general permit, all operations covered under that general permit shall be notified to submit applications for individual permits.

(f) Anyone engaged in activities covered by the general permit rules but not permitted in accordance with this Subchapter shall be in violation of G.S. 143-215.1.

(g) Any individual covered or considering coverage under a general permit may choose to pursue an individual permit for any operation covered by this Rule.

(h) The Director may require any person, otherwise eligible for coverage under a general permit, to apply for an individual permit by notifying that person that an application is required. Notification shall consist of a written description of the ~~reason(s)~~ reason for the decision, appropriate permit application forms and application instructions, a statement establishing the required date for submission of the application, and a statement informing the person that coverage by the general permit shall automatically terminate upon issuance of the individual permit. Reasons for requiring application for an individual permit include:

- (1) the operation is a significant contributor of pollutants to the waters of the state;
- (2) conditions at the permitted site change, altering the constituents or characteristics of the

- (3) wastewater such that the operation no longer qualifies for coverage under a general permit;
- (4) noncompliance with the general permit;
- (5) noncompliance with the Commission rules in this Chapter;
- (6) a change has occurred in the availability of demonstrated technology or practices for the control or abatement of pollutants applicable to the operation;
- (7) a determination by the Division that there has been or is the potential to have a direct discharge of ~~wastewater, sludge~~ wastewater or residuals to waters of the state; or the system has been allowed to deteriorate or leak such that it poses an immediate threat to the environment.

(i) General permits or individual Certificate of Coverages may be modified, terminated, or revoked and reissued in accordance with the authority and requirements of rules of this Subchapter.

Authority G.S. 143-215.1; 143-215.3(a)(1); 143-215.10C.

15A NCAC 02T .0112 DELEGATION OF AUTHORITY

For permits issued by the Division, the Director is authorized to delegate any or all of the functions contained in the rules of this Subchapter except the following:

- (1) denial of a permit application;
- (2) revocation of a permit not requested by the ~~permittee; Permittee; and~~
- (3) modification of a permit not requested by the ~~permittee; Permittee.~~

Authority G.S. 143-215.3(a)(1); 143-215.3(a)(4).

15A NCAC 02T .0113 PERMITTING BY REGULATION

(a) The following disposal systems as well as those in Permitting By Regulation rules in this Subchapter (i.e., Rules .0203, .0303, .0403, ~~.1003,~~ .1103, .1203, .1303, .1403, and .1503) ~~are~~ shall be deemed to be permitted pursuant to G.S. ~~143-215.1(b)~~ 143-215.1(b), and it shall not be necessary for the Division to issue individual permits or coverage under a general permit for construction or operation of the following disposal systems provided the system does not result in any violations of surface water or groundwater standards, there is no direct discharge to surface waters, and all criteria required for the specific system ~~is~~ are met:

- (1) Swimming pool and spa filter backwash and drainage, filter backwash from aesthetic fountains, and filter backwash from commercial or residential water features such as garden ponds or fish ~~ponds~~ ponds, that is discharged to the land surface;
- (2) Backwash from raw water intake screening devices that is discharged to the land surface;
- (3) Condensate from residential or commercial air conditioning units that is discharged to the land surface;
- (4) Discharges to the land surface from individual non-commercial car washing operations;

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- (5) Discharges to the land surface from flushing and hydrostatic testing water associated with utility distribution systems, new sewer extensions or new reclaimed water distribution lines;
- (6) Street wash water that is discharged to the land surface;
- (7) Discharges to the land surface from firefighting ~~fire fighting~~ activities;
- (8) Discharges to the land surface associated with emergency removal and treatment activities for spilled oil authorized by the federal or state on-scene coordinator when such removals are undertaken to minimize overall environmental damage due to an oil spill;
- (9) Discharges to the land surface associated with biological or chemical decontamination activities performed as a result of an emergency declared by the Governor or the Director of the Division of Emergency Management and that are conducted by or under the direct supervision of the federal or state on-scene coordinator and that meet the following criteria:
- (A) the volume produced by the decontamination activity is too large to be contained onsite;
- (B) the Division is informed prior to commencement of the decontamination activity; and
- (C) the wastewater is not radiologically contaminated or classified as hazardous waste;
- (10) Drilling muds, cuttings and well water from the development of wells or from other construction ~~activities~~ activities, including directional boring, except such wastes generated in the construction and development of oil and gas wells regulated by Article 27 of G.S. 113;
- (11) Purge water from groundwater monitoring wells;
- (12) Composting facilities for dead ~~animals~~, animals if the construction and operation of the facilities is approved by the North Carolina Department of Agriculture and Consumer Services; the facilities are constructed on an impervious, weight-bearing foundation, operated under a roof; and the facilities are approved by the State Veterinarian pursuant to G.S. 106-403;
- (13) Overflow from elevated potable water storage facilities;
- (14) Mobile carwashes if:
- (A) all detergents used are biodegradable;
- (B) no steam cleaning, engine or parts cleaning is being conducted;
- (C) notification is made prior to operation by the owner to the municipality or if not in a municipality then the county
- where the cleaning service is being provided; and
- (D) ~~all~~ non-recyclable washwater is collected and discharged into a sanitary sewer or wastewater treatment ~~facility~~ facility, upon approval of the facility's ~~owner~~ owner, such that no ponding or runoff of the washwater occurs;
- (15) Mine tailings ~~where~~ if no chemicals are used in the mining process;
- (16) Mine dewatering ~~where~~ if no chemicals are used in the mining process; ~~and~~
- (17) Wastewater created from the washing of produce, with no further processing on-site, on farms where the wastewater is irrigated onto fields so as not to create runoff or cause a ~~discharge~~ discharge; and
- (18) Discharges to the land surface of less than 5,000 gallons per week of backwash water from greensand filters, not including conventional filters, reverse osmosis, and ion exchange filters, at potable water wells, provided ponding or runoff does not occur and the backwash does not contain radioactive material or arsenic; and
- (19) Discharges to the land surface of less than 350 gallons per week of backwash water from reverse osmosis, ion exchange filters, greensand filters at private drinking water wells serving single-family residences, provided ponding or runoff does not occur.
- (b) Nothing in this Rule shall be deemed to allow the violation of any ~~assigned~~ surface water, groundwater, or air quality standards, and in addition any such violation shall be considered a violation of a condition of a permit. Further, nothing in this Rule shall be deemed to apply to or permit disposal systems for which a state National Pollutant Discharge Elimination System permit is otherwise required.
- (c) Any violation of this Rule or any discharge to surface waters from the disposal systems listed in Paragraph (a) of this Rule or the activities listed in other Permitted By Regulation rules in this Subchapter shall be reported in accordance with 15A NCAC 02B .0506.
- (d) Disposal systems deemed permitted under this Subchapter shall remain deemed permitted, notwithstanding any violations of surface water or groundwater standards or violations of this Rule or other Permitted By Regulation rules in this Subchapter, until such time as the Director determines that they shall not be deemed permitted in accordance with the criteria established in this Rule.
- (e) The Director may determine that a disposal system ~~should~~ shall not be deemed to be permitted in accordance with this Rule or other Permitted By Regulation rules in this Subchapter and require the disposal system to obtain an individual permit or a certificate of coverage under a general permit. This determination shall be made based on existing or projected environmental impacts, compliance with the provisions of this Rule or other Permitted By Regulation rules in this Subchapter, and the compliance history of the facility owner.

Authority G.S. 130A-300; 143-215.1(a)(1); 143-215.1(b)(4)(e); 143-215.3(a).

15A NCAC 02T .0114 WASTEWATER DESIGN FLOW RATES

(a) This Rule shall be used to determine wastewater flow rates for all systems ~~covered~~ governed by this Subchapter unless alternate criteria are provided by a ~~program specific~~ program-specific rule ~~and or~~ for flow used for the purposes of 15A NCAC 02H .0105. These are ~~minimum~~ design daily flow rates for normal use and occupancy situations. Higher flow rates may be required where usage and occupancy are atypical, ~~including,~~ including those in Paragraph (e) of this Rule. Wastewater flow calculations ~~must shall~~ take hours of operation and anticipated maximum ~~occupancies/usage~~ occupancies and usage into account when calculating peak flows for design.

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

(c) The following table shall be used to determine the minimum allowable design daily flow of wastewater facilities. Design flow rates for establishments not identified below shall be determined using available flow data, water-using fixtures, occupancy or operation patterns, and other measured data.

Type of Establishments	Daily Flow For Design
Barber and beauty shops	
Barber Shops	50 gal/chair
Beauty Shops	125 gal/booth or bowl
Businesses, offices and factories	
General business and office facilities	25 gal/employee/shift
Factories, excluding industrial waste	25 gal/employee/shift
Factories or businesses with showers or food preparation	35 gal/employee/shift
Warehouse	100 gal/loading bay
Warehouse – self storage (not including caretaker residence)	1 gal/unit
Churches	
Churches without kitchens, day care or camps	3 gal/seat
Churches with kitchen	5 gal/seat
Churches providing day care or camps	25 gal/person (child & employee)
Fire, rescue and emergency response facilities	
Fire or rescue stations without on site staff	25 gal/person
Fire or rescue stations with on-site staff	50 gal/person/shift
Food and drink facilities	
Banquet, dining hall	30 gal/seat
Bars, cocktail lounges	20 gal/seat
Caterers	50 gal/100 sq ft floor space
Restaurant, full Service	40 gal/seat
Restaurant, single service articles	20 gal/seat
Restaurant, drive-in	50 gal/car space
Restaurant, carry out only	50 gal/100 sq ft floor space
Institutions, dining halls	5 gal/meal
Deli	40 gal/100 sq ft floor space
Bakery	10 gal/100 sq ft floor space
Meat department, butcher shop or fish market	75 gal/100 sq ft floor space
Specialty food stand or kiosk	50 gal/100 sq ft floor space
Hotels and Motels	
Hotels, motels and bed & breakfast facilities, without in-room cooking facilities	120 gal/room
Hotels and motels, with in-room cooking facilities	175 gal/room
Resort hotels	200 gal/room
Cottages, cabins	200 gal/unit
Self service laundry facilities	500 gal/machine
Medical, dental, veterinary facilities	
Medical or dental offices	250 gal/practitioner/shift
Veterinary offices (not including boarding)	250 gal/practitioner/shift
Veterinary hospitals, kennels, animal boarding facilities	20 gal/pen, cage, kennel or stall
Hospitals, medical	300 gal/bed

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Hospitals, mental	150 gal/bed
Convalescent, nursing, rest homes without laundry facilities	60 gal/bed
Convalescent, nursing, rest homes with laundry facilities	120 gal/bed
Residential care facilities	60 gal/person
Parks, recreation, camp grounds, R-V parks and other outdoor activity facilities	
Campgrounds with comfort station, without water or sewer hookups	75 gal/campsite
Campgrounds with water and sewer hookups	100 gal/campsite
Campground dump station facility	50 gal/space
Construction, hunting or work camps with flush toilets	60 gal/person
Construction, hunting or work camps with chemical or portable toilets	40 gal/person
Parks with restroom facilities	250 gal/plumbing fixture
Summer camps without food preparation or laundry facilities	30 gal/person
Summer camps with food preparation and laundry facilities	60 gal/person
Swimming pools, bathhouses and spas	10 gal/person
Public access restrooms	325 gal/plumbing fixture
Schools, preschools and day care	
Day care and preschool facilities	25 gal/person (child & employee)
Schools with cafeteria, gym and showers	15 gal/student
Schools with cafeteria	12 gal/student
Schools without cafeteria, gym or showers	10 gal/student
Boarding schools	60 gal/person (student & employee)
Service stations, car wash facilities	
Service stations, gas stations	250 gal/plumbing fixture
Car wash facilities (if recycling water see Rule .0235)	1200 gal/bay
Sports centers	
Bowling center	50 gal/lane
Fitness, exercise, karate or dance center	50 gal/100 sq ft
Tennis, racquet ball	50 gal/court
Gymnasium	50 gal/100 sq ft
Golf course with only minimal food service	250 gal/plumbing fixture
Country clubs	60 gal/member or patron
Mini golf, putt-putt	250 gal/plumbing fixture
Go-kart, motocross	250 gal/plumbing fixture
Batting cages, driving ranges	250 gal/plumbing fixture
Marinas without bathhouse	10 gal/slip
Marinas with bathhouse	30 gal/slip
Video game arcades, pool halls	250 gal/plumbing fixture
Stadiums, auditoriums, theaters, community centers	5 gal/seat
Stores, shopping centers, malls and flea markets	
Auto, boat, recreational vehicle dealerships/showrooms with restrooms	125 gal/plumbing fixture
Convenience stores, with food preparation	60 gal/100 sq ft
Convenience stores, without food preparation	250 gal/plumbing fixture
Flea markets	30 gal/stall
Shopping centers and malls with food service	130 gal/1000 sq ft
Stores and shopping centers without food service	100 gal/1000 sq ft
Transportation terminals – air, bus, train, ferry, port and dock	5 gal/passenger

(d) Design daily flow rates for proposed non-residential developments where the types of use and occupancy are not known shall be designed for a minimum of 880 gallons per acre ~~acre~~, or the Applicant ~~applicant~~ shall specify an anticipated flow based upon anticipated or potential uses.

(e) ~~Conditions applicable to the use of the above design daily flow rates:~~

- (1) ~~For restaurants, convenience stores, service stations and public access restroom facilities,~~

~~higher design daily flow rates shall be required based on higher expected usage where use is increased because of its proximity to highways, malls, beaches, or other similar high use areas.~~

(e)(2) Residential property on barrier islands and similar communities located south or east of the Atlantic Intracoastal Waterway and used as vacation rental as defined in G.S. 42A-4 shall use 120 gallons per day per habitable room. Habitable room shall mean a room or enclosed floor space used or intended to be

used for living or sleeping, excluding kitchens and dining areas, bathrooms, shower rooms, water closet compartments, laundries, pantries, foyers, connecting corridors, closets, and storage spaces.

(f) An adjusted daily sewage flow design rate shall be granted for permitted but not yet tributary connections and future connections tributary to the system upon showing that the capacity of a sewage system is adequate to meet actual daily wastewater flows from a facility included in Paragraph (b) or (c) of this Rule without causing flow violations at the receiving wastewater treatment plant or capacity-related capacity-related sanitary sewer overflows within the collection system as follows:

(1) Documented, representative data from that facility or a comparable facility shall be submitted by an authorized signing official in accordance with Rule .0106 of this Section to the Division ~~as follows~~ for all flow reduction ~~request~~ requests, as follows:

(A) Dates of flow meter calibrations during the time frame evaluated and indication if any adjustments were necessary.

(B) A breakdown of the type of connections (e.g. two bedroom units, three bedroom units) and number of customers for each month of submitted data as applicable. Identification of any non-residential connections including subdivision ~~clubhouses/pools, clubhouses and pools,~~ restaurants, schools, churches and businesses. For each non-residential connection, information as identified in Paragraph (c) of this Rule (e.g. 200 seat church, 40 seat restaurant, 35 person pool bathhouse).

(C) ~~Owner of the collection system. A letter of agreement from the owner or an official, meeting the criteria of Rule .0106 of this Subchapter, of the receiving collection system or treatment works accepting the wastewater and agreeing with the adjusted design rate.~~

(D) Age of the collection system.

(E) Analysis of inflow and infiltration within the collection system or receiving treatment plant, as applicable.

(F) ~~Where~~ If a dedicated wastewater treatment plant serves the specific area and is representative of the residential wastewater usage, at least the 12 most recent consecutive monthly average wastewater flow readings and the daily total wastewater flow readings for the highest average wastewater flow month per ~~customers~~ customers, as reported to the Division.

(G) ~~Where~~ If daily data from a wastewater treatment plant cannot be ~~utilized~~ used or is not representative of the project area: ~~at least~~ 12 months worth of monthly average wastewater flows from the receiving treatment plant shall be evaluated to determine the peak sewage month. Daily wastewater flows shall then be taken from a flow meter installed at the most downstream point of the collection area for the peak month selected that is representative of the project area. Justification for the selected placement of the flow meter shall also be provided.

(H) An estimated ~~minimum~~ design daily sewage flow rate shall be ~~taken~~ determined by calculating the numerical average of the top three daily readings for the highest average flow month. The calculations shall also account for seasonal variations, excessive inflow and infiltration, age and suspected meter ~~reading/recording~~ reading and recording errors.

(2) The Division shall evaluate all data submitted but shall also consider other factors in granting, with or without adjustment, or denying a flow reduction request including: applicable weather conditions during the data period (i.e. rainy or drought), other historical monitoring data for the particular facility or other similar facilities available to the Division, the general accuracy of monitoring reports and flow meter readings, and facility usage (i.e., resort area).

(3) Flow increases shall be required if the calculations in Subparagraph (f)(1) of this Rule yield design flows higher than that specified in Paragraphs (b) or (c) of this Rule.

(4) The ~~Permittee applicant/owner~~ shall retain the letter of any approved adjusted daily design flow rate for the life of the facility and shall transfer such letter to any future Permittee, new system owner.

Authority G.S. 143-215.1; 143-215.3(a)(1).

15A NCAC 02T .0115 OPERATIONAL AGREEMENTS

(a) Prior to issuance or reissuance of a permit pursuant to this Subchapter for a wastewater facility or sewer extension as specified in G.S. 143-215.1(d1), a private ~~applicant shall provide evidence with the permit application:~~ Applicant shall:

(1) ~~To show~~ Demonstrate that the Applicant applicant has been designated as a public utility by the North Carolina Utilities Commission and is authorized to provide service to the specific project area. This may be a Certificate of Public

Convenience and Necessity or letter from the Public Staff; or

- (2) Enter into and submit an executed Operational Agreement pursuant to G.S. 143-215.1(d1) with the Division.

(b) ~~Where~~ If the Applicant applicant is not a Homeowner's or Property Owner's Association, developer of lots to be sold, an executed Operational Agreement must shall be submitted with the permit application. A copy of the Articles of Incorporation, Declarations and By-laws shall be submitted to the Division Division, as required by 15A NCAC 02T .0116, with the engineer's certification as required by 15A NCAC 02T .0116 and prior to operation of the permitted facilities.

(c) ~~For permit applications where~~ If the Applicant applicant is a legally formed Homeowners' or Property Owner's Association, an executed Operational Agreement and a copy of the Articles of Incorporation, Declarations and By-laws shall be submitted to the Division with the permit application.

(d) ~~An Operational Agreement is required prior to donation to a public utility or municipality unless the applicant is the respective municipality or public utility. The Operational Agreement shall become void upon transferring the permit to the public utility or municipality via a change of ownership request to the Division and permit issuance into the new owner name.~~

Authority G.S. 143-215.1(d1).

15A NCAC 02T .0116 CERTIFICATION OF COMPLETION

(a) Prior to the operation of any sewer system, treatment works, utilization system, or disposal system for which an individual permit has been issued in accordance with this Subchapter and the application prepared by licensed professional, a certification must shall be received by the Division from a professional certifying that the sewer system, treatment works, utilization system, or disposal system has been installed in accordance with the rules, any minimum design criteria except as noted, and approved plans and specifications. The professional certification must shall be on official forms completely filled out, where applicable, and submitted to the Division. For facilities with phased construction or where there is a need to operate certain equipment under actual operating conditions prior to certification, additional certification may be needed as follow-ups to the initial, pre-operation certification. The Division may not acknowledge receipt of engineering certifications. The Permittee and the professional shall track the submittal of certifications.

(b) For sewer extensions ~~involving developer donated projects where the developer is the original Permittee, where a transfer of ownership is desired~~, a change of ownership request shall be submitted to the Division on Division on Division-approved forms upon certifying completion of the project.

(c) All deeds, easements and encroachment agreements necessary for installation and operation and maintenance of the system shall be obtained prior to operation of the system.

(d) The Permittee shall maintain a copy of the individual permit and a set of final record drawings for the life of the facility.

Authority G.S. 143-215.1.

15A NCAC 02T .0117 TREATMENT FACILITY OPERATION AND MAINTENANCE

(a) For facilities permitted under this Subchapter, the ~~permittee must~~ Permittee shall designate an Operator in Responsible Charge and a back-up operator as required by the Water Pollution Control System Operators Certification Commission as ~~established in pursuant to 15A NCAC 08F .0200 and 15A NCAC 08G .0200. Copies of this Rule are available from the Division, Archdale Building, 512 N. Salisbury Street, Raleigh, North Carolina 27604 at no charge.~~

(b) In order to insure the proper operation and maintenance of facilities permitted under this Section, the Operator in Responsible Charge, Charge or a back-up operator when appropriate must shall operate and visit the facility as required by the Water Pollution Control System Operators Certification Commission as ~~established in pursuant to 15A NCAC 08F .0200 and 15A NCAC 08G .0200. Copies of this Rule are available from the Division, Archdale Building, 512 N. Salisbury Street, Raleigh, North Carolina 27604 at no charge.~~

Authority G.S. 143-215.3.

15A NCAC 02T .0118 DEMONSTRATION OF FUTURE WASTEWATER TREATMENT CAPACITIES

~~In order to insure that treatment, utilization, or disposal systems do not exceed their hydraulic treatment capacities, no~~ No permits for sewer line extensions shall be issued to wastewater treatment systems owned or operated by municipalities, counties, sanitary districts or public utilities unless they meet the following requirements:

- (1) Prior to exceeding 80 percent of the ~~wastewater treatment system's~~ permitted hydraulic capacity (based on the average flow of during the last calendar year), the ~~permittee must~~ Permittee shall submit an approvable engineering evaluation of their future wastewater treatment, utilization, and disposal needs. This evaluation must shall outline specific plans for meeting future wastewater treatment, utilization, or disposal needs by either expansion of the existing system, elimination or reduction of extraneous flows, or water conservation and must shall include the ~~source(s)~~ source of funding for the improvements. If expansion is not proposed or is proposed for a later date, a detailed justification must shall be made to the ~~satisfaction of the Director~~ that wastewater treatment needs will be met based on past growth records and future growth projections and, as appropriate, shall include conservation plans or other specific measures to achieve waste flow reductions.

- (2) Prior to exceeding 90 percent of the ~~wastewater treatment, utilization, or disposal systems~~ permitted hydraulic ~~capacity,~~ capacity (based on the average flow during the last calendar year), the ~~permittee must~~ Permittee shall obtain all permits needed for the expansion of the wastewater treatment, utilization, or disposal

system and, if construction is needed, submit ~~approvable~~ final plans and specifications for ~~expansion expansion~~, including a construction schedule. If expansion is not proposed or is proposed for a later date, a ~~detailed~~ justification ~~must shall~~ be made ~~to the satisfaction of the Director~~ that wastewater treatment needs will be met based on past growth records and future growth projections and, as appropriate, shall include conservation plans or other specific measures to achieve waste flow reductions.

- (3) The Director shall allow permits to be issued to facilities that are exceeding the 80 percent or 90 percent ~~loading rates~~ disposal capacity if the additional flow is not projected to result in the facility exceeding its permitted hydraulic capacity, the facility is in compliance with all other permit limitations and requirements, and ~~it is demonstrated to the satisfaction of the Director~~ that adequate progress is being made in developing the needed engineering evaluations or plans and specifications. In determining the adequacy of the progress, the Director shall consider the projected flows, the complexity and scope of the work to be ~~completed~~ completed, and any projected environmental impacts.

Authority G.S. 143-215.3.

15A NCAC 02T .0120 HISTORICAL CONSIDERATION IN PERMIT APPROVAL

(a) The Division shall consider an ~~Applicant's applicant's~~ compliance history in accordance with G.S. 143-215.1(b)(4)b.2. and with the requirements contained ~~within in~~ this Rule for environmental permits and certifications issued under Article 21. Paragraph (b) of this Rule is a partial set of criteria for routine consideration under G.S. 143-215.1(b)(4)b.2. The Director may also consider other compliance information in determining compliance history.

(b) When any of the following apply, permits for new and expanding facilities shall not be granted, unless the Division determines that the permit is specifically and solely needed for the construction of facilities to resolve non-compliance with any environmental statute or rule:

- (1) The ~~Applicant applicant~~ or any parent, subsidiary, or other affiliate of the ~~Applicant applicant or parent~~ has been convicted of environmental crimes under G.S. 143-215.6B or under Federal law that would otherwise be prosecuted under G.S. 143-215.6B ~~where all appeals and all appeals of this conviction~~ have been abandoned or exhausted.
- (2) The ~~Applicant applicant~~ or any parent, subsidiary, or other affiliate of the ~~Applicant affiliation~~ has previously abandoned a wastewater treatment facility without properly closing the facility in accordance with the permit or this Subchapter.

- (3) The ~~Applicant applicant~~ or any parent, subsidiary, or other affiliate of the ~~Applicant affiliation~~ has not paid a civil penalty ~~where all appeals and all appeals of this penalty~~ have been abandoned or exhausted.
- (4) The ~~Applicant applicant~~ or any parent, subsidiary, or other affiliate of the ~~Applicant affiliation~~ is currently not compliant with any compliance schedule in a permit, settlement agreement or order.
- (5) The ~~Applicant applicant~~ or any parent, subsidiary, or other affiliate of the ~~Applicant affiliation~~ has not paid an annual fee in accordance with Rule .0105(e)(2).

(c) Permits for renewing facilities shall not be granted if the Applicant or any affiliation has not paid an annual fee in accordance with Rule .0105(e)(2).

(d)(e) Any variance to this Rule shall be approved by the Director and shall be based on the current compliance status of the Permittee's permittee's facilities and the magnitude of previous violations. Variance approval shall not be delegated to subordinate staff.

Authority G.S. 143-215.1(b); 143-215.3(a).

SECTION .0200 – WASTEWATER PUMP AND HAUL SYSTEMS

15A NCAC 02T .0201 SCOPE (READoption WITHOUT SUBSTANTIVE CHANGES)

15A NCAC 02T .0203 PERMITTING BY REGULATION

(a) The following systems ~~are shall be~~ deemed permitted pursuant to Rule .0113 of this Subchapter ~~provided if~~ the system meets the criteria in Rule .0113 of this Subchapter and all criteria required for ~~the specific that~~ system in this Rule:

- (1) Wastewater from single-beverage kiosks and similar operations not regulated under the authority of the Division of ~~Environmental Public Health~~ if the following criteria are met:
- (A) The facility notifies the appropriate Division regional office in writing advising of the type of operation, type and quantity of wastewater generated, and the receiving wastewater treatment facility. A letter from the facility that is accepting the wastewater (type and quantity) ~~specifically~~ agreeing to accept wastewater from the applicant shall be ~~included; included;~~
- (B) The wastewater does not contain any human waste; ~~Waste; and~~
- (C) The waste is collected and discharged into a sewer or treatment system designed and permitted to accept the type of wastewater being pumped and hauled.

- (2) Industrial wastewater if the following criteria are met:
 - (A) The facility notifies the appropriate Division regional office in writing advising of the type of operation, type and quantity of wastewater generated, ~~location,~~ location of wastewater generation, and the receiving wastewater treatment facility. A letter from the facility accepting the wastewater (type and quantity) ~~specifically~~ agreeing to accept wastewater from the applicant shall be ~~included.~~ included.
 - (B) The wastewater does not contain any human ~~waste.~~ waste.
 - (C) The waste is collected and discharged into a sewer or treatment system designed and permitted to accept the type of wastewater being pumped and ~~hauled.~~ hauled.
 - (D) The pump and haul activity is not to alleviate a failing wastewater ~~system.~~ system; and
 - (E) The Division regional office concurs in writing that the activity meets the criteria in this Rule.
- (3) ~~Pump~~ Pumping and hauling of waste from sewer cleaning activities.

(b) The Director may determine that a system ~~should~~ shall not be deemed permitted in accordance with this Rule and Rule .0113 of this Subchapter. This determination shall be made in accordance with Rule .0113(e) of this Subchapter.

Authority G.S. 143-215.1; 143-215.3(a).

15A NCAC 02T .0204 PERMITTING

- (a) ~~Pump and haul permits are not acceptable long-term domestic wastewater treatment alternatives.~~ Permits for domestic wastewater shall only be issued in cases of environmental emergencies, nuisance conditions (e.g. odors, vectors), health problems, or for unavoidable delays in construction of systems previously permitted under this Section. Applications for pump and haul permits to for unavoidable construction delays must include documentation demonstrating the delay could not be avoided. Failure to complete construction prior to the expiration of a pump and haul permit due to unavoidable construction delays may subject the Permittee to enforcement action by the Division if the delay could have been avoided by payment of additional costs. The permits shall be issued for a period of no more than six months unless the Director determines that conditions are such that the final waste management options cannot be implemented within six months.
- (b) Applications shall include a letter from the facility accepting the wastewater ~~specifically~~ agreeing to accept wastewater (type and quantity) from the applicant for the proposed activity.
- (c) Pump and haul facilities shall include at a minimum 24 hours storage equipped with high-water alarms.

(d) Permitted pump and haul facilities or activities under this rule shall be inspected at least daily by the permittee or its representative.

Authority G.S. 143-215.1; 143-215.3(a).

SECTION .0300 - SEWER EXTENSIONS

15A NCAC 02T .0301 SCOPE (READOPTION WITHOUT SUBSTANTIVE CHANGES)

15A NCAC 02T .0302 DEFINITIONS

- (a) The following definitions are used in this Section:
 - (1) "Alternative sewer system" means any sewer system (collection system) other than a gravity system or standard pump station and force main. These include pressure sewer systems, ~~septic tank/effluent tank with effluent~~ pump (STEP) sewer systems, vacuum sewer system, and small diameter variable grade gravity sewers.
 - (2) "Building" means any structure occupied or intended for supporting or sheltering any occupancy.
 - (3) "Building drain" means that part of the lowest piping of a drainage system that receives the discharge from soil, waste and other drainage pipes that extends 10 feet beyond the walls of the building and conveys the drainage to the building sewer.
 - (4) "Building sewer" means that part of the drainage system that extends from the end of the building drain and conveys the discharge from a single building to a public gravity sewer, private gravity sewer, individual sewage disposal system or other point of disposal.
 - (5) "Fast-track" means a permitting process whereby a professional engineer certifies ~~that~~ a sewer design and associated construction documents conform to all applicable sewer related rules and design ~~criteria, thereby forgoing an upfront technical review by the Division.~~ criteria.
 - (6) "Pressure sewer system" means an interdependent system of grinder pump stations, typically for residences, serving individual wastewater connections for single buildings that share a common and typically a small diameter pressure pipe (1.5 inches through 6 inches). Duplex or greater pump stations connected to a common pressure pipe that can operate both independently and simultaneously with other pump stations while maintaining operation of the system within the operating constraints ~~are not considered~~ shall be exclude from the definition of a pressure sewer system.
 - (7) "Private sewer" means any part of a sewer system ~~which~~ that collects wastewater from one

- building and crosses another property or travels along a street right of way or from more than one building and is not considered a public sewer.
- (8) "Public sewer" means a sewer located in a dedicated public street, roadway, or dedicated public right-of-way or easement ~~which that~~ is owned or operated by any municipality, county, water or sewer district, or any other political subdivision of the state authorized to construct or operate a sewer system.
- (9) "Sewer system" means pipelines or conduits, pumping ~~stations~~, stations including lift stations and grinder stations, alternative ~~systems~~, ~~systems~~ and ~~appliances appurtenant thereto~~, appurtenant ~~appliances~~ used for conducting wastewater to a point of ultimate treatment and disposal.
- (10) "Small diameter, variable grade gravity sewer system" means a system of wastewater collection utilizing an interceptor tank to remove solids and grease from the waste ~~stream, thereby allowing smaller diameter pipes and shallower grades to be used.~~ stream. Flow is transferred to the central gravity system in the public right-of-way by gravity or effluent pumps. With venting and design, inflective grades (up-gradients) may also be accommodated.
- (11) "Septic ~~tank/effluent tank with effluent pump~~ (STEP) system" means ~~the same type of system as a "pressure sewer system" except that a~~ pressure sewer system in which the individual grinder pump is replaced with a septic tank with an effluent pump either in the second chamber of the septic tank or in a separate pump tank that follows the septic tank.
- (12) "Vacuum sewer system" means a mechanized system of wastewater collection ~~utilizing~~ using differential air pressure to move the wastewater. Centralized stations provide the vacuum with valve pits providing the collection point from the source and also the inlet air required to move the wastewater. In conjunction with the vacuum pumps, a standard (non vacuum) pump station and force main is used to transport the wastewater from the vacuum tanks to a gravity sewer or ultimate point of treatment and disposal.
- North Carolina State Plumbing Code, ~~which Code and that~~ serves a single building with the sole purpose of conveying wastewater from that building into a gravity sewer that extends onto or is adjacent to the building's property. A building sewer that contribute more than five percent of the existing wastewater treatment facility's design capacity or 50,000 gallons per day of flow as calculated using the wastewater design flow rates in Rule .0114 of this Subchapter shall not commence operations until after it receives approval form the regional office.
- (2) A gravity sewer serving a single building with less than 600 gallons per day of flow as calculated using rates in 15A NCAC 02T .0114 that crosses another property or parallels a ~~right-of-way~~ right-of-way, provided that:
- (A) an easement for crossing another property is obtained, a map is created and both are recorded at the Register of Deeds office in the county of residence for both property owners and runs with the ~~land,~~ land or, in the case of a building sewer traveling along a right-of-way, documented permission from the dedicated right-of-way owner to use such right-of-way;
- (B) the building inspector certifies the sewer to the point of connection to the existing sewer is in accordance with state or local plumbing code; and
- (C) no other connections are made to the sewer without prior approval from the Division.
- (3) ~~New pump stations or sewage ejectors and force mains if all of the following criteria are met: A pump station and force main serving a single building with less than 600 gallons per day of flow as calculated using the wastewater design flow rates in Rule .0114 of this Subchapter provided that:~~
- (A) ~~the pump station serves a single building;~~
- (B) ~~the force main does not traverse other property or parallel a street right-of-way;~~
- (A) an easement for crossing another property is obtained, a map is created and both are recorded at the Register of Deeds office in the county of residence for both property owners and runs with the land or, in the case of a force main traveling along a right-of-way, documented permission form the dedicated right-of-way owner to use such right-of-way;

Authority G.S. 143-215.1; 143-215.3(a).

15A NCAC 02T .0303 PERMITTING BY REGULATION

(a) The following systems ~~are~~ shall be deemed permitted pursuant to Rule .0113 of this Subchapter ~~provided if~~ the system meets the criteria in Rule .0113 of this Subchapter and all criteria required for ~~the specific~~ that system in this Rule:

- (1) A building sewer documented by the local building inspector to be in compliance with the

~~(C)~~(B) ~~the force main ties if a force main is used, it ties into a non-pressurized pipe/manhole/wetwell pipe, manhole or wetwell; (i.e. is not part of an alternative sewer system),~~

~~(D)~~(C) the system is approved by the local building inspector as being in complete compliance with the North Carolina Plumbing Code to the point of connection to the existing sewer, and

~~(E)~~(D) no other connections are made to the sewer without prior approval from the Division.

(4) The following sewer ~~operations~~ operations, provided that the work conforms to all rules, setbacks and design standards; record drawings of the completed project are kept for the life of the project; and new sources of wastewater flow, immediate or future, are not planned to be connected to the sewer other than previously permitted but not yet tributary:

(A) rehabilitation or replacement of sewers ~~in-kind (i.e., size) of the same size and~~ with the same horizontal and vertical alignment;

(B) rehabilitation or replacement of public 6-inch sewers with 8-inch ~~sewers, sewers,~~ provided that the rehabilitation or replacement is to correct deficiencies and bring the sewer up to current ~~minimum~~ standards;

(C) line relocations of the same pipe size and within the same right-of-way or easement;

(D) parallel line installations of the same size and within the right-of-way or easement where the existing line will be abandoned;

(E) point repairs; and

(F) ~~in-place in-place~~ pump station ~~repairs/upgrades and maintaining repairs or upgrades that maintain~~ permitted capacity to within five percent of the original permitted capacity for pump replacement.

(b) The Director may determine that a system ~~should~~ shall not be deemed permitted in accordance with this Rule and Rule .0113 of this Subchapter. This determination shall be made in accordance with Rule .0113(e) of this Subchapter.

Authority G.S. 143-215.1; 143-215.3(a).

15A NCAC 02T .0304 APPLICATION SUBMITTAL

(a) Application Applications for permits pursuant to this Section shall be made on forms provided by the Division. [<https://deq.nc.gov/about/divisions/water-resources/water->

resources-permits/wastewater-branch/collection-systems/sewer-extension-permitting]

(b) Applications shall not be submitted unless the Permittee has assured downstream sewer capacity.

(c) For pressure sewers, vacuum sewers, STEP systems and other alternative sewer systems discharging into a sewer system, the Permittee, by certifying the permit application and receiving an issued permit, ~~agrees to be responsible for~~ shall maintain in operable condition all individual pumps, tanks, service laterals and main lines as ~~permitted. The line from a building to the septic or pump tank is excluded from this responsibility. permitted,~~ excluding the line from a building to the septic or pump tank. This does not prohibit the Permittee from entering into a service agreement with another entity. However, the Permittee shall be responsible for correcting any environmental or public health problems with the system.

(d) For sewer extensions ~~involving gravity sewers, pump stations and force mains or any combination thereof that do not require an Environmental Assessment pursuant to 15A NCAC 01C .0408 (except for low pressure sewers, vacuum sewers and STEP systems discharging to a sewer system), are not funded through the Division's Construction, Grants and Loans Section, that have been designed in accordance with all applicable rules and design criteria, and where if plans, calculations and specifications~~ calculations, specifications, and other supporting documents have been sealed by a professional engineer, application may be made according to the fast-track permitting process.

(e) ~~Projects involving an Environmental Assessment per 15A NCAC 01C .0408 or are funded through the Division's Construction, Grants and Loans Section must be submitted for a full technical review on application forms provided by the Division. An application for sewers involving an Environmental Assessment shall not be considered complete until either a Finding of No Significant Impact or an Environmental Impact Statement and Record of Decision is has been issued.~~

~~(f) Where the plans were not prepared by a professional engineer, applications shall be submitted for full technical review on application forms specified by the Division.~~

~~(g)(f) Low pressure sewer systems, vacuum sewer systems and other alternative sewer systems~~ Sewer systems where the design criteria has not been developed or if the system does not meet all applicable rules and design criteria shall be submitted for a full technical review using the official application form for those systems.

[[https://deq.nc.gov/about/divisions/water-resources/water-resources-permits/wastewater-branch/collection-systems/sewer-extension-permitting\]](https://deq.nc.gov/about/divisions/water-resources/water-resources-permits/wastewater-branch/collection-systems/sewer-extension-permitting)

~~(h)(g) A letter of agreement from the owner or an official, meeting the criteria in Rule .0106 of this Subchapter, of the receiving collection system or treatment works accepting the wastewater is required, if If the application is not submitted by the owner of the receiving collection system or treatment works, the application shall include a letter of agreement from the owner or an official of the receiving collection system or treatment works that accepts the wastewater and that meets the criteria if Rule .0106 of this Subchapter. This letter shall be specific to the project whether or not capacity has been purchased through an intergovernmental agreement or contract. This letter shall also signify that the owner of the receiving collection system or treatment works has adequate capacity to transport and treat the~~

~~proposed new wastewater. This shall not negate the need for downstream sewer capacity calculations. In addition, this letter shall:~~

- (1) specifically refer to the project, regardless whether capacity has been purchased through an intergovernmental agreement of contract;
- (2) signify that the owner of the receiving collection system or treatment works has adequate capacity to transport and treat the proposed new wastewater; and
- (3) shall be dated within 12 months from the date of submitting the application.

This letter shall not obviate the need for the downstream sewer capacity calculations.

Authority G.S. 143-215.1; 143-215.3(a); 143-215.67.

15A NCAC 02T .0305 DESIGN CRITERIA

(a) Construction of sewers and sewer extensions are prohibited in the following ~~areas unless the specified determinations are made:~~ area:

- (1) ~~in~~ a natural area designated on the State Registry of Natural Heritage Areas by a protection agreement between the owner and the Secretary, unless ~~the Commission agrees that~~ no prudent, feasible or technologically possible alternative exists; or,
- (2) ~~in~~ a natural area dedicated as a North Carolina Nature Preserve by mutual agreement between the owner and State of North Carolina (Governor and Council of State), unless ~~the Commission recommends and~~ the Governor and Council of State agree that no prudent, feasible or technologically possible alternative exists;

(b) Engineering design documents. The following documents shall be prepared prior to submitting a permit application to the Division. If submittal of such documents is not requested in the permitting process (i.e., fast-track), they shall be available upon request by the Division. If required by G.S. 89C, a professional engineer shall prepare these documents:

[Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via letter dated December 1, 2005, that preparation of engineering design documents pursuant to this Paragraph constitutes practicing engineering under G.S. 89C.]

- (1) A plan and profile of sewers, showing their proximity to other utilities and natural features, such as water supply lines, water lines, wells, storm drains, surface waters, wetlands, roads and other trafficked areas.
- (2) Design calculations including pipe and pump sizing, velocity, pump cycle times and level control settings, pump station buoyancy, wet well storage, surge protection, detention time in the wet well and force main, ability to flush low points in force mains with a pump cycle, and downstream sewer capacity analysis.
- (3) ~~Specifications relative to the sewer system~~ Sewer system specifications describing all

materials to be used, methods of construction and means for assuring the quality and integrity of the finished project.

(c) All deeds, easements and encroachment agreements necessary for ~~installation and operation~~ installation, operation, and maintenance of the system shall be obtained prior to operation of the system.

(d) There shall be no by-pass or overflow lines designed in any new sewer system except for valved piping and appurtenances intended for emergency pumping ~~operation(s)~~ operations.

(e) ~~A minimum of two~~ Two feet protection from a 100-year flood shall be provided unless there is a water-tight seal on all station hatches and manholes with control panels and vents extending two feet above the 100-year flood elevation.

(f) The following ~~minimum~~ separations shall be provided ~~for~~ from the sewer system to the listed feature except as allowed by Paragraph (g) of this Rule:

- Storm sewers and other utilities not listed below (vertical) 24 ~~18~~ inches
- Water mains (vertical-water over sewer including in benched trenches) 18 inches
- or (horizontal) 10 feet
- Reclaimed water lines (vertical – reclaimed over sewer) 18 inches
- or (horizontal) 2 feet
- Any private or public water supply source, ~~including any consisting of wells, WS-I waters, Class I, or Class II, impounded or Class III~~ reservoirs used as a source of drinking water 100 feet
- Waters classified ~~WS (except WS I or WS V), WS-II, WS-III, WS-IV, B, SA, ORW, HQW, or SB~~ from normal high water (or tide elevation) and elevation), wetlands that are directly abutting these waters and wetlands classified as UWL or SWL 50 feet
- Any other stream, lake, impoundment, wetlands classified as WL, waters classified as C, SC, or WS-V, or ground water lowering and surface drainage ditches 10 feet
- Any building foundation 5 feet
- Any basement 10 feet
- Top slope of embankment or cuts of 2 feet or more vertical height 10 feet
- Drainage systems and interceptor drains 5 feet
- Any swimming pool 10 feet
- Final earth grade (vertical) 36 inches

(g) ~~Alternatives where~~ The following separations shall be permitted if separations in Paragraph (f) of this Rule cannot be ~~achieved. Nothing achieved, provided that nothing~~ in this Paragraph shall supersede the allowable alternatives provided in the Commission for Public Health Public Water Supply Rules (15A NCAC 18C), Commission for Public Health Sanitation Rules (15A NCAC 18A) or the Groundwater Protection Rules (15A NCAC 02L and 15A NCAC 02C) that pertain to the separation of sewer systems to water mains or public or private wells:

- (1) For storm sewers, engineering solutions such as ductile iron pipe or structural bridging to prevent crushing the underlying pipe. ~~pipe;~~
- (2) For public or private wells, piping materials, testing methods and acceptability standards meeting water main standards shall be used where these ~~minimum~~ separations cannot be maintained. All appurtenances shall be outside the 100-foot ~~radius.~~ radius of the well. The ~~minimum~~ separation shall however not be less than 25 feet from a private well or 50 ~~feet~~ from a public ~~well.~~ well;
- (3) For public water main horizontal or vertical separations, alternatives as described in 15A NCAC 18C .0906(b) and ~~(e).~~ (c);
- (4) For less than 36-inches cover from final earth grade, ductile iron pipe shall be ~~specified.~~ required in any alternative. Ductile iron pipe or other pipe with proper bedding to develop design supporting strength shall be provided where sewers are subject to traffic bearing ~~loads.~~ loads; and
- (5) For all other separations, materials, testing methods and acceptability standards meeting water main standards (15A NCAC 18C) shall be ~~specified.~~ required in any alternative.

(h) The following criteria shall be met for all pumping stations and force mains:

- (1) Pump Station Reliability:
 - (A) ~~Pump stations, except when exempted by Subparagraph (j)(2) of this Rule,~~ Pump stations shall be designed with multiple pumps such that peak flow can be pumped with the largest pump out of service. Simplex pump stations (i.e. pump stations with only one pump) shall only be allowable to serve only a single building with an average daily design flow less than 600 gallons per day as calculated using Rule .0114 of this Subchapter.
 - (B) A standby power source or pump is shall be required at all pump stations except for ~~these~~ simplex pump stations ~~subject to Subparagraph (j)(2) of this Rule.~~ stations. Controls shall be provided to automatically activate the standby source and signal an alarm condition.
 - (C) As an alternative to Part (B) of this Subparagraph for pump stations with an average daily design flow less than 15,000 gallons per day as calculated using Rule .0114 of this Subchapter, a portable power source or pumping capability may be ~~utilized.~~ used. ~~It shall be demonstrated to the Division that the~~ The portable source is shall be owned or contracted by the permittee

and is shall be compatible with the station. If the portable power source or pump is dedicated to multiple pump stations, an evaluation of all the pump stations' storage capacities and the rotation schedule of the portable power source or ~~pump,~~ including travel timeframes, shall be provided in the case of a multiple station power outage. Pump in a multiple station power outage, including travel timeframes, shall be provided.

(D) ~~As an alternative to Part (B) for Simplex pump or vacuum stations connecting a single building to an alternative a sewer system, wet well storage requirements system shall be documented to provide 24-hours worth of wastewater storage or, or exceed shall provide storage in excess of that needed during the greatest power outage over the last three years or the documented response time to replace a failed pump, whichever is greater. Documentation shall be required pursuant to the of wastewater storage shall be provided with the permit application. In no case shall less than 6 hours worth of wastewater storage be provided above the pump-on level.~~

(E) All pump stations designed for two pumps or more shall have a telemetry system to provide remote notification of a problem condition ~~to include~~ including power failure and high water alarm.

(F) All pump stations shall have a high water audio and visual alarm.

(2) Pump stations shall have a permanent weatherproof sign stating the pump station identifier, 24-hour emergency number and instructions to call in case of emergency. Simplex pump or vacuum stations serving a single-family residence shall have a placard or sticker placed inside the control panel with a 24-hour emergency contact number.

(3) Screened vents for all wet wells.

(4) The public shall be restricted from access to the site and equipment.

(5) Air relief valves shall be provided at all high points along force mains where the vertical distance exceeds ten feet.

(i) The following criteria shall be met for gravity sewers:

(1) ~~for public gravity sewers, public gravity sewers shall be equipped with a minimum eight inch diameter pipe and for private gravity sewers, private gravity sewers shall be equipped with a minimum six inch diameter pipe;~~

PROPOSED RULES

- (2) the maximum separation between manholes shall be 425 feet unless ~~written~~ documentation is submitted with the application that the ~~owner/authority~~ owner has the capability to perform routine cleaning and maintenance ~~on~~ of the sewer at the specified manhole separation; and
 - (3) drop manholes shall be provided where invert separations exceed 2.5 feet.
- (j) The following criteria shall be met for low pressure sewers, vacuum sewers, STEP and other alternative sewers discharging into another sewer system:
- (1) Hydraulic modeling of the system shall be submitted using the ~~statistical (projected)~~ statistically projected number of pumps running at one time. If computer modeling is provided by a pump manufacturer, it shall be indicated and shall be considered part of the design calculations pursuant to Subparagraph (b)(2) of this Rule.
 - (2) Simplex pump stations shall only ~~be allowable for single family residences to serve a single building with an average daily design flow less than 600 gallons per day as calculated using Rule .0114 of this Subchapter.~~ All other buildings connected to the system shall at a minimum have duplex pumps.
 - (3) Septic tanks shall adhere to the standards established in 15A NCAC 18A .1900.

Authority G.S. 143-215.1; 143-215.3(a).

15A NCAC 02T .0306 LOCAL PROGRAMS FOR SEWER SYSTEMS

(a) Jurisdiction. Municipalities, counties, local boards or commissions, water and sewer authorities, or groups of municipalities and counties may apply to the Commission for ~~approval~~ certification of local programs for permitting construction, modification, and operation of public and private sewer systems in their utility service areas (~~i.e., delegation~~) pursuant to G.S. 143-215.1(f). Permits issued by ~~approved~~ certified local programs serve in place of permits issued by the Division except for projects involving an Environmental Impact Statement, Assessment, projects that do not meet all applicable sewer related rules and minimum design criteria, or if the permitting authority has not been certified (e.g. alternative sewer systems), which shall continue to be permitted by the Division. The Division may ~~choose~~ choose to cede permitting authority to the ~~approved~~ certified local program after review of Environmental Assessment projects and issuance of a Finding of No Significant Impact, or if other permits are required.

(b) ~~Applications.~~ Application An application for ~~approval~~ certification of a local program must provide adequate information to assure compliance with the requirements of G.S. 143-215.1 (f) and the following requirements:

- (1) Applications for local sewer system programs shall be submitted to the Director.
- (2) The program application shall include: ~~include~~ three copies of the intended permit application

- ~~forms, permit shell(s), minimum design criteria (specifications), sewer ordinances, flow chart of permitting, staffing, inspection and certification procedures, intended permit application fees, downstream capacity assurance methods and other relevant documents to be used in administering the local program. The applicant shall specify in a cover letter what permits the local authority desires to issue. The options are any of the following: gravity sewers, pump stations, force mains, and/or pressure sewers. The applicant shall also specify whether such permits will be issued to public (to be self-owned) or private systems (not donated to delegated authority).~~
- (A) the intended permit application forms;
 - (B) permit shells;
 - (C) design criteria and specifications;
 - (D) sewer ordinance;
 - (E) flow chart of permitting;
 - (F) staffing;
 - (G) inspection and certification procedures;
 - (H) intended permit application fees;
 - (I) downstream capacity assurance methods.

The applicant shall specify in a cover letter what permits the local authority desires to issue. The options are any of the following: gravity sewers, pump stations, force mains, or pressure sewers. The applicant shall also specify whether such permits will be issued to public (to be self-owned) or private (not donated to the certified authority).

- (3) ~~Certification that the local Local~~ authorities for processing permit applications, setting permit requirements, enforcement, and penalties are shall be compatible with those for permits issued by the Division.
- (4) If the treatment and disposal system receiving the ~~waste~~ wastewater from the sewer line extension permitted under the local program is under the jurisdiction of another local unit of government, then the program application must contain a written statement from ~~that~~ the other local unit of government that the proposed program complies with all its requirements and that the applicant has entered into a satisfactory contract which assures continued compliance.
- (5) Any future amendments to the requirements of this Section shall be incorporated into the local sewer system program within 60 days of the effective date of the amendments.
- (6) A Professional Engineer shall be on the staff of the local sewer system program or be retained as a consultant to review unusual situations or designs and to answer questions that arise in the review of proposed projects.
- (7) Each project permitted by the local sewer system program shall be inspected for

compliance with the requirements of the local program at least once during construction.

(c) Approval of Local Programs. The staff of the Division shall acknowledge receipt of an application for a local sewer system program in writing, review the application, notify the applicant of additional information that may be required, and make a recommendation to the Commission ~~on the acceptability regarding certification~~ of the proposed local program.

(d) Conditions of Local Program Approval (Delegation). Once approved by the Commission, the ~~delegated authority local program~~ shall adhere to the following:

- (1) Adequacy of Receiving Facilities. Local sewer system programs shall not issue a permit for a sewer project ~~which that~~ would increase the flow or change the characteristics of waste to a treatment works or sewer system unless the local program has received a written determination from the Division that, pursuant to G.S. 143-215.67 (a), the treatment works or sewer system ~~is adequate to receive~~ can adequately treat the waste. The Division staff may, when appropriate, provide one written determination that covers all local permits for domestic sewage sewer projects with total increased flow to a particular treatment works less than a specified amount and which are issued within a specified period of time. In no case shall the local sewer system program issue a permit for additional wastewater if the receiving wastewater treatment is in noncompliance with its Division issued permit unless the additional flow is allowed as part of a special order pursuant to G.S. 143-215.2. In no case shall the delegated authority issue a permit for additional wastewater without documenting capacity assurance along the tributary wastewater path to the wastewater treatment plant.
- (2) All permitting actions shall be summarized and submitted to the Division and the appropriate Division Regional Office ~~on a quarterly basis~~ annually on Division ~~forms. forms unless more frequent reporting is required by the Division.~~ The report shall also provide a listing and summary of all enforcement actions taken or pending during the quarter. ~~The quarters begin on January 1, April 1, July 1 and October 1. The report shall be submitted by February 1 of each year, within 30 days after the end of each quarter. Reporting forms are available at: <https://deq.nc.gov/about/divisions/water-resources/water-resources-permits/wastewater-branch/collection-systems/local-programs>~~
- (3) A copy of all program ~~documents~~ documents, such as specifications, permit applications, permit shells, shell certification forms, and ordinance pertaining to ~~permitting~~ permitting, shall be submitted to the Division ~~on an annual basis~~ annually along with a summary of any

other program changes. Program changes ~~to note shall include staffing, staffing changes,~~ processing fees, and ordinance revisions. After initial submittal of such documents and if no further changes occur in subsequent years, a letter stating such may be submitted in lieu of the ~~requested~~ required documentation. ~~The Division may request changes to local program documents if the Commission adopts more stringent standards.~~

(4) Modification of a Local Program. Modifications to local programs, including the expansion of permitting ~~authority~~ authority, shall not be required to be approved by the Commission, but by the Director.

(e) Appeal of Local Decisions. Appeal of individual permit denials or issuance with conditions the permit applicant finds unacceptable shall be made according to the approved local ordinance. The Commission shall not consider individual permit denials or issuance with conditions to which a Permittee objects. This Paragraph does not alter the enforcement authority of the Commission as specified in G.S. 143-215.1(f).

(f) The Division may audit the ~~delegated~~ certified program for compliance with this Rule and G.S. 143-215.1(f) at any time with a scheduled appointment with the ~~delegated~~ certified authority.

(g) The Division shall maintain a list of all local units of government with approved local sewer system programs and make copies of the list available to the public upon request and payment of ~~any~~ reasonable costs for reproduction. The list may be obtained from the Division.

Authority G.S. 143-215.1; 143-215.3(a).

SECTION .0400 – SYSTEM-WIDE COLLECTION SYSTEM PERMITTING

15A NCAC 02T .0401 SCOPE

The rules of this Section apply to system-wide collection systems pursuant to G.S. 143-215.9B, ~~where the Director may issue governing the issuance of~~ system-wide permits for collection systems relating to operation and maintenance of sewers, pump stations, force mains and all appurtenances.

Authority G.S. 143-215.1(a); 143-215.3(a); 143-215.9B.

15A NCAC 02T .0402 DEFINITIONS

The following definitions are used in this Section:

- (1) "Collection system" means a public or private sewer ~~system system, consisting of sewer lines, force mains, pump stations or any combination thereof~~ that conveys wastewater to a designated wastewater treatment facility or separately-owned sewer system. For purposes of permitting, the collection system ~~is considered to be~~ shall mean any existing or newly installed sewer system extension up to the wastewater treatment facility property or point of connection with a separately-owned sewer system.

- (2) "High-priority sewer" means any aerial sewer, sewer contacting surface waters, siphon, sewer positioned parallel to streambanks that is subject to erosion that undermines or deteriorates the sewer, or sewer designated as a high priority in a ~~Division-issued~~ Division-issued permit ~~where~~ if the sewer does not meet minimum design requirements.

Authority G.S. 143-215.1(a); 143-215.3(a); 143-215.9B.

15A NCAC 02T .0403 PERMITTING BY REGULATION

(a) Collection systems having an actual, permitted or ~~Division approved~~ Division-approved average daily flow less than 200,000 gallons per day ~~are~~ shall be deemed permitted pursuant to Rule .0113 of this Subchapter ~~provided if~~ the system meets the criteria in Rule .0113 of this Subchapter and all ~~specific~~ criteria required in this Rule:

- (1) The ~~sewer collection~~ system ~~is~~ shall be effectively maintained and operated at all times to prevent discharge to land or surface ~~waters,~~ waters and to prevent any contravention of groundwater standards or surface water standards.
- (2) A map of the ~~sewer collection~~ system ~~has been~~ shall have been developed and ~~is~~ shall be actively maintained.
- (3) An operation and maintenance ~~plan~~ plan, including pump station inspection frequency, preventative maintenance schedule, spare parts inventory and overflow response ~~has been~~ shall have been developed and implemented.
- (4) Pump stations that are not connected to a telemetry system (~~i.e., remote alarm system~~) ~~are~~ inspected shall be inspected by the permittee or its representative every day (i.e., 365 days per year). Pump stations that are connected to a telemetry system ~~are~~ shall be inspected at least once per week.
- (5) High-priority sewers ~~are~~ shall be inspected by the permittee or its representative ~~at least~~ once every ~~six months~~ six-months, and inspections ~~are~~ shall be documented.
- (6) A general observation by the permittee or its representative of the entire ~~sewer collection~~ system ~~is~~ shall be conducted ~~at least~~ once per year.
- (7) Overflows and bypasses are reported to the appropriate Division regional office in accordance with 15A NCAC 02B .0506(a), and public notice ~~is~~ shall be provided as required by G.S. 143-215.1C.
- (8) A Grease Control Program ~~is~~ shall be in place as follows:

- (A) For publicly owned collection systems, the Grease Control Program shall include ~~at least~~ bi-annual distribution of educational materials for both commercial and residential

users and the legal means to require grease interceptors for new construction and retrofit, if necessary, of grease interceptors at existing establishments. The plan shall also include legal means for inspections of the grease interceptors, enforcement for violators and the legal means to control grease entering the system from other public and private satellite ~~sewer collection~~ systems.

- (B) For privately owned collection systems, the Grease Control Program shall include ~~at least~~ bi-annual distribution of grease education materials to users of the collection system by the permittee or its representative.

- (C) Grease education materials shall be distributed more often than required in Parts (A) and (B) of this Subparagraph if necessary to prevent grease-related sanitary sewer overflows.

- (9) Right-of-ways and easements ~~are~~ shall be maintained in the full easement width for personnel and equipment accessibility.

- (10) Documentation shall be kept for Subparagraphs (a)(1) through (a)(9) of this Rule for ~~a minimum~~ of three years with ~~the~~ exception of the map, which shall be maintained for the life of the system.

(b) Private collection systems on a single property serving an industrial facility ~~where~~ from which the domestic wastewater contribution is less than 200,000 gallons per day shall be deemed permitted.

(c) The Director may determine that a collection system ~~should~~ shall not be deemed to be permitted in accordance with this Rule and Rule .0113 of this Subchapter. This determination shall be made in accordance with Rule .0113(e) of this Subchapter.

Authority G.S. 143-215.1(a); 143-215.3(a); 143-215.9B.

15A NCAC 02T .0404 MULTIPLE COLLECTION SYSTEMS UNDER COMMON OWNERSHIP

If a public entity owns multiple but separate collection systems (i.e., tributary to separate plants) and any one is subject to an individual permit, all collection systems shall be covered ~~under~~ by one permit. This shall not be applicable to public utilities authorized to operate by the North Carolina Utilities Commission ~~who~~ that own several individual systems within the state.

Authority G.S. 143-215.1(a); 143-215.3(a); 143-215.9B.

15A NCAC 02T .0405 IMPLEMENTATION

(a) Permit applications for the initial issuance of a collection system permit shall be completed and submitted to the Division within 60 days of the collection system owner's certified mail receipt of the Division's request for application submittal. Permit renewal requests shall be submitted to the Director at least 180

days prior to expiration, unless the permit has been revoked in accordance with ~~15A NCAC 02T .0110.~~ 15A NCAC 02T .0110, a request has been made to rescind the permit, or the Director extends this deadline. All applications must be submitted in duplicate, completed on official forms, and fully executed. Application forms available at: https://deq.nc.gov/about/divisions/water-resources/water-resources-permits/wastewater-branch/collection-systems/system-wide-collection-system-permitting.

(b) Collection systems subject to an individual permit shall comply with the standards in Rule .0403 of this ~~Section until such time as their individual permit is issued.~~ Section and such permit conditions contained in an individual permit to effectuate the purpose of Article 21, Chapter 143 of the General Statutes.

Authority G.S. 143-215.1(a); 143-215.3(a); 143-215.9B.

SECTION .0500 – WASTEWATER IRRIGATION SYSTEMS

15A NCAC 02T .0501 SCOPE

The rules in this Section shall apply to all surface irrigation of wastewater systems not otherwise specifically governed by other rules of this Subchapter. Surface irrigation of wastewater shall include ~~includes~~ spray irrigation, drip irrigation, and any other application of wastewater to the ground surface.

Authority G.S. 143-215.1; 143-215.3(a).

15A NCAC 02T .0504 APPLICATION SUBMITTAL

(a) The requirements in this Rule shall apply to all new and expanding ~~facilities, facilities, as applicable.~~

(b) Soils Report. A soil evaluation of the disposal site shall be provided to the Division by the Applicant ~~applicant~~ in a report that includes the following. If required by G.S. 89F, a soil scientist shall prepare this evaluation:

~~[Note: The North Carolina Board for Licensing of Soil Scientists has determined, via letter dated December 1, 2005, that preparation of soils reports pursuant to this Paragraph constitutes practicing soil science under G.S. 89F.]~~

- (1) A field ~~Field~~ description of the soil profile, based on examinations of excavation pits or auger borings, within seven feet of land surface or to ~~bedrock~~ bedrock, describing the following parameters by individual diagnostic horizons:
 - (A) the thickness of the horizon;
 - (B) the texture;
 - (C) the color and other diagnostic features;
 - (D) the structure;
 - (E) the internal drainage;
 - (F) the depth, thickness, and type of restrictive horizon; ~~horizon(s)~~; and
 - (G) the presence or absence and depth of evidence of any seasonal high water table. ~~table (SHWT).~~

Applicants shall dig pits when necessary for evaluation of the soils at the ~~site~~. site;

- (2) Recommendations concerning loading rates of liquids, solids, other wastewater constituents

and amendments. Annual hydraulic loading rates shall be based on in-situ measurement of saturated hydraulic conductivity in the most restrictive horizon for each soil mapping unit. Maximum irrigation precipitation rates shall be provided for each soil mapping ~~unit~~. unit;

- (3) A field-delineated soil map delineating soil mapping units within each land application site and showing all physical features, location of pits and auger borings, legends, scale, and a north arrow. The legends shall also include dominant soil series name and family or higher taxonomic class for each soil mapping ~~unit~~. unit; and

- (4) A ~~representative soils analysis (i.e., Standard Soil Fertility Analysis)~~ Standard Soil Fertility Analysis conducted on each land application site. The Standard Soil Fertility Analysis shall include the following parameters:

- (A) Acidity; ~~acidity~~;
- (B) Base Saturation (by calculation); ~~base saturation (by calculation)~~;
- (C) Calcium; ~~calcium~~;
- (D) Cation Exchange Capacity; ~~cation exchange capacity~~;
- (E) Copper; ~~copper~~;
- (F) Exchangeable Sodium Percentage (by calculation); ~~exchangeable sodium percentage (by calculation)~~;
- (G) Magnesium; ~~magnesium~~;
- (H) Manganese; ~~manganese~~;
- (I) Percent Humic Matter; ~~percent humic matter~~;
- (J) pH; ~~pH~~;
- (K) Phosphorus; ~~phosphorus~~;
- (L) Potassium; ~~potassium~~;
- (M) Sodium; ~~sodium~~; and
- (N) Zinc. ~~zinc~~.

[Note: The North Carolina Board for Licensing of Soil Scientists has determined, via letter dated December 1, 2005, that preparation of soils reports pursuant to this Paragraph constitutes practicing soil science pursuant to G.S. 89F.]

(c) Engineering design documents. If required by G.S. 89C, a professional engineer shall prepare these documents. The following documents shall be provided to the Division by the Applicant. ~~applicant~~:

~~[Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via letter dated December 1, 2005, that preparation of engineering design documents pursuant to this Paragraph constitutes practicing engineering under G.S. 89C.]~~

- (1) engineering plans for the entire system, including treatment, storage, application, and disposal facilities and equipment except those previously permitted unless those previously permitted are directly tied into the new units or are critical necessary ~~to the~~ understanding of the complete process;
- (2) specifications describing materials to be used, methods of construction, and means for

- (3) ensuring quality and integrity of the finished ~~product~~ product, including leakage testing; and engineering ~~calculations~~ calculations, including hydraulic and pollutant loading for each treatment unit, treatment unit sizing criteria, hydraulic profile of the treatment system, total dynamic head and system curve analysis for each pump, buoyancy calculations, and irrigation design.

[Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via letter dated December 1, 2005, that preparation of engineering design documents pursuant to this Paragraph constitutes practicing engineering pursuant to G.S. 89C.]

(d) Site plans. If required by G.S. 89C, a professional land surveyor shall provide location information on boundaries and physical features not under the purview of other licensed professions. Site plans or maps shall be provided to the Division by the Applicant ~~applicant~~ depicting the location, orientation and relationship of facility components including:

[Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via letter dated December 1, 2005, that locating boundaries and physical features, not under the purview of other licensed professions, on maps pursuant to this Paragraph constitutes practicing surveying under G.S. 89C.]

- (1) ~~a sealed map of the site, with topographic contour intervals not exceeding 10 feet or 25 percent of total site relief and showing all facility related structures and fences within the treatment, storage, and disposal areas, and soil mapping units shown on all disposal sites; a~~ scaled map of the site, with topographic contour intervals not exceeding 10 feet or 25 percent of total site relief, showing:
- (A) all facility-related structures and fences within the treatment, storage, and disposal areas; and
- (B) soil mapping units on all disposal sites;
- (2) the location of all wells (including usage and construction details if available), streams (ephemeral, intermittent, and perennial), springs, lakes, ponds, and other surface drainage features within 500 feet of all waste treatment, storage, and disposal sites ~~sites(s)~~ and delineation of the review and compliance boundaries;
- (3) setbacks as required by Rule .0506 of this Section; and
- (4) site property boundaries within 500 feet of all waste treatment, storage, and disposal sites ~~sites(s)~~.

[Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via letter dated December 1, 2005, that locating boundaries and physical features, not under the purview of other licensed professions, on maps pursuant to this Paragraph constitutes practicing surveying pursuant to G.S. 89C.]

(e) Hydrogeologic report. A hydrogeologic description prepared by a Licensed Geologist, Licensed Soil Scientist, or Professional

Engineer if required by Chapters 89E, 89F, or 89C, respectively, respectively, of the subsurface to a depth of 20 feet or bedrock, whichever is less, shall be provided to the Division by the Applicant ~~applicant~~ for systems treating industrial waste and any system with a design flow over 25,000 gallons per day. Industrial facilities with a design flow less than 25,000 gallons per day of wastewater that can demonstrate that the effluent will be of quality similar to domestic wastewater, including effluent requirements established in 15A NCAC 02T .0505(b)(1), shall, upon request, be exempted from this requirement. The hydrogeologic evaluation shall be of the subsurface to a depth of 20 feet or bedrock, whichever is less deep. A greater depth of An investigation to a depth greater than 20 feet is required if the respective depth is used in predictive calculations. This evaluation shall be based on borings for which the numbers, locations, and depths are sufficient ~~borings for which the numbers, locations, and depths are sufficient~~ sufficient numbers, locations, and depths of borings to define the components of the hydrogeologic evaluation. In addition to borings, other techniques may be used to investigate the subsurface conditions at the site. ~~These techniques may include site, including~~ geophysical well logs, surface geophysical surveys, and tracer studies. This evaluation shall be presented in a report that includes the following components:

[Note: The North Carolina Board for Licensing of Geologists, via letter dated April 6, 2006, North Carolina Board for Licensing of Soil Scientists, via letter dated December 1, 2005, and North Carolina Board of Examiners for Engineers and Surveyors, via letter dated December 1, 2005, have determined that preparation of hydrogeologic description documents pursuant to this Paragraph constitutes practicing geology under G.S. 89E, soil science under G.S. 89F, or engineering under G.S. 89C.]

- (1) a description of the regional and local geology and hydrogeology;
- (2) a description, based on field observations of the site, of the site topographic setting, streams, springs and other groundwater discharge features, drainage features, existing and abandoned wells, rock outcrops, and other features that may affect the movement of the contaminant plume and treated wastewater;
- (3) changes in the lithology underlying the site;
- (4) the depth to bedrock and the occurrence of any rock outcrops;
- (5) the hydraulic conductivity and transmissivity of the affected aquifer(s); aquifer as determined by in-situ field testing, such as slug tests or pumping tests, in the intended area of irrigation;
- (6) the depth to the seasonal high water table;
- (7) a discussion of the relationship between the affected aquifers of the site to local and regional geologic and hydrogeologic features;
- (8) a discussion of the groundwater flow regime of the site prior to the operation of the proposed facility and the post operation of the proposed ~~facility,~~ facility, focusing on the relationship of the system to groundwater receptors, groundwater discharge features, and groundwater flow media; and
- (9) if the SHWT seasonal high water table is within six feet of the surface, a mounding analysis to

predict the level of the ~~SHWT~~ seasonal high water table after wastewater application.

[Note: The North Carolina Board for Licensing of Geologists, via letter dated April 6, 2006, North Carolina Board for Licensing of Soil Scientists, via letter dated December 1, 2005, and North Carolina Board of Examiners for Engineers and Surveyors, via letter dated December 1, 2005, have determined that preparation of hydrogeologic description documents pursuant to this Paragraph constitutes practicing geology pursuant to G.S. 89E, soil science pursuant to G.S. 89F, or engineering pursuant to G.S. 89C.]

(f) Property Ownership Documentation shall be provided to the Division by the ~~Applicant~~ applicant consisting of:

- (1) legal documentation of ownership (i.e., contract, deed or article of incorporation);
- (2) ~~written notarized intent to purchase agreement~~ an agreement of an intent to purchase the property that is written, notarized, and signed by both parties, accompanied by a plat or survey map; or
- (3) ~~written notarized lease agreement~~ an agreement to lease the property that is written, notarized, and signed by both parties, specifically indicating the intended use of the property, as well as accompanied by a plat or survey map. Lease agreements shall adhere to the requirements of 15A NCAC 02L .0107.

(g) Public utilities shall submit to the Division a Certificate of Public ~~Conveyance~~ Convenience and Necessity or a letter from the NC Utilities Commission stating that it has received a franchise application, application has been received.

(h) A ~~complete~~ chemical analysis of the typical wastewater to be discharged irrigated shall be provided to the Division by the ~~Applicant~~ applicant for industrial waste, including which shall include:

- (1) ~~Total Organic Carbon; Total Organic Carbon,~~
- (2) ~~5-day Biochemical Oxygen Demand (BOD₅); 5-day Biochemical Oxygen Demand (BOD₅);~~
- (3) ~~Chemical Oxygen Demand (COD); Chemical Oxygen Demand (COD);~~
- (4) ~~Nitrate Nitrogen (NO₃-N); Nitrate Nitrogen (NO₃-N);~~
- (5) ~~Ammonia Nitrogen (NH₃-N); Ammonia Nitrogen (NH₃-N);~~
- (6) ~~Total Kjeldahl Nitrogen (TKN); Total Kjeldahl Nitrogen (TKN);~~
- (7) ~~pH; pH;~~
- (8) ~~Chloride; Chloride;~~
- (9) ~~Total Phosphorus; Total Phosphorus;~~
- (10) ~~Phenol; Phenol;~~
- (11) ~~Total Volatile Organic Compounds; Total Volatile Organic Compounds;~~
- (12) ~~Fecal Coliform; Fecal Coliform;~~
- (13) ~~Calcium; Calcium;~~
- (14) ~~Sodium; Sodium;~~
- (15) ~~Magnesium; Magnesium;~~
- (16) ~~Sodium Adsorption Ratio (SAR); Sodium Adsorption Ratio (SAR);~~

(17) ~~Total Trihalomethanes; Total Trihalomethanes, and~~

~~Toxicity Test Parameters and~~

(18) ~~Total Dissolved Solids.~~

(i) A project evaluation and a receiver site agronomic management plan (if applicable) and recommendations concerning cover crops and their ability to accept the proposed application rates of liquid, solids, minerals and other constituents of the wastewater shall be provided to the Division by the ~~Applicant~~ applicant.

(j) A residuals management plan as required by Rule ~~.0508~~ .0508(a) of this Section shall be provided to the Division by the ~~Applicant~~ applicant. ~~A written commitment is not required at the time of application; however, it must be provided to the Division prior to operation of the permitted system.~~

(k) ~~A water balance shall be provided to the Division by the applicant that determines required effluent storage based upon the most limiting factor of the hydraulic loading based on either the most restrictive horizon or groundwater mounding analysis; or nutrient management based on either agronomic rates for the specified cover crop or crop management.~~

(k) The Applicant shall provide to the Division a water balance that determines the required effluent storage based on the following most limiting factor:

- (1) hydraulic loading based on the most restrictive horizon;
- (2) hydraulic loading based on the groundwater mounding analysis;
- (3) nutrient management based on agronomic rates for the specified cover crop; or
- (4) nutrient management based on crop management.

Authority G.S. 143-215.1; 143-215.3(a).

15A NCAC 02T .0505 DESIGN CRITERIA

(a) The requirements in this Rule shall apply to all new and expanding facilities, facilities, as applicable.

(b) Minimum degree of treatment for new and expanding systems; systems are as follows:

- (1) ~~For new that are~~ For new that are municipal, domestic and commercial facilities, except systems subject to Subparagraph (b)(2) of this Rule, the minimum degree of treatment shall meet a monthly average of each of the following:
 - (A) five-day Biochemical Oxygen Demand (BOD₅) ≤ 30 mg/L;
 - (B) Total Suspended Solids (TSS) ≤ 30 mg/L;
 - (C) Ammonia (NH₃-N) (NH₃) ≤ 15 mg/L; and
 - (D) Fecal Coliforms ≤ 200 colonies/100 mL. mL.
- (2) ~~For expanding municipal, domestic, and commercial facilities except systems subject to Subparagraphs (b)(3) or (b)(4) of this Rule, facilities shall meet the limitation provided in Subparagraph (b)(1) of this Rule.~~

- (3) For ~~expanding municipal facilities, except those permitted as new under Subparagraph (b)(1) of this Rule, with lagoon treatment systems, the minimum degree of treatment shall meet a monthly average of five-day Biochemical Oxygen Demand (BOD₅) ≤ 60 mg/L; Total Suspended Solids (TSS) ≤ 90 mg/L; Fecal Coliforms ≤ 200 colonies/100 ml. No expanding facilities shall be permitted under this provision for any project whose application is received by the Division after December 31, 2011.~~
- (2)(4) For ~~expanding municipal facilities whose application is received by the Division after December 31, 2011, except those permitted as new under Subparagraph (b)(1) of this Rule, with lagoon treatment systems systems, except those permitted as new under Subparagraph (b)(1) of this Rule, the minimum degree of treatment shall meet a monthly average of each of the following:~~
- (A) five-day Biochemical Oxygen Demand (BOD₅) ≤ 30 mg/L;
- (B) Total Suspended Solids (TSS) ≤ 90 mg/L; and
- (C) Fecal Coliforms ≤ 200 colonies/100 ml. mL; or
- (3)(5) that are not described in Subparagraphs (b)(1) and (b)(2) of this Rule shall meet treatment standards that assure that surface water or groundwater standards will not be exceeded. Treatment for other operations shall be based on producing the quality effluent used in documenting protection of surface water or groundwater standards.
- (c) All wastes shall be applied at agronomic rates unless predictive calculations are provided that ~~document~~ demonstrate State groundwater standards will be protected.
- (d) All ~~treatment/storage lagoons/ponds open-atmosphere treatment lagoons and ponds, and open-atmosphere storage units~~ shall have at least two feet of freeboard.
- (e) Waste, including treated waste, shall not be placed directly into, or in contact with, GA classified groundwater unless such placement will not result in a contravention of GA groundwater standards, as demonstrated by predictive calculations or modeling.
- (f) Treatment works and disposal systems ~~utilizing~~ using earthen basins, lagoons, ponds or trenches, excluding holding ponds containing non-industrial treated effluent prior to ~~spray~~ irrigation, for treatment, storage or disposal shall have either a liner of natural material at least one foot in thickness and having a hydraulic conductivity of no greater than 1×10^{-6} centimeters per second when compacted, or a synthetic liner of sufficient thickness to exhibit structural integrity and an effective hydraulic conductivity no greater than that of the natural material liner.
- (g) The bottoms of earthen impoundments, trenches or other similar excavations shall be at least four feet above the bedrock surface, except that the bottom of excavations ~~which that~~ are less than four feet above bedrock shall have a liner with a hydraulic conductivity no greater than 1×10^{-7} centimeters per second. Liner thickness shall be that thickness necessary to achieve a leakage rate consistent with the sensitivity of classified groundwaters. Liner requirements may be reduced if ~~it can be demonstrated by the Applicant demonstrates applicant~~ through predictive calculations or modeling methods that construction and use of these treatment and disposal units will not result in contravention of surface water or groundwater standards.
- (h) Impoundments, trenches or other excavations made for the purpose of storing or treating waste shall not be excavated into bedrock unless the placement of waste into such excavations will not result in a contravention of surface water or groundwater standards, as demonstrated by predictive calculations or modeling.
- (i) Each facility, except for those using septic tanks or lagoon treatment, shall provide flow equalization with either a capacity based upon a representative diurnal hydrograph or a capacity of 25 percent of the daily system design flow. Flow equalization of at least 25 percent of the facilities permitted hydraulic capacity must be provided for all seasonal or resort facilities and all other facilities with fluctuations in influent flow which may adversely affect the performance of the system.
- (j) By-pass and overflow lines shall be prohibited.
- (k) Multiple pumps shall be provided if wherever pumps are used.
- (l) Power reliability shall be provided, provided consisting of:
- (1) automatically activated standby power supply supply, located onsite, and onsite capable of powering all essential treatment units under design conditions; or
 - (2) approval by the Director that the facility:
 - (A) serves a private water distribution system ~~which that~~ has automatic shut-off at power failure and no elevated water storage ~~tanks; tanks,~~
 - (B) has sufficient storage capacity that no potential for overflow exists; exists, and
 - (C) can tolerate septic wastewater ~~due to~~ during prolonged detention.
- (m) A water-tight seal on all ~~treatment/storage treatment and storage~~ units or ~~minimum~~ of two feet of protection from the 100-year flood elevation shall be provided.
- (n) Irrigation system design shall not exceed the recommended precipitation rates in the soils report prepared pursuant to Rule .0504 of this Section.
- (o) ~~A minimum~~ of 30 days of residual storage shall be provided.
- (p) Disposal areas shall be designed to maintain a one-foot vertical separation between the seasonal high water table and the ground surface.
- (q) The public shall be prohibited access to the treatment, storage and irrigation facilities, wetted irrigation area and treatment facilities.
- (r) Influent pump stations shall meet the sewer ~~minimum~~ design criteria as provided set forth in Section .0300 of this Subchapter.
- (s) Septic tanks shall adhere to the standards established in 15A NCAC 18A .1900.
- (t) The irrigation system Facilities with an average daily flow greater than 10,000 GPD shall be provided with a flow meter to

~~allow accurate determination of~~ measure the volume of treated wastewater applied to each field.

(u) Coastal waste treatment facilities, defined in 15A NCAC 02H .0403, shall be equipped with noise and odor control devices that shall be enclosed.

(v) For coastal waste treatment facilities, defined in 15A NCAC 02H .0403, all essential treatment and disposal units shall be provided in duplicate.

(w) Facilities serving residential communities shall provide five days of effluent storage.

(x) Automatically activated irrigation systems shall be connected to a rain or moisture sensor to prevent irrigation during precipitation events or wet conditions that would cause runoff.

Authority G.S. 143-215.1; 143-215.3(a).

15A NCAC 02T .0506 SETBACKS

(a) The setbacks for irrigation sites shall be as follows:

	Spray (feet)	Drip (feet)
Any habitable residence or place of public assembly under separate ownership or not to be maintained as part of the project site	400	100
Any habitable residence or place of public assembly owned by the Permittee <u>permittee</u> to be maintained as part of the project site	200	15
Any private or public water supply source	100	100
Surface waters (streams – intermittent and perennial, perennial waterbodies, and wetlands)	100	100
Groundwater lowering ditches (where the bottom of the ditch intersects the SHWT)	100	100
Surface water diversions (ephemeral streams, waterways, ditches)	25	25
Any well with exception of monitoring wells	100	100
Any property line	150	50
Top of slope of embankments or cuts of two feet or more in vertical height	15	15
Any water line from a disposal system	10	10
Subsurface groundwater lowering drainage systems	100	100
Any swimming pool	100	100
Public right of way	50	50
Nitrification field	20	20
Any building foundation or basement	15	15

(b) The setbacks for treatment and storage units shall be as follows:
(feet)

Any habitable residence or place of public assembly under separate ownership or not to be maintained as part of the project site	100
Any private or public water supply source	100
Surface waters (streams – intermittent and perennial, perennial waterbodies, and wetlands)	50
Any well with exception of monitoring wells	100
Any property line	50

(c) Achieving the reclaimed water effluent standards ~~contained~~ established in 15A NCAC 02U .0301 shall permit the system to use the setbacks located in 15A NCAC 02U .0701(d) for property lines and the compliance boundary shall be at the irrigation area boundary.

(d) Setback waivers shall be written, notarized, signed by all parties involved and recorded with the county Register of Deeds. Waivers involving the compliance boundary shall be in accordance with 15A NCAC 02L .0107.

(e) Setbacks to property lines established in Paragraphs (a) and (b) of this Rule shall not be applicable when the Permittee, or the entity from which the Permittee is leasing, owns both parcels creating said property line.

(f) Habitable residences or places of public assembly under separate ownership constructed after the non-discharge facilities were originally permitted or subsequently modified, are exempt from the setback requirements in Paragraphs (a) and (b) of this Rule.

Authority G.S. 143-215.1; 143-215.3(a).

15A NCAC 02T .0507 OPERATION AND MAINTENANCE PLAN

(a) An operation and maintenance plan shall be maintained for all systems. The plan shall:

- (1) describe the operation of the system in sufficient detail to show what operations are necessary for the system to function and by whom the ~~functions~~ operations are to be conducted;
- (2) describe anticipated maintenance of the system;
- (3) include provisions for safety measures, ~~measures~~ including restriction of access to the site and equipment, as appropriate; and
- (4) include spill control provisions, ~~provisions~~ including:

- (A)(a) response to upsets and bypasses, bypasses including control, containment, and remediation; and
- (B)(b) contact information for plant personnel, emergency responders, and regulatory agencies.

- (b) Irrigation areas shall have a year-round vegetative cover.
- (c) Irrigation shall not result in ponding or runoff of treated effluent.
- (d) Irrigation and metering equipment shall be tested and calibrated annually, or as established by permit.
- (e) Automobiles and heavy machinery shall not be allowed on the irrigation area, except during installation or maintenance activities.
- (f) Water level gauges shall be provided for all open-atmosphere treatment lagoons and ponds, and open-atmosphere storage units.
- (g) Vegetative cover shall be maintained on all earthen embankments.
- (h) The Permittee shall keep a log of maintenance activities that occur at the facility.
- (i) The Permittee shall perform inspections and maintenance to ensure proper operation of the facility.

Authority G.S. 143-215.1; 143-215.3(a).

15A NCAC 02T .0508 RESIDUALS MANAGEMENT PLAN

(a) A Residuals Management Plan shall be maintained for all systems that generate residuals. The plan ~~must~~ shall include the following:

- (1) a detailed explanation as to how the residuals will be collected, handled, processed, stored and disposed;
- (2) an evaluation of the residuals storage requirements for the treatment ~~facility~~, facility based upon the maximum anticipated residuals production rate and the ability to remove residuals;
- (3) a permit for residuals disposal or utilization ~~utilization~~, or a written commitment to the Permittee of a Department-approved ~~Department~~ residuals disposal/utilization ~~disposal or utilization~~ program accepting the residuals ~~which that~~ demonstrates that the approved program has adequate capacity to accept the residuals ~~residuals~~, or that an application for approval has been submitted; and
- (4) if oil, grease, grit, or screenings removal and collection is a designed unit process, a detailed explanation as to how ~~the oil/grease these~~ materials will be collected, handled, processed, stored and disposed.

(b) The Permittee shall maintain a record of all residuals removed from the facility.

Authority G.S. 143-215.1; 143-215.3(a).

SECTION .0600 – SINGLE-FAMILY RESIDENCE WASTEWATER IRRIGATION SYSTEMS

15A NCAC 02T .0601 SCOPE

The rules in this Section shall apply to all surface irrigation of wastewater systems ~~specifically~~ designed for one building single-family residences. One building single-family residences generating and utilizing reclaimed water shall meet requirements established in 15A NCAC 02U. Surface irrigation systems serving single-family residences ~~are~~ shall be considered to be ground absorption systems in accordance with 15A NCAC 02L .0107.

Authority G.S. 143-215.1; 143-215.3(a).

15A NCAC 02T .0604 APPLICATION SUBMITTAL

(a) The requirements in this Rule shall apply to all new and expanding ~~facilities, as applicable.~~ facilities.

(b) Soils Report. A soil evaluation of the disposal site shall be provided to the Division by the Applicant ~~applicant~~ in a report that includes the following. If required by G.S. 89F, a soil scientist shall prepare this evaluation:

~~[Note: The North Carolina Board for Licensing of Soil Scientists has determined, via letter dated December 1, 2005, that preparation of soils reports pursuant to this Paragraph constitutes practicing soil science under G.S. 89F.]~~

- (1) A field ~~Field~~ description of the soil profile, based on examinations of excavation pits and auger borings, within seven feet of land surface or to ~~bedrock~~ bedrock, describing the following parameters by individual diagnostic horizons:
 - (A) the thickness of the horizon;
 - (B) the texture;
 - (C) the color and other diagnostic features;
 - (D) the structure;
 - (E) the internal drainage;
 - (F) the depth, thickness, and type of restrictive ~~horizon(s)~~; horizon; and
 - (G) the presence or absence and depth of evidence of any seasonal high water table.

Applicants may be required to dig pits when necessary for proper evaluation of the soils at the site.

- (2) Recommendations concerning loading rates of liquids, solids, other wastewater constituents and amendments. Annual hydraulic loading rates shall be based on in-situ measurement of saturated hydraulic conductivity in the most restrictive horizon for each soil mapping unit. Maximum irrigation precipitation rates shall be provided for each soil mapping unit.
- (3) A field-delineated soil map delineating soil mapping units within each land application site and showing all physical features, location of pits and auger borings, legends, scale, and a north arrow. The legends shall also include dominant soil series name and family or higher taxonomic class for each soil mapping unit; and

- (4) A ~~representative soils analysis (i.e., Standard Soil Fertility Analysis)~~ Standard Soil Fertility Analysis conducted on each land application site. The Standard Soil Fertility Analysis shall include the following parameters:
- (A) ~~Acidity; acidity,~~
 - (B) ~~Base Saturation (by calculation); base saturation (by calculation),~~
 - (C) ~~Calcium; calcium,~~
 - (D) ~~Cation Exchange Capacity; cation exchange capacity,~~
 - (E) ~~Copper; copper,~~
 - (F) ~~Exchangeable Sodium Percentage (by calculation); exchangeable sodium percentage (by calculation),~~
 - (G) ~~Magnesium; magnesium,~~
 - (H) ~~Manganese; manganese,~~
 - (I) ~~Percent Humic Matter; percent humic matter,~~
 - (J) ~~pH; pH,~~
 - (K) ~~Phosphorus; phosphorus,~~
 - (L) ~~Potassium; potassium,~~
 - (M) ~~Sodium; sodium, and~~
 - (N) ~~Zinc; zinc.~~

[Note: The North Carolina Board for Licensing of Soil Scientists has determined, via letter dated December 1, 2005, that preparation of soils reports pursuant to this Paragraph constitutes practicing soil science pursuant to G.S. 89F.]

(c) Engineering design documents. If required by G.S. 89C, a professional engineer shall prepare these documents. The following documents shall be provided to the Division by the Applicant; applicant:

[Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via letter dated December 1, 2005, that preparation of engineering design documents pursuant to this Paragraph constitutes practicing engineering under G.S. 89C.]

- (1) engineering plans for the entire system, including treatment, storage, application, and disposal facilities and equipment except those previously permitted unless those previously permitted are directly tied into the new units or are critical necessary to the understanding of the complete process;
- (2) specifications describing materials to be used, methods of construction, and means for ensuring quality and integrity of the finished product, including leakage testing; and
- (3) engineering calculations, including hydraulic and pollutant loading for each treatment unit, treatment unit sizing criteria, hydraulic profile of the treatment system, total dynamic head and system curve analysis for each pump, buoyancy calculations, and irrigation design.

[Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via letter dated December 1, 2005, that preparation of engineering design documents pursuant to this Paragraph constitutes practicing engineering pursuant to G.S. 89C.]

(d) Site plans. If required by G.S. 89C, a professional land surveyor shall provide location information on boundaries and physical features not under the purview of other licensed professions. Site plans or maps shall be provided to the Division by the Applicant; applicant depicting the location, orientation and relationship of facility components including:

[Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via letter dated December 1, 2005, that locating boundaries and physical features, not under the purview of other licensed professions, on maps pursuant to this Paragraph constitutes practicing surveying under G.S. 89C.]

- (1) ~~a sealed map of the site, with topographic contour intervals not exceeding 10 feet or 25 percent of total site relief and showing all facility-related structures and fences within the treatment, storage and disposal areas, and soil mapping units shown on all disposal sites; a~~ scaled map of the site, with topographic contour intervals not exceeding 10 feet or 25 percent of total site relief, showing:

- (A) all facility-related structures and fences within the treatment, storage, and disposal areas; and
- (B) soil mapping units on all disposal sites;

- (2) the location of all wells (including usage and construction details if available), streams (ephemeral, intermittent, and perennial), springs, lakes, ponds, and other surface drainage features within 500 feet of all waste treatment, storage, and disposal site(s) site and delineation of the review and compliance boundaries;
- (3) setbacks as required by Rule .0606 of this Subchapter; and
- (4) site property boundaries within 500 feet of all waste treatment, storage, and disposal site(s)-sites.

[Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via letter dated December 1, 2005, that locating boundaries and physical features, not under the purview of other licensed professions, on maps pursuant to this Paragraph constitutes practicing surveying pursuant to G.S. 89C.]

(e) Property Ownership Documentation shall be provided to the Division consisting of:

- (1) legal documentation of ownership (i.e., contract, deed or article of incorporation);
- (2) ~~written-notarized intent to purchase agreement~~ an agreement of an intent to purchase the property that is written, notarized, and signed by both parties, accompanied by a plat or survey map; or
- (3) ~~written-notarized lease agreement~~ an agreement to lease the property that is written, notarized, and signed by both parties, specifically indicating the intended use of the property, as well as accompanied by a plat or survey map. Lease agreements shall adhere to the requirements of 15A NCAC 02L .0107.

PROPOSED RULES

- (f) An Operation and Maintenance Plan addressing routine inspections, maintenance schedules, troubleshooting and a layman's explanation about the wastewater treatment and irrigation disposal systems shall be submitted to the Division by the Applicant. ~~applicant.~~
- (g) A letter from the local County Health Department denying the site for all subsurface systems shall be submitted to the Division by the Applicant. ~~applicant.~~
- (h) ~~A notarized~~ A properly executed Operation and Maintenance Agreement shall be submitted to the Division by the Applicant. ~~applicant.~~

Authority G.S. 143-215.1; 143-215.3(a).

15A NCAC 02T .0605 DESIGN CRITERIA

- (a) The requirements in this Rule shall apply to new and expanding facilities.
- (b) Minimum degree of treatment for new and expanding systems ~~prior to storage~~ shall meet a monthly average of each of the following:
 - (1) five-day Biochemical Oxygen Demand (BOD₅) ≤ 30 mg/L;
 - (2) Total Suspended Solids (TSS) ≤ 30 mg/L;
 - (3) Ammonia (NH₃) ≤ 15 mg/L; and
 - (4) Fecal Coliforms ≤ 200 colonies/100 ~~mL~~ mL.
- (c) Waste, including treated waste, shall not be placed directly into, or in contact with, GA classified groundwater unless such placement will not result in a contravention of GA groundwater standards, as demonstrated by predictive calculations or modeling.
- (d) Excavation into bedrock shall be lined with a 10 millimeter synthetic liner.
- (e) Earthen treatment and storage facilities shall be prohibited.

15A NCAC 02T .0606 SETBACKS

(a) The setbacks for Irrigation sites shall be as follows:

	Spray (feet)	Drip (feet)
Any habitable residence or place of public assembly under separate ownership or not to be maintained as part of the project site	400	100
Any habitable residence or place of public assembly owned by the <u>Permittee</u> permittee to be maintained as part of the project site	200	15
Any private or public water supply source	100	100
Surface waters (streams – intermittent and perennial, perennial waterbodies, and wetlands)	100	100
Groundwater lowering ditches (where the bottom of the ditch intersects the SHWT)	100	100
Surface water diversions (ephemeral streams, waterways, ditches)	25	25
Any well with exception of monitoring wells	100	100
Any property line	150	50
Top of slope of embankments or cuts of two feet or more in vertical height	15	15
Any water line from a disposal system	10	10
Subsurface groundwater lowering drainage systems	100	100
Any swimming pool	100	100
Public right of way	50	50
Nitrification field	20	20
Any building foundation or basement	15	15

- (f) By-pass and overflow lines shall be prohibited.
- (g) A water-tight seal on all ~~treatment/storage~~ treatment and storage units or ~~minimum of two feet of~~ protection from the 100-year flood elevation shall be provided.
- (h) Preparation of an operational management ~~plan~~, plan and, if appropriate, a crop management plan shall be provided.
- (i) Fencing shall be provided to prevent access to the irrigation site (minimum 2-strand wire) and treatment units shall be ~~secured with locks on all tankage and control panels~~. lockable.
- (j) Irrigation system design shall not exceed the recommended precipitation rates in the soils report prepared pursuant to Rule .0604 of this Section.
- (k) Septic tanks shall adhere to 15A NCAC 18A .1900.
- (l) Tablet chlorination or ultraviolet disinfection shall be provided.
- (m) ~~A minimum of five~~ Five days of storage based on average daily flow between the pump off float and inlet invert pipe shall be provided.
- (n) ~~Pump/dosing~~ Pump and dosing tanks shall have audible and visual alarms external to any structure.
- (o) A rain or moisture sensor shall be provided to prevent irrigation during precipitation events or wet conditions that would cause runoff.
- (p) ~~A minimum of 18 inches of vertical separation between the apparent seasonal high water table and the ground surface shall be provided.~~
- (q) ~~A minimum of one~~ One foot of vertical separation between any perched seasonal high water table and the ground surface shall be provided.
- (r) Loading rates shall not exceed 50 inches per year.

Authority G.S. 143-215.1; 143-215.3(a).

(b) Treatment and storage facilities associated with systems permitted under this Section shall adhere to the setback

requirements in Section .0500 of this Subchapter except as provided in this Rule.

(c) Setback waivers shall be written, notarized, signed by both parties and recorded with the County Register of Deeds. Waivers involving the compliance boundary shall be in accordance with 15A NCAC 02L .0107.

(d) Setbacks to property lines established in Paragraphs (a) and (b) of this Rule shall not be applicable when the Permittee, or the entity from which the Permittee is leasing, owns both parcels creating said property line.

(e) Habitable residences or places of public assembly under separate ownership constructed after the non-discharge facilities were originally permitted or subsequently modified, are exempt from the setback requirements in Paragraphs (a) and (b) of this Rule.

Authority G.S. 143-215.1; 143-215.3(a).

15A NCAC 02T .0607 CONNECTION TO REGIONAL SYSTEM

If a public or community sewage system is or becomes available, the subject wastewater treatment facilities shall be closed and all wastewater shall be discharged into the public or community sewage system.

Authority G.S. 143-215.1; 143-215.3(a).

15A NCAC 02T .0608 OPERATION AND MAINTENANCE

(a) Irrigation areas shall have a year-round vegetative cover.

(b) Irrigation shall not result in ponding or runoff of treated effluent.

(c) Metering equipment shall be tested and calibrated annually, or as established by permit.

(d) Automobiles and heavy machinery shall not be allowed on the irrigation area, except during installation or maintenance activities.

(e) The Permittee shall keep a log of maintenance activities that occur at the facility.

(f) The Permittee shall perform inspections and maintenance to ensure proper operation of the facility.

Authority G.S. 143-215.1; 143-215.3(a).

SECTION .0700 – ~~HIGH-RATE~~ HIGH-RATE INFILTRATION SYSTEMS

15A NCAC 02T .0701 SCOPE

This Section ~~shall apply~~ applies to all high-rate infiltration facilities. High-rate infiltration facilities include all facilities that dispose of wastewater effluent onto the land at an application rate that meets or exceeds the rates provided in Rule .0702 of this Section.

Authority G.S. 143-215.1; 143-215.3(a).

15A NCAC 02T .0702 DEFINITIONS

A s used in this Section, "High-rate infiltration" shall mean any application rate that exceeds 1.75 inches of wastewater effluent per week or 0.156 gallons per day per square foot of land. ~~mean:~~

(1) ~~In coastal areas as defined in Section 15A NCAC 02H .0400, an application rate that exceeds 1.75 inches of wastewater effluent per week (0.156 gallons per day per square foot of land).~~

(2) ~~In non-coastal areas, an application rate that exceeds 1.50 gallons of wastewater effluent per day per square foot of land (16.8 inches per week).~~

Authority G.S. 143-215.1; 143-215.3(a).

15A NCAC 02T .0704 APPLICATION SUBMITTAL

(a) The requirements in this Rule ~~shall~~ apply to all new and expanding ~~facilities, as applicable, facilities.~~

(b) Soils Report. A soil evaluation of the disposal site shall be provided to the Division by the Applicant ~~applicant~~ in a report that includes the following. If required by G.S. 89F, a soil scientist shall prepare this evaluation:

~~[Note: The North Carolina Board for Licensing of Soil Scientists has determined, via letter dated December 1, 2005, that preparation of soils reports pursuant to this Paragraph constitutes practicing soil science under G.S. 89F.]~~

(1) A field ~~Field~~ description of the soil profile, based on examinations of excavation pits or auger borings, within seven feet of land surface or to bedrock ~~bedrock~~, describing the following parameters by individual diagnostic horizons:

(A) the thickness of the horizon;

(B) the texture;

(C) the color and other diagnostic features;

(D) the structure;

(E) the internal drainage;

(F) the depth, thickness, and type of restrictive ~~horizon(s); horizon;~~ and

(G) the presence or absence and depth of evidence of any seasonal high water ~~table (SHWT); table.~~

Applicants shall dig pits when necessary for evaluation of the soils at the site. ~~site;~~

(2) Recommendations concerning loading rates of liquids, solids, other wastewater constituents and amendments. Annual hydraulic loading rates shall be based on in-situ measurement of saturated hydraulic conductivity in the most restrictive horizon for each soil mapping unit. Maximum ~~irrigation-precipitation~~ infiltration rates shall be provided for each soil mapping unit.

(3) A field-delineated soil map delineating soil mapping units within each land application site and showing all physical features, location of pits and auger borings, legends, scale, and a north arrow. The legends shall also include dominant soil series name and family or higher taxonomic class for each soil mapping unit; and

(4) ~~A representative soils analysis (i.e., Standard Soil Fertility Analysis)~~ Standard Soil Fertility Analysis conducted on each land application

site. The Standard Soil Fertility Analysis shall include the following parameters:

- (A) Acidity; acidity,
- (B) Base Saturation (by calculation); base saturation (by calculation),
- (C) Calcium; calcium,
- (D) Cation Exchange Capacity; cation exchange capacity,
- (E) Copper; copper,
- (F) Exchangeable Sodium Percentage (by calculation); exchangeable sodium percentage (by calculation),
- (G) Magnesium; magnesium,
- (H) Manganese; manganese,
- (I) Percent Humic Matter; percent humic matter,
- (J) pH; pH,
- (K) Phosphorus; phosphorus,
- (L) Potassium; potassium,
- (M) Sodium; sodium, and
- (N) Zinc; zinc.

[Note: The North Carolina Board for Licensing of Soil Scientists has determined, via letter dated December 1, 2005, that preparation of soils reports pursuant to this Paragraph constitutes practicing soil science pursuant to G.S. 89F.]

(c) Engineering design documents. If required by G.S. 89C, a professional engineer shall prepare these documents. The following documents shall be provided to the Division by the Applicant; applicant:

[Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via letter dated December 1, 2005, that preparation of engineering design documents pursuant to this Paragraph constitutes practicing engineering under G.S. 89C.]

- (1) engineering plans for the entire system, including treatment, storage, application, and disposal facilities and equipment except those previously permitted unless those previously permitted are directly tied into the new units or are critical necessary to the understanding of the complete process;
- (2) specifications describing materials to be used, methods of construction, and means for ensuring quality and integrity of the finished product including leakage testing; and
- (3) engineering calculations, including hydraulic and pollutant loading for each treatment unit, treatment unit sizing criteria, hydraulic profile of the treatment system, total dynamic head and system curve analysis for each pump, buoyancy calculations, and irrigation/infiltration design-infiltration design.

[Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via letter dated December 1, 2005, that preparation of engineering design documents pursuant to this Paragraph constitutes practicing engineering pursuant to G.S. 89C.]

(d) Site plans. If required by G.S. 89C, a professional land surveyor shall provide location information on boundaries and physical features not under the purview of other licensed

professions. Site plans or maps shall be provided to the Division by the Applicant; applicant depicting the location, orientation and relationship of facility components including:

[Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via letter dated December 1, 2005, that locating boundaries and physical features, not under the purview of other licensed professions, on maps pursuant to this Paragraph constitutes practicing surveying under G.S. 89C.]

- (1) a scaled map of the site, with topographic contour intervals not exceeding 10 feet or 25 percent of total site relief and showing all facility related structures and fences within the treatment, storage and disposal areas, and soil mapping units shown on all disposal sites; a scaled map of the site, with topographic contour intervals not exceeding 10 feet or 25 percent of total site relief, showing:
 - (A) all facility-related structures and fences within the treatment, storage, and disposal areas; and
 - (B) soil mapping units on all disposal sites;
- (2) the location of all wells (including usage and construction details if available), streams (ephemeral, intermittent, and perennial), springs, lakes, ponds, and other surface drainage features within 500 feet of all waste treatment, storage, and disposal site(s) sites and delineation of the review and compliance boundaries;
- (3) setbacks as required by Rule .0706 of this Section; and
- (4) site property boundaries within 500 feet of all waste treatment, storage, and disposal site(s)-sites.

[Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via letter dated December 1, 2005, that locating boundaries and physical features, not under the purview of other licensed professions, on maps pursuant to this Paragraph constitutes practicing surveying pursuant to G.S. 89C.]

(e) Hydrogeologic report. A hydrogeologic description prepared by a Licensed Geologist, Licensed Soil Scientist, or Professional Engineer if required by Chapters 89E, 89F, or 89C, respectively, of the subsurface to a depth of 20 feet or bedrock, whichever is less, shall be provided to the Division by the Applicant; applicant for systems treating industrial waste and any system with a design flow over 25,000 gallons per day. Industrial facilities with a design flow less than 25,000 gallons per day, and can demonstrate that the effluent will be of quality similar to domestic wastewater including effluent requirements established in 15A NCAC 02T .0705(b) and 02T .0706(b) or (c) as applicable, may request and receive an exemption from this requirement. The hydrogeologic evaluation shall be of the subsurface to a depth of 20 feet or bedrock, whichever is less deep. A greater depth of An investigation to a depth greater than 20 feet is required if the respective depth is used in predictive calculations. This evaluation shall be based on borings for which the numbers, locations, and depths are sufficient sufficient numbers, locations, and depths of borings to define the components of the hydrogeologic evaluation.

In addition to borings, other techniques may be used to investigate the subsurface conditions at the ~~site~~ site, including. ~~These techniques may include~~ geophysical well logs, surface geophysical surveys, and tracer studies. This evaluation shall be presented in a report that includes the following components:

~~[Note: The North Carolina Board for Licensing of Geologists, via letter dated April 6, 2006, North Carolina Board for Licensing of Soil Scientists, via letter dated December 1, 2005, and North Carolina Board of Examiners for Engineers and Surveyors, via letter dated December 1, 2005, have determined that preparation of hydrogeologic description documents pursuant to this Paragraph constitutes practicing geology under G.S. 89E, soil science under G.S. 89F, or engineering under G.S. 89C.]~~

- (1) a description of the regional and local geology and hydrogeology;
- (2) a description, based on field observations of the site, of the site topographic setting, streams, springs and other groundwater discharge features, drainage features, existing and abandoned wells, rock outcrops, and other features that may affect the movement of the contaminant plume and treated wastewater;
- (3) changes in the lithology underlying the site;
- (4) the depth to bedrock and the occurrence of any rock outcrops;
- (5) the hydraulic conductivity and transmissivity of the affected aquifer(s); aquifer as determined by in-situ field testing, such as slug tests or pumping tests, in the intended area of infiltration;
- (6) the depth to the seasonal high water table;
- (7) a discussion of the relationship between the affected aquifers of the site to local and regional geologic and hydrogeologic features;
- (8) a discussion of the groundwater flow regime of the site prior to the operation of the proposed facility and the post operation of the proposed facility, focusing on the relationship of the system to groundwater receptors, groundwater discharge features, and groundwater flow media; and
- (9) a mounding analysis to predict the level of the SHWT seasonal high water table after wastewater application.

~~[Note: The North Carolina Board for Licensing of Geologists, via letter dated April 6, 2006, North Carolina Board for Licensing of Soil Scientists, via letter dated December 1, 2005, and North Carolina Board of Examiners for Engineers and Surveyors, via letter dated December 1, 2005, have determined that preparation of hydrogeologic description documents pursuant to this Paragraph constitutes practicing geology pursuant to G.S. 89E, soil science pursuant to G.S. 89F, or engineering pursuant to G.S. 89C.]~~

(f) Property Ownership Documentation shall be provided to the Division consisting of:

- (1) legal documentation of ownership (i.e., contract, deed or article of incorporation);
- (2) written notarized intent to purchase agreement an agreement of an intent to purchase the

property that is written, notarized, and signed by both parties, accompanied by a plat or survey map; or

- (3) ~~written notarized lease agreement an agreement to lease the property that is written, notarized, and signed by both parties, specifically indicating the intended use of the property, as well as accompanied by a plat or survey map.~~ Lease agreements shall adhere to the requirements of 15A NCAC 02L .0107.

(g) Public utilities shall submit a Certificate of Public Conveyance Convenience and Necessity or a letter from the NC Utilities Commission stating that it has received a franchise application has been received. application.

(h) A ~~complete~~ chemical analysis of the typical wastewater to be ~~discharged~~ infiltrated shall be provided to the Division by the Applicant applicant for industrial waste, including which shall include:

- (1) ~~Total Organic Carbon, Total Organic Carbon;~~
- (2) ~~5-day Biochemical Oxygen Demand (BOD₅); 5-day Biochemical Oxygen Demand (BOD₅);~~
- (3) ~~Chemical Oxygen Demand (COD); Chemical Oxygen Demand (COD);~~
- (4) ~~Nitrate Nitrogen (NO₃-N); Nitrate Nitrogen (NO₃-N);~~
- (5) ~~Ammonia Nitrogen (NH₃-N); Ammonia Nitrogen (NH₃-N);~~
- (6) ~~Total Kjeldahl Nitrogen (TKN); Total Kjeldahl Nitrogen (TKN);~~
- (7) ~~pH; pH;~~
- (8) ~~Chloride; Chloride;~~
- (9) ~~Total Phosphorus; Total Phosphorus;~~
- (10) ~~Phenol; Phenol;~~
- (11) ~~Total Volatile Organic Compounds; Total Volatile Organic Compounds;~~
- (12) ~~Fecal Coliform; Fecal Coliform;~~
- (13) ~~Calcium; Calcium;~~
- (14) ~~Sodium; Sodium;~~
- (15) ~~Magnesium; Magnesium;~~
- (16) ~~Sodium Adsorption Ratio (SAR) ; Sodium Adsorption Ratio (SAR);~~
- (17) ~~Total Trihalomethanes; Total Trihalomethanes; and Toxicity Test Parameters and~~
- (18) ~~Total Dissolved Solids.~~

(i) A project evaluation and a receiver site agronomic management plan (if applicable) containing recommendations concerning cover crops and their ability to accept the proposed application rates of liquid, solids, minerals and other constituents of the wastewater shall be provided to the Division.

(j) A residuals management plan as required by Rule .0708 .0708(a) of this Section is to be provided to the Division. ~~A written commitment is not required at the time of application; however, it must be provided prior to operation of the permitted system.~~

~~(k) A water balance shall be provided to the Division that determines required effluent storage based upon the most limiting factor of the hydraulic loading based on either the most restrictive horizon or groundwater mounding analysis; or nutrient~~

~~management based on either agronomic rates for a specified cover crop or crop management requirements.~~

(k) The Applicant shall provide to the Division a water balance that determines the required effluent storage based on the following most limiting factor:

- (1) hydraulic loading based on the most restrictive horizon;
- (2) hydraulic loading based on the groundwater mounding analysis;
- (3) nutrient management based on agronomic rates for the specified cover crop; or
- (4) nutrient management based on crop management.

(l) Facilities utilizing subsurface groundwater lowering drainage systems shall demonstrate that groundwater and surface water standards will be protected.

Authority G.S. 143-215.1; 143-215.3(a).

15A NCAC 02T .0705 DESIGN CRITERIA

(a) The requirements in this Rule shall apply to all new and expanding facilities, ~~facilities, as applicable.~~

~~(b) Degree of treatment shall be based on a monthly average 5-day Biochemical Oxygen Demand (BOD₅) ≤ 10 mg/L; Total Suspended Solids (TSS) ≤ 15 mg/L; Ammonia Nitrogen (NH₃-N) ≤ 4 mg/L; Fecal Coliforms ≤ 14 per 100 mL; and Nitrate Nitrogen (NO₃-N) ≤ 10 mg/L for domestic and commercial operations. Treatment for other operations shall be based on producing the quality effluent used in documenting protection of surface water or groundwater standards. More stringent effluent limits may be applied in accordance with calculations submitted by the applicant to document protection of surface water or groundwater standards.~~

(b) Minimum degree of treatment for new and expanding systems:

- (1) that are municipal, domestic and commercial facilities, except systems subject to Subparagraph (b)(2) of this Rule, shall meet a monthly average of each of the following:
 - (A) five-day Biochemical Oxygen Demand (BOD₅) < 10 mg/L;
 - (B) Total Suspended Solids (TSS) < 15 mg/L;
 - (C) Ammonia (NH₃-N) < 4 mg/L;
 - (D) Fecal Coliforms < 14 colonies/100 mL; and
 - (E) Nitrate Nitrogen (NO₃-N) < 10 mg/L; or
- (2) that are not described in Subparagraph (b)(1) of this Rule shall meet treatment standards that assure that surface water or groundwater standards will not be exceeded.

~~(c) All treatment/storage lagoons/ponds open-atmosphere treatment lagoons and ponds, and open-atmosphere storage and basin infiltration units shall have at least two feet of freeboard.~~

~~(d) Waste, including treated waste, shall not be placed directly into, or in contact with, GA classified groundwater unless such placement will not result in a contravention of GA groundwater~~

standards, as demonstrated by predictive calculations or modeling.

~~(e) Treatment works and disposal systems utilizing using earthen basins, lagoons, ponds or trenches, excluding holding ponds containing non-industrial treated effluent prior to spray-irrigation infiltration, for treatment, storage or disposal shall have either a liner of natural material at least one foot in thickness and having a hydraulic conductivity of no greater than 1×10^{-6} centimeters per second when compacted, or a synthetic liner of sufficient thickness to exhibit structural integrity and an effective hydraulic conductivity no greater than that of the natural material liner.~~

~~(f) The bottoms of earthen impoundments, trenches or other similar excavations shall be at least four feet above the bedrock surface, except that the bottom of excavations which that are less than four feet above bedrock shall have a liner with a hydraulic conductivity no greater than 1×10^{-7} centimeters per second. Liner thickness shall be that thickness necessary to achieve a leakage rate consistent with the sensitivity of classified groundwaters. Liner requirements may be reduced if it can be demonstrated by the Applicant demonstrates applicant through predictive calculations or modeling methods that construction and use of these treatment and disposal units will not result in contravention of surface water or groundwater standards.~~

~~(g) Impoundments, trenches or other excavations made for the purpose of storing or treating waste shall not be excavated into bedrock unless the placement of waste into such excavations will not result in a contravention of surface water or groundwater standards, as demonstrated by predictive calculations or modeling.~~

~~(h) Each facility, except for those using septic tanks or lagoon treatment, shall provide flow equalization with either a capacity based upon a representative diurnal hydrograph or a capacity of 25 percent of the daily system design flow. Flow equalization of at least 25 percent of the facilities permitted hydraulic capacity must be provided for all seasonal or resort facilities and all other facilities with fluctuations in influent flow which may adversely affect the performance of the system.~~

~~(i) By-pass and overflow lines shall be prohibited.~~

~~(j) Multiple pumps shall be provided if wherever pumps are used.~~

~~(k) Power reliability shall be provided provided, consisting of:~~

- ~~(1) automatically activated standby power supply power supply, located onsite, onsite and capable of powering all essential treatment units under design conditions; or~~
- ~~(2) approval by the Director that the facility:
 - ~~(A) serves a private water distribution system which that has automatic shut-off at power failure and no elevated water storage tanks, tanks;~~
 - ~~(B) has sufficient storage capacity that no potential for overflow exists, exists; and~~
 - ~~(C) can tolerate septic wastewater due to during prolonged detention.~~~~

~~(l) A water-tight seal on all treatment/storage treatment and storage units or minimum of two feet of protection from the 100-year flood elevation shall be provided.~~

- (m) ~~Irrigation~~ Infiltration system design shall not exceed the recommended precipitation rates in the soils report prepared pursuant to Rule .0704 of this Section.
- (n) ~~A minimum of~~ 30 days of residuals storage shall be provided.
- (o) Disposal areas shall be designed to maintain a one-foot vertical separation between the seasonal high water table and the ground surface.
- (p) The public shall be prohibited access to the treatment, storage and infiltration facilities, wetted disposal area and treatment facilities.
- (q) Inflow pump stations shall meet the sewer ~~minimum~~ design criteria as provided set forth in Section .0300 of this Subchapter.
- (r) Septic tanks shall adhere to 15A NCAC 18A .1900.
- (s) Infiltration areas shall be designed to allow routine maintenance of the area without interruption of disposal.
- (t) Subsurface groundwater lowering drainage systems permitted under this Subchapter shall be subject to the corrective action requirements in 15A NCAC 02L .0106.
- (u) Waste treatment facilities shall be equipped with noise and odor control devices that shall be enclosed.

- (v) All essential treatment and disposal units shall be provided in duplicate.
- (w) The application rate shall not exceed 10 gallons per day per square foot (GPD/ft²).
- (x) Facilities with an average daily flow greater than 10,000 GPD shall be provided with a flow meter to measure the volume of treated wastewater applied to each infiltration site.
- (y) Subsurface groundwater lowering drainage systems shall be prohibited within the compliance boundary.
- (z) Facilities serving residential communities shall provide five days of effluent storage, unless the Applicant demonstrates that the infiltrated effluent will not pond, runoff or breakout regardless of weather or soil conditions.
- (aa) Automatically activated infiltration systems, excluding basin, rotary, and spray bed infiltration systems, shall be connected to a rain or moisture sensor to prevent infiltration during precipitation events or wet conditions that would cause runoff.

Authority G.S. 143-215.1; 143-215.3(a).

15A NCAC 02T .0706 SETBACKS

(a) The setbacks for Infiltration Units shall be as follows:

	<u>Spray (feet)</u>	<u>Drip (feet)</u>	<u>Basin (feet)</u>
<u>Any habitable residence or place of public assembly under separate ownership or not to be maintained as part of the project site</u>	400	100	100
<u>Any habitable residence or place of public assembly owned by the Permittee to be maintained as part of the project site</u>	200	15	50
<u>Any private or public water supply source</u>	100	100	100
<u>Surface waters (streams – intermittent and perennial, perennial waterbodies, and wetlands)</u>	200	200	200
<u>Groundwater lowering ditches (where the bottom of the ditch intersects the SHWT)</u>	200	200	200
<u>Subsurface groundwater lowering drainage systems</u>	200	200	200
<u>Surface water diversions (ephemeral streams, waterways, ditches)</u>	50	50	50
<u>Any well with exception of monitoring wells</u>	100	100	100
<u>Any property line</u>	150	50	50
<u>Top of slope of embankments or cuts of two feet or more in vertical height</u>	100	100	100
<u>Any water line from a disposal system</u>	10	10	10
<u>Public right of way</u>	50	50	50
<u>Nitrification field</u>	20	20	20
<u>Any building foundation or basement</u>	15	15	15
<u>Impounded public water supplies</u>	500	500	500
<u>Public shallow groundwater supply (less than 50 feet deep)</u>	500	500	500
(feet)			
<u>Any habitable residence or place of public assembly under separate ownership or not to be maintained as part of the project site</u>			400
<u>Any habitable residence or place of public assembly owned by the permittee to be maintained as part of the project site</u>			200
<u>Any private or public water supply source</u>			100
<u>Surface waters (streams – intermittent and perennial, perennial waterbodies, and wetlands)</u>			200
<u>Groundwater lowering ditches (where the bottom of the ditch intersects the SHWT)</u>			200
<u>Subsurface groundwater lowering drainage systems</u>			200
<u>Surface water diversions (ephemeral streams, waterways, ditches)</u>			50
<u>Any well with exception of monitoring wells</u>			100
<u>Any property line</u>			200
<u>Top of slope of embankments or cuts of two feet or more in vertical height</u>			100
<u>Any water line from a disposal system</u>			10

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Any swimming pool	100
Public right of way	50
Nitrification field	20
Any building foundation or basement	15
Impounded public water supplies	500
Public shallow groundwater supply (less than 50 feet deep)	500

(b) Setbacks in Paragraph (a) of this Rule to surface waters, groundwater lowering ditches, and subsurface groundwater lowering drainage systems shall be 100 feet if the treatment units are designed to meet a Total Nitrogen of 7 ~~mg/4~~ mg/L and Total Phosphorus of 3 ~~mg/4~~ mg/L effluent limit.

(c) Setbacks in Paragraph (a) of this Rule to surface waters, groundwater lowering ditches, and subsurface groundwater lowering drainage systems shall be 50 feet if the treatment units are designed to meet a Total Nitrogen of 4 ~~mg/4~~ mg/L and Total Phosphorus of 2 ~~mg/4~~ mg/L effluent limit. This setback provision ~~does shall~~ not apply to SA waters.

(d) Treatment and storage facilities associated with systems permitted under this Section shall adhere to the setback requirements in Section .0500 of this Subchapter except as provided in this Rule.

(e) Setback waivers shall be written, notarized, signed by all parties involved and recorded with the County Register of Deeds. Waivers involving the compliance boundary shall be in accordance with 15A NCAC 02L .0107.

(f) Setbacks to property lines established in Paragraphs (a) and (d) of this Rule shall not be applicable when the Permittee, or the entity from which the Permittee is leasing, owns both parcels creating said property line.

(g) Habitable residences or places of public assembly under separate ownership constructed after the non-discharge facilities were originally permitted or subsequently modified, are exempt from the setback requirements in Paragraphs (a) and (d) of this Rule.

Authority G.S. 143-215.1; 143-215.3(a).

15A NCAC 02T .0707 OPERATION AND MAINTENANCE PLAN

(a) An operation and maintenance plan shall be maintained for all systems. The plan shall:

- (1) describe the operation of the system in sufficient detail to show what operations are necessary for the system to function and by whom the functions are to be conducted;
- (2) describe anticipated maintenance of the system;
- (3) include provisions for safety ~~measures,~~ measures including restriction of access to the site and equipment, as appropriate; and
- (4) include spill control ~~provisions,~~ provisions including:
 - (A) response to upsets and ~~bypasses,~~ bypasses including control, containment, and remediation; and
 - (B) contact information for plant personnel, emergency responders, and regulatory agencies.

(b) Infiltration areas, excluding basin, rotary, and spray bed infiltration systems, shall have a year-round vegetative cover.

(c) Infiltration, excluding basin infiltration systems, shall not result in ponding or runoff of treated effluent.

(d) Infiltration and metering equipment shall be tested and calibrated annually, or as established by permit.

(e) Automobiles and heavy machinery shall not be allowed on the infiltration area, except during installation or maintenance activities.

(f) Water level gauges shall be provided for all open-atmosphere treatment lagoons and ponds, and all open-atmosphere storage and basin infiltration units.

(g) Vegetative cover shall be maintained on all earthen embankments.

(h) Basin, rotary, and spray bed infiltration systems shall be cleaned to remove deposited materials every permit cycle, or as established by permit.

(i) The Permittee shall keep a log of all maintenance activities that occur at the facility.

(j) The Permittee shall perform inspections and maintenance to ensure proper operation of the facility.

Authority G.S. 143-215.1; 143-215.3(a).

15A NCAC 02T .0708 RESIDUALS MANAGEMENT PLAN

(a) A Residuals Management Plan shall be maintained for all systems that generate residuals. The plan ~~must shall~~ include the following:

- (1) a detailed explanation as to how the residuals will be collected, handled, processed, stored and disposed;
- (2) an evaluation of the residuals storage requirements for the treatment ~~facility~~ facility, based upon the maximum anticipated residuals production rate and the ability to remove residuals;
- (3) a permit for residuals disposal or utilization, utilization or a written commitment to the Permittee of a ~~Department—approved~~ Department-approved residuals ~~disposal/utilization~~ disposal or utilization program accepting the residuals ~~which that~~ demonstrates that the approved program has adequate capacity to accept the ~~residuals,~~ residuals or that an application for approval has been submitted; and
- (4) if oil, grease, grit, or screenings removal and collection is a designed unit process, a detailed explanation as to how ~~the oil/grease these~~ materials will be collected, handled, processed, stored and disposed.

(b) The Permittee shall maintain a record of all residuals removed from the facility.

Authority G.S. 143-215.1; 143-215.3(a).

SECTION .0800 – OTHER NON-DISCHARGE WASTEWATER SYSTEMS

15A NCAC 02T .0801 SCOPE

This Section ~~applies shall apply~~ to systems not specifically regulated by other rules in this Subchapter ~~in which the waste and governs waste that~~ is disposed of by ground absorption systems or other non-discharge systems such as infiltration lagoons and evaporative ~~systems systems~~, as well as authorizations to construct for NPDES facilities.

Authority G.S. 143-215.1; 143-215.3(a).

15A NCAC 02T .0804 APPLICATION SUBMITTAL

Submittal requirements shall be the same as systems permitted under ~~15A NCAC 02T .0504~~ 15A NCAC 02T .0504, except those that are not applicable to authorization to construct type ~~permits (e.g., soils report, hydrogeological investigations, or receiver site management plan).~~ permits.

Authority G.S. 143-215.1; 143-215.3(a).

15A NCAC 02T .0805 DESIGN CRITERIA

Design requirements shall be the same as systems permitted under ~~15A NCAC 02T .0505~~ 15A NCAC 02T .0505, except those that are not applicable to authorization to construct type permits ~~(e.g. degree of treatment and irrigation system design requirements)~~ or specifically addressed by Section 15A NCAC 02H .0100.

Authority G.S. 143-215.1; 143-215.3(a).

15A NCAC 02T .0806 SETBACKS (READOPTIION WITHOUT SUBSTANTIVE CHANGES)

15A NCAC 02T .0807 OPERATION AND MAINTENANCE

Operation and maintenance requirements shall be the same as systems permitted under 15A NCAC 02T .0707.

Authority G.S. 143-215.1; 143-215.3(a).

15A NCAC 02T .0808 RESIDUALS MANAGEMENT

Residuals management requirements shall be the same as systems permitted under 15A NCAC 02T .0708.

Authority G.S. 143-215.1; 143-215.3(a).

SECTION .1100 – RESIDUALS MANAGEMENT

15A NCAC 02T .1101 SCOPE

This Section shall apply ~~applies~~ to the treatment, storage, transportation, use, and disposal of residuals. Not regulated under this Section is the treatment, storage, transportation, use, or disposal of:

- (1) oil, grease, grit and screenings from wastewater treatment facilities;
- (2) septage from wastewater treatment facilities;
- (3) ash that is regulated in accordance with Section .1200;
- (4) residuals that are regulated in accordance with Section .1300 and Section .1400 of this Subchapter;
- (5) residuals that are prepared for land application, used, or disposed of in a solid waste management facility permitted by the Division of Waste Management;
- (6) residuals that are disposed of in an incinerator permitted by the Division of Air Quality;
- (7) residuals that are transported out of state for treatment, storage, use, or disposal; ~~and~~
- (8) residuals that meet the definition of a hazardous waste in accordance with 40 CFR 260.10 as adopted by reference in 15A NCAC 13A .0102(b) or that have a concentration of polychlorinated biphenyls equal to or greater than 50 milligrams per kilogram of total solids on a dry weight basis; and (i.e., dry weight basis).
- (9) byproduct waste resulting from any process of industry, manufacturing, trade, business, or the development of any natural resource (i.e., not from a wastewater treatment, water supply treatment, or air pollution control facility permitted under the authority of the Commission).

Authority G.S. 143-215.1; 143-215.3(a).

15A NCAC 02T .1102 DEFINITIONS

As used in this Section:

- (1) "Aerobic digestion" shall mean the biochemical decomposition of organic matter in residuals into carbon dioxide and water by microorganisms in the presence of air.
- (2) "Agricultural land" shall mean land on which a food crop, feed crop, or fiber crop is grown.
- (3) "Anaerobic digestion" shall mean the biochemical decomposition of organic matter in residuals into methane gas and carbon dioxide by microorganisms in the absence of air.
- (4) "Bag and other container" shall mean a bag, bucket, bin, box, carton, vehicle, trailer, tanker, or an open or closed receptacle with a load capacity of 1.102 short tons or one metric ton or less.
- (5) "Base flood" shall mean a flood that has a one percent ~~chance change~~ of occurring in any given ~~year. year~~ year (i.e., a flood with a magnitude equaled once in 100 years).
- (6) "Biological residuals" shall mean residuals that have been generated during the treatment of domestic wastewater, the treatment of animal

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- processing wastewater, or the biological treatment of industrial wastewater.
- (7) "Biological treatment" shall mean treatment in a system that utilizes uses biological processes, processes that shall include including lagoons, activated sludge systems, extended aeration systems, and fixed film systems.
- (8) ~~"Bulk residuals" shall mean residuals that are transported and not sold or given away in a bag or other container for application to the land.~~
- (8)(9) "Cover" shall mean soil or ~~other~~ Division-approved material used to cover residuals placed in a surface disposal unit.
- (9)(10) "Cumulative pollutant loading rate" shall mean the maximum amount of a pollutant that ~~can~~ is permitted to be applied to a unit area of land.
- (10)(11) "Dedicated program" shall mean a program involving the application of ~~bulk~~ residuals in which any of the permitted land meets the definition of a dedicated land application site.
- (11)(12) "Dedicated land application site" shall mean land:
- (a) to which ~~bulk~~ residuals are applied at greater than agronomic ~~rates; rates,~~
 - (b) to which ~~bulk~~ residuals are applied through fixed irrigation facilities or irrigation facilities fed through a fixed supply ~~system; system,~~ or
 - (c) where the primary use of the land is for the disposal of ~~bulk residuals,~~ residuals and agricultural crop production is of secondary importance.
- (12)(13) "Density of microorganisms" shall mean the number of microorganisms per unit mass of total solids on a dry weight basis (i.e., dry weight basis) in the residuals.
- (13)(14) "Dry weight basis" shall mean the weight calculated after the residuals have been dried at 105 degrees Celsius until they reach a constant mass.
- (14)(15) "Feed crop" shall mean a crop produced for consumption by animals.
- (15)(16) "Fiber crop" shall mean a crop grown for fiber ~~production. This shall include production,~~ including flax and cotton.
- (16)(17) "Food crop" shall mean a crop produced for consumption by ~~humans. This shall include humans, including~~ humans, including fruits, vegetables, and tobacco.
- (17)(18) "Grit" shall mean sand, gravel, cinders, or other materials with a high specific gravity generated during preliminary treatment of wastewater in a wastewater treatment facility.
- (18)(19) "Incorporation" shall mean the mixing of residuals with top soil to a minimum depth of four inches by methods such as discing, plowing, and rototilling.
- (19)(20) "Injection" shall mean the subsurface application of liquid residuals to a depth of four to 12 inches.
- (20)(21) "Land application" shall mean the spraying or spreading of residuals onto the land ~~surface, surface;~~ the injection of residuals below the land surface, surface; or the incorporation of residuals into the soil so that the residuals can condition the soil or fertilize crops or vegetation grown in the soil.
- (21)(22) "Lower explosive limit for methane gas" shall mean the lowest percentage of methane gas in air, by volume, that propagates a flame at 25 degrees Celsius and atmospheric pressure.
- (22)(23) "Monthly average" shall mean the arithmetic mean of all measurements taken during ~~the a~~ a month.
- (23)(24) "Pathogens" shall mean disease-causing ~~organisms organisms,~~ including disease-causing bacteria, protozoa, viruses, and viable helminth ova.
- (24)(25) "Place residuals" shall mean to dispose of residuals in a surface disposal unit.
- (25)(26) "Person who prepares residuals" shall mean either the person who generates residuals during the treatment of waste in a wastewater treatment facility or the person who derives a material from residuals.
- (26)(27) "Pollutant limit" shall mean a numerical value that describes the amount of a pollutant allowed per unit amount of residuals or the amount of a pollutant that can be applied to a unit area of land.
- (27)(28) "Public contact site" shall mean land with a high potential for contact by the public as defined in 40 CFR 503.11(4). ~~This shall include 503.11(1), including~~ 503.11(1), including public parks, ball fields, cemeteries, plant nurseries, turf farms, and golf courses.
- (28)(29) "Runoff" shall mean rainwater, leachate, or other liquid that drains overland and runs off of the land surface.
- (29)(30) "Screenings" shall mean rags or other relatively large materials generated during preliminary treatment of wastewater in a wastewater treatment facility.
- (30)(31) "Seismic impact zone" shall mean an area that has a 10 percent or greater probability that the horizontal ground level acceleration of the rock in the area exceeds 0.10 gravity once in 250 years.
- (31)(32) "Specific oxygen uptake rate (SOUR)" shall mean the mass of oxygen consumed per unit time per unit mass of total solids on a dry weight basis (i.e., dry weight basis) in the residuals.
- (32)(33) "Surface disposal unit" shall mean the land on which only residuals are placed for final disposal, including monofills, lagoons, and

~~trenches and not including land on which residuals is either treated or stored, not including land on which residuals is either treated or stored. This shall include monofills, lagoons, and trenches.~~

- (33)(34) "Surface disposal unit boundary" shall mean the outermost perimeter of a surface disposal unit.
- (34)(35) "Total solids" shall mean the materials that remain as residue after the residuals have been dried at between 103 and 105 degrees Celsius until they reach a constant mass.
- (35)(36) "Water treatment residuals" shall mean residuals that have been generated during the treatment of potable or process water.
- (36)(37) "Unstabilized residuals" shall mean residuals that have not been treated in either an aerobic or an anaerobic treatment process.
- (37)(38) "Unstable area" shall mean land subject to natural or human-induced forces that may damage the structural components of a surface disposal unit. ~~This shall include unit, including land on which the soils are subject to mass movement.~~
- (38)(39) "Vector attraction" shall mean the characteristic of residuals that attracts rodents, flies, mosquitoes, or other organisms capable of transporting infectious agents.
- (39)(40) "Volatile solids" shall mean the amount of the total solids in the residuals lost when they are combusted at 550 degrees Celsius in the presence of excess air.

Authority G.S. 143-215.1; 143-215.3(a).

15A NCAC 02T .1103 PERMITTING BY REGULATION

(a) The following systems ~~are~~ shall be deemed permitted pursuant to Rule .0113 of this Subchapter ~~provided if~~ the system meets the criteria in Rule .0113 of this Subchapter and all criteria required for ~~the specific that~~ system in this Rule:

- (1) Preparation for land application, use, or disposal of residuals in a solid waste facility permitted by the Division of Waste Management that is approved to receive the residuals.
- (2) Land application of residuals that have been prepared for land application in a solid waste facility permitted by the Division of Waste Management approved to receive the residuals ~~as long as~~ if the requirements of this Section are met.
- (3) Land application sites onto which Class A residuals that are sold or given away in a bag or other ~~container container~~, are ~~applied applied~~, provided the following criteria ~~is~~ are met:
 - (A) the residuals meet the pollutant limits in Rule .1105(a) and Rule .1105(c) of this Section,

- (B) the residuals meet the pathogen requirements in Rule .1106(a)(1) of this Section,
 - (C) the residuals meet the vector attraction reduction requirements in Rule .1107(a) of this Section, and
 - (D) the land application activities are carried out according to the instructions provided in the informational ~~sheet, sheet or bag bag~~, or other container label as required in Rule ~~.1109(c) .1109(a)~~ of this Section.
- (4) Land application sites onto which ~~bulk Class A~~ biological residuals are applied, ~~provided that if~~ the residuals and activities ~~meet meeting~~ the following criteria:
 - (A) the residuals meet the pollutant limits in Rule .1105(a) and Rule .1105(c) of this Section,
 - (B) the residuals meet the pathogen requirements in Rule .1106(b) of this Section,
 - (C) the residuals meet the vector attraction reduction requirements in Rule .1107(a) of this Section, and
 - (D) the land application activities meet all applicable conditions of Rule ~~.1108(b) .1108(b)(1)~~ and Rule ~~.1109(a)(1) .1109(b)~~ of this Section.
- (5) Land application sites onto which Class A non-biological residuals ~~generated from the treatment of potable or fresh water or that are generated from the treatment of non-biological industrial wastewater with no domestic or municipal wastewater contributions~~ are applied, ~~provided that if~~ the residuals and activities meet the following criteria:
 - (A) the residuals meet the pollutant limits in Rule .1105(a) and Rule .1105(c) of this Section,
 - (B) the residuals meet the pathogen requirements in Rule .1106(b) of this Section, and
 - (C) the land application activities meet all applicable conditions of Rule ~~.1108(b) .1108(b)(1)~~ and Rule ~~.1109 .1109(a)(1)~~ of this Section.
- (6) Transportation of residuals from the ~~residuals generating residuals-generating~~ source facility to other Division or Division of Waste Management facilities approved to treat, store, use, or dispose the residuals.

(b) The Director may determine that a system ~~should~~ shall not be deemed permitted in accordance with this Rule and Rule .0113 of this Subchapter. This determination shall be made in accordance with Rule .0113(e) of this Subchapter.

Authority G.S. 143-215.1; 143-215.3(a).

15A NCAC 02T .1104 APPLICATION SUBMITTAL

(a) For new and expanding residuals treatment and storage facilities:

- (1) Site plans. If required by G.S. 89C, a professional land surveyor shall provide location information on boundaries and physical features not under the purview of other licensed professions. Site plans or maps shall be provided to the Division by the Applicant ~~applicant~~ depicting the location, orientation and relationship of facility ~~components~~ components, including:

~~[Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via letter dated December 1, 2005, that locating boundaries and physical features, not under the purview of other licensed professions, on maps pursuant to this Paragraph constitutes practicing surveying under G.S. 89C.]~~

- (A) a scaled map of the site, with topographic contour intervals not exceeding 10 feet or 25 percent of total site relief and showing all facility-related structures and fences within the treatment and storage areas;
- (B) the location of all wells (including ~~usage~~ use and construction details if available), streams (ephemeral, intermittent, and perennial), springs, lakes, ponds, and other surface drainage features within 500 feet of all treatment and storage facilities and delineation of the review and compliance boundaries;
- (C) setbacks as required by Rule .1108 of this Section; and
- (D) site property boundaries within 500 feet of all treatment and storage facilities.

~~[Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via letter dated December 1, 2005, that locating boundaries and physical features, not under the purview of other licensed professions, on maps pursuant to this Paragraph constitutes practicing surveying pursuant to G.S. 89C.]~~

- (2) Engineering design documents. If required by G.S. 89C, a professional engineer shall prepare these documents. The following documents shall be provided to the Division by the Applicant; ~~applicant~~:

~~[Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via letter dated December 1, 2005, that preparation of engineering design documents pursuant to this Paragraph constitutes practicing engineering under G.S. 89C.]~~

- (A) engineering plans for the facilities and equipment except those previously

permitted unless they are directly tied into the new units or are ~~critical~~ essential ~~necessary~~ to the understanding of the complete process;

- (B) specifications describing materials to be used, methods of construction, and means for ensuring quality and integrity of the finished product, ~~product~~ including leakage testing; and
- (C) engineering ~~calculations~~ calculations, including hydraulic and pollutant loading for each unit, unit sizing criteria, hydraulic profile of the facilities, total dynamic head and system curve analysis for each pump, and buoyancy calculations.

~~[Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via letter dated December 1, 2005, that preparation of engineering design documents pursuant to this Paragraph constitutes practicing engineering pursuant to G.S. 89C.]~~

(b) For new and modified sources of residuals:

- (1) Site maps shall be provided to the Division by the Applicant ~~applicant~~ depicting the location of the source.
- (2) ~~A complete~~ An analysis of the residuals shall be provided to the Division by the Applicant ~~applicant~~. The analysis ~~may include~~ shall include:
 - (A) all pollutants identified in Rule .1105 of this ~~Section~~; ~~Section~~;
 - (B) nutrients and micronutrients; ~~micronutrients~~;
 - (C) hazardous waste characterization ~~tests~~; ~~tests~~; and
 - (D) proof of compliance with Rule .1106 and Rule .1107 of this Section if applicable.

- (3) A ~~sampling/monitoring~~ sampling and monitoring plan that describes how compliance with Rule .1105, Rule .1106, and Rule .1107 of this Section if applicable shall be provided to the Division by the Applicant. ~~applicant~~.

(c) For new and expanding non-dedicated land application sites:

- (1) ~~Buffer~~ Setback maps shall be provided to the Division by the Applicant ~~applicant~~ depicting the location, orientation and relationship of land application site features including:
 - (A) a scaled map of the land application site, showing all related structures and fences within the land application area;
 - (B) the location of all wells, streams (ephemeral, intermittent, and perennial), springs, lakes, ponds, and other surface drainage features within 500 feet of the land application area

- and delineation of the review and compliance boundaries;
- (C) setbacks as required by Rule .1108 of this Section; and
- (D) property boundaries within 500 feet of the land application site.
- (2) Soils Report. A soil evaluation of the land application site shall be provided to the Division by the Applicant, ~~applicant~~. This evaluation shall be presented in a report that includes the following. If required by G.S. 89F, a soil scientist shall prepare this evaluation:
~~[Note: The North Carolina Board for Licensing of Soil Scientists has determined, via letter dated December 1, 2005, that preparation of soils reports pursuant to this Paragraph constitutes practicing soil science under G.S. 89F.]~~
- (A) Confirmation of a county soils map, soil evaluation, and verification of the presence or absence of a seasonal high water table within three feet of land surface or establishment of a soil map through field description of soil profile, based on examinations of excavation pits or auger borings, within seven feet of land surface or to bedrock describing the following parameters by individual diagnostic horizons: thickness of the horizon; texture; color and other diagnostic features; structure; internal drainage; depth, thickness, and type of restrictive horizon; ~~horizon(s)~~; and presence or absence and depth of evidence of any seasonal high water table, ~~table~~ (SHWT).
- (B) A representative soils analysis for standard soil fertility and all pollutants listed in Rule .1105(b) of this Section. The Standard Soil Fertility Analysis shall include the following parameters: acidity; base saturation (by calculation); calcium; cation exchange capacity; copper; exchangeable sodium percentage (by calculation); magnesium; manganese; percent humic matter; pH; phosphorus; potassium; sodium, and zinc.
[Note: The North Carolina Board for Licensing of Soil Scientists has determined, via letter dated December 1, 2005, that preparation of soils reports pursuant to this Paragraph constitutes practicing soil science pursuant to G.S. 89F.]
- (3) A project evaluation and a land application site management plan (if applicable) with recommendations concerning cover crops and
- their ability to accept the proposed application rates of liquid, solids, minerals and other constituents of the residuals shall be provided to the Division.
- (4) Unless the land application site is owned by the Permittee, property ownership documentation consisting of a notarized landowner agreement shall be provided to the Division.
- (d) For new and expanding dedicated land application sites:
- (1) Site plans. If required by G.S. 89C, a professional land surveyor shall provide location information on boundaries and physical features not under the purview of other licensed professions. Site plans or maps shall be provided to the Division by the Applicant ~~applicant~~ depicting the location, orientation and relationship of land application site features including:
~~[Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via letter dated December 1, 2005, that locating boundaries and physical features, not under the purview of other licensed professions, on maps pursuant to this Paragraph constitutes practicing surveying under G.S. 89C.]~~
- (A) a scaled map of the site, with topographic contour intervals not exceeding 10 feet or 25 percent of total site relief and showing all facility-related structures and fences within the land application area;
- (B) the location of all wells (including ~~usage~~ use and construction details if available), streams (ephemeral, intermittent, and perennial), springs, lakes, ponds, and other surface drainage features within 500 feet of the land application site and delineation of the review and compliance boundaries;
- (C) setbacks as required by Rule .1108 of this Section; and
- (D) property boundaries within 500 feet of the land application site.
[Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via letter dated December 1, 2005, that locating boundaries and physical features, not under the purview of other licensed professions, on maps pursuant to this Paragraph constitutes practicing surveying pursuant to G.S. 89C.]
- (2) Engineering design documents (for land applications sites onto which ~~bulk~~ residuals are applied through fixed irrigation facilities or irrigation facilities fed through a fixed supply system only). If required by G.S. 89C, a professional engineer shall prepare these documents. The following documents shall be

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provided to the Division by the Applicant
~~applicant~~:

~~[Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via letter dated December 1, 2005, that preparation of engineering design documents pursuant to this Paragraph constitutes practicing engineering under G.S. 89C.]~~

- (A) engineering plans for the facilities and equipment except those previously permitted unless they are directly tied into the new units or are ~~critical~~ necessary to the understanding of the complete process;
- (B) specifications describing materials to be used, methods of construction, and means for ensuring quality and integrity of the finished ~~product~~ product, including leakage testing; and
- (C) ~~engineering calculations~~ calculations, including hydraulic and pollutant loading, sizing criteria, hydraulic profile, total dynamic head and system curve analysis for each pump, and irrigation design.

~~[Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via letter dated December 1, 2005, that preparation of engineering design documents pursuant to this Paragraph constitutes practicing engineering pursuant to G.S. 89C.]~~

- (3) Soils Report. A soil evaluation of the land application site shall be provided. This evaluation shall be presented to the Division by the Applicant ~~applicant~~ in a report that includes the following. If required by G.S. 89F, a soil scientist shall prepare this evaluation:

~~[Note: The North Carolina Board for Licensing of Soil Scientists has determined, via letter dated December 1, 2005, that preparation of soils reports pursuant to this Paragraph constitutes practicing soil science under G.S. 89F.]~~

- (A) Field description of soil profile, based on examinations of excavation pits or auger borings, within seven feet of land surface or to bedrock describing the following parameters by individual diagnostic horizons: thickness of the horizon; texture; color and other diagnostic features; structure; internal drainage; depth, thickness, and type of restrictive ~~horizon(s)~~ horizon; and presence or absence and depth of evidence of any seasonal high water ~~table~~ table (SHWT). Applicants shall dig pits if necessary for proper evaluation of the soils at the site.

- (B) Recommendations concerning loading rates of liquids, solids, other residuals constituents and amendments (i.e., for land application sites onto which ~~bulk~~ residuals are applied through fixed irrigation facilities or irrigation facilities fed through a fixed supply system only). Annual hydraulic loading rates shall be based on in-situ measurement of saturated hydraulic conductivity in the most restrictive horizon for each soil mapping unit. Maximum irrigation precipitation rates shall be provided for each soil mapping unit.

- (C) A field-delineated soil map delineating soil mapping units within the land application site and showing all physical features, location of pits and auger borings, legends, scale, and a north arrow. The legends shall also include dominant soil series name and family or higher taxonomic class for each soil mapping unit.

- (D) A representative soils analysis for standard soil fertility and all pollutants listed in Rule .1105(b) of this Section. The Standard Soil Fertility Analysis shall include the following parameters: acidity, base saturation (by calculation), calcium, cation exchange capacity, copper, exchangeable sodium percentage (by calculation), magnesium, manganese, percent humic matter, pH, phosphorus, potassium, sodium, and zinc.

~~[Note: The North Carolina Board for Licensing of Soil Scientists has determined, via letter dated December 1, 2005, that preparation of soils reports pursuant to this Paragraph constitutes practicing soil science pursuant to G.S. 89F.]~~

- (4) Hydrogeologic report. A hydrogeologic description prepared by a Licensed Geologist, Licensed Soil Scientist, or Professional Engineer if required by Chapters 89E, 89F, or 89C, respectively, respectively ~~of the subsurface to a depth of 20 feet or bedrock, whichever is less~~, shall be provided to the Division by the Applicant ~~applicant~~. The hydrogeologic evaluation shall be of the subsurface to a depth of 20 feet or bedrock, whichever is less deep. A greater depth of An investigation to a depth greater than 20 feet is required if the respective depth is used in predictive calculations. This evaluation shall be based on borings for which the numbers, locations, and depths are sufficient sufficient

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numbers, locations, and depths of borings to define the components of the hydrogeologic evaluation. In addition to borings, other techniques may be used to investigate the subsurface conditions at the site, including site. ~~These techniques may include~~ geophysical well logs, surface geophysical surveys, and tracer studies. This evaluation shall be presented in a report that includes the following components:

~~[Note: The North Carolina Board for Licensing of Geologists, via letter dated April 6, 2006, North Carolina Board for Licensing of Soil Scientists, via letter dated December 1, 2005, and North Carolina Board of Examiners for Engineers and Surveyors, via letter dated December 1, 2005, have determined that preparation of hydrogeologic description documents pursuant to this Paragraph constitutes practicing geology under G.S. 89E, soil science under G.S. 89F, or engineering under G.S. 89C.]~~

- (A) a description of the regional and local geology and hydrogeology;
- (B) a description, based on field observations of the land application site, of the land application site topographic setting, streams, springs and other groundwater discharge features, drainage features, existing and abandoned wells, rock outcrops, and other features that may affect the movement of the contaminant plume and treated wastewater;
- (C) changes in the lithology underlying the ~~land application~~ site;
- (D) depth to the bedrock and the occurrence of any rock outcrops;
- (E) the hydraulic conductivity and transmissivity of the affected aquifer(s); aquifer as determined by in-situ field testing, such as slug tests or pumping tests, in the intended area of irrigation;
- (F) the depth to the seasonal high water table;
- (G) a discussion of the relationship between the affected aquifers of the land application site to local and regional geologic and hydrogeologic features;
- (H) a discussion of the groundwater flow regime of the ~~land application~~ site prior to the operation of the proposed site and the post operation of the proposed ~~site~~ site, focusing on the relationship of the site to groundwater receptors, groundwater discharge features, and groundwater flow media; and

- (I) if residuals are applied through fixed irrigation facilities or irrigation facilities fed through a fixed supply system only and if the SHWT seasonal high water table is within six feet of the surface, a mounding analysis to predict the level of the SHWT seasonal high water table after residuals land application.

~~[Note: The North Carolina Board for Licensing of Geologists, via letter dated April 6, 2006, North Carolina Board for Licensing of Soil Scientists, via letter dated December 1, 2005, and North Carolina Board of Examiners for Engineers and Surveyors, via letter dated December 1, 2005, have determined that preparation of hydrogeologic description documents pursuant to this Paragraph constitutes practicing geology pursuant to G.S. 89E, soil science pursuant to G.S. 89F, or engineering pursuant to G.S. 89C.]~~

- (5) For land application sites onto which ~~bulk~~ residuals are applied through fixed irrigation facilities or irrigation facilities fed through a fixed supply system only, the Applicant shall provide to the Division a water balance shall be provided to the Division by the applicant that determines the required residuals storage based upon the following most limiting ~~factor; factor~~

- (A) hydraulic loading based on the most restrictive horizon;
 - (B) hydraulic loading based on the groundwater mounding analysis;
 - (C) nutrient management based on agronomic rates for the specified cover crop; or
 - (D) nutrient management based on crop management.
- ~~of the hydraulic loading based on either the most restrictive horizon or groundwater mounding analysis; or nutrient management based on either agronomic rates for the specified cover crop or crop management requirements.~~

- (6) A project evaluation and a receiver site management plan (if applicable) with recommendations concerning cover crops and their ability to accept the proposed application rates of liquid, solids, minerals and other constituents of the residuals shall be provided to the Division by the Applicant, applicant.
- (7) Property Ownership Documentation shall be provided to the Division by the Applicant applicant consisting of:

- (A) legal documentation of ownership (i.e., contract, deed or article of incorporation);
- (B) ~~written notarized intent to purchase agreement~~ an agreement of an intent to

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purchase the property that is written, notarized, and signed by both parties, accompanied by a plat or survey map; or

- (C) ~~written notarized lease agreement an agreement to lease the property that is written, notarized, and signed by both parties, specifically indicating the intended use of the property, as well as accompanied by a plat or survey map.~~ Lease agreements shall adhere to the requirements of 15A NCAC 02L .0107.

(e) For new and expanding surface disposal units:

- (1) Site plans. If required by G.S. 89C, a professional land surveyor shall provide location information on boundaries and physical features not under the purview of other licensed professions. Site plans or maps shall be provided to the Division by the Applicant ~~applicant~~ depicting the location, orientation and relationship of the surface disposal unit features including:

~~[Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via letter dated December 1, 2005, that locating boundaries and physical features, not under the purview of other licensed professions, on maps pursuant to this Paragraph constitutes practicing surveying under G.S. 89C.]~~

- (A) a scaled map of the surface disposal unit, with topographic contour intervals not exceeding 10 feet or 25 percent of total site relief and showing all surface disposal unit-related structures and fences within the surface disposal unit;
- (B) the location of all wells (including ~~usage~~ use and construction details if available), streams (ephemeral, intermittent, and perennial), springs, lakes, ponds, and other surface drainage features within 500 feet of the surface disposal unit and delineation of the review and compliance boundaries;
- (C) setbacks as required by Rule .1108 of this Section; and
- (D) site property boundaries within 500 feet of the surface disposal unit.

~~[Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via letter dated December 1, 2005, that locating boundaries and physical features, not under the purview of other licensed professions, on maps pursuant to this Paragraph constitutes practicing surveying pursuant to G.S. 89C.]~~

- (2) Engineering design documents. If required by G.S. 89C, a professional engineer shall prepare

these documents. The following documents shall be provided to the Division by the Applicant ~~applicant~~:

~~[Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via letter dated December 1, 2005, that preparation of engineering design documents pursuant to this Paragraph constitutes practicing engineering under G.S. 89C.]~~

- (A) engineering plans for the surface disposal unit and equipment except those previously permitted unless they are directly tied into the new units or are critical ~~necessary~~ to the understanding of the complete process;
- (B) specifications describing materials to be used, methods of construction, and means for ensuring quality and integrity of the finished ~~product~~ product, including leakage testing; and
- (C) engineering ~~calculations~~ calculations, including hydraulic and pollutant loading, sizing criteria, hydraulic profile, and total dynamic head and system curve analysis for each pump.

~~[Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via letter dated December 1, 2005, that preparation of engineering design documents pursuant to this Paragraph constitutes practicing engineering pursuant to G.S. 89C.]~~

- (3) Soils Report. A soil evaluation of the surface disposal unit site shall be provided to the Division by the Applicant ~~applicant~~ in a report that includes the following. If required by G.S. 89F, a soil scientist shall prepare this evaluation:

~~[Note: The North Carolina Board for Licensing of Soil Scientists has determined, via letter dated December 1, 2005, that preparation of soils reports pursuant to this Paragraph constitutes practicing soil science under G.S. 89F.]~~

- (A) Field description of soil profile, based on examinations of excavation pits or auger borings, within seven feet of land surface or to bedrock describing the following parameters by individual diagnostic horizons: thickness of the horizon; texture; color and other diagnostic features; structure; internal drainage; depth, thickness, and type of restrictive horizon; ~~horizon(s)~~; and presence or absence and depth of evidence of any seasonal high water ~~table~~ table (SHWT). Applicants may be required

to dig pits when necessary for proper evaluation of the soils at the site.

- (B) A field-delineated soil map delineating major soil mapping units within the surface disposal unit site and showing all physical features, location of pits and auger borings, legends, scale, and a north arrow. The legends shall also include dominant soil series name and family or higher taxonomic class for each soil mapping unit.

[Note: The North Carolina Board for Licensing of Soil Scientists has determined, via letter dated December 1, 2005, that preparation of soils reports pursuant to this Paragraph constitutes practicing soil science pursuant to G.S. 89F.]

- (4) Hydrogeologic report. A hydrogeologic description prepared by a Licensed Geologist, Licensed Soil Scientist, or Professional Engineer if required by Chapters 89E, 89F, or 89C, ~~respectively, respectively~~ of ~~the subsurface to a depth of 20 feet or bedrock, whichever is less,~~ shall be provided to the Division by the Applicant, applicant. The hydrogeologic evaluation shall be of the subsurface to a depth of 20 feet or bedrock, whichever is less deep. A greater depth of an investigation to a depth greater than 20 feet is required if the respective depth is used in predictive calculations. This evaluation shall be based on borings for which the numbers, locations, and depths are sufficient sufficient numbers, locations, and depths of borings to define the components of the hydrogeologic evaluation. In addition to borings, other techniques may be used to investigate the subsurface conditions at the site, including site. These techniques may include geophysical well logs, surface geophysical surveys, and tracer studies. This evaluation shall be presented in a report that includes the following components:

[~~Note: The North Carolina Board for Licensing of Geologists, via letter dated April 6, 2006, North Carolina Board for Licensing of Soil Scientists, via letter dated December 1, 2005, and North Carolina Board of Examiners for Engineers and Surveyors, via letter dated December 1, 2005, have determined that preparation of hydrogeologic description documents pursuant to this Paragraph constitutes practicing geology under G.S. 89E, soil science under G.S. 89F, or engineering under G.S. 89C.~~]

- (A) a description of the regional and local geology and hydrogeology;
(B) a description, based on field observations of the site, of the site

topographic setting, streams, springs and other groundwater discharge features, drainage features, existing and abandoned wells, rock outcrops, and other features that may affect the movement of the contaminant plume and treated wastewater;

- (C) changes in the lithology underlying the site;
(D) the depth to bedrock and the occurrence of any rock outcrops;
(E) the hydraulic conductivity and transmissivity of the affected aquifer(s); aquifer as determined by in-situ field testing, such as slug tests or pumping tests, in the intended area of irrigation;
(F) the depth to the seasonal high water table;
(G) a discussion of the relationship between the affected aquifers of the site to local and regional geologic and hydrogeologic features; and
(H) a discussion of the groundwater flow regime of the site prior to the operation of the proposed unit and the post operation of the proposed unit, unit focusing on the relationship of the unit to groundwater receptors, groundwater discharge features, and groundwater flow media.

[Note: The North Carolina Board for Licensing of Geologists, via letter dated April 6, 2006, North Carolina Board for Licensing of Soil Scientists, via letter dated December 1, 2005, and North Carolina Board of Examiners for Engineers and Surveyors, via letter dated December 1, 2005, have determined that preparation of hydrogeologic description documents pursuant to this Paragraph constitutes practicing geology pursuant to G.S. 89E, soil science pursuant to G.S. 89F, or engineering pursuant to G.S. 89C.]

- (5) Property Ownership Documentation shall be provided to the Division by the Applicant applicant consisting of:

- (A) legal documentation of ownership (i.e., contract, deed or article of incorporation);
(B) ~~written notarized intent to purchase agreement~~ an agreement of an intent to purchase the property that is written, notarized, and signed by both parties, accompanied by a plat or survey map; or
(C) ~~written notarized lease agreement~~ an agreement to lease the property that is written, notarized, and signed by both parties, specifically indicating the

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intended use of the property, ~~as well as accompanied by~~ a plat or survey map. Lease agreements shall adhere to the requirements of 15A NCAC 02L .0107.

loading rates shall be determined using one of the following methods:

- (A) by calculating the existing cumulative level of pollutants using ~~actual~~ analytical data from all historical land application ~~events~~ of residuals not otherwise exempted by this ~~Paragraph Paragraph~~; or
- (B) for land on which land application events of residuals has not occurred or for which the data required in Rule .1105(b) is incomplete, by determining background concentrations through representative soil sampling.

Authority G.S. 143-215.1; 143-215.3(a).

15A NCAC 02T .1105 POLLUTANT LIMITS

(a) ~~Bulk residuals or residuals that are sold or given away in a bag or other container~~ Residuals shall not be land applied to the land if the concentration of any pollutant in the residuals exceeds the ceiling concentration for that pollutant as stipulated in the following on a dry weight basis: ~~(i.e., on a dry weight basis)~~:

<u>Pollutant</u> <u>(milligrams per kilogram)</u>	<u>Ceiling Concentration</u>
Arsenic	75
Cadmium	85
Copper	4,300
Lead	840
Mercury	57
Molybdenum	75
Nickel	420
Selenium	100
Zinc	7,500

(b) ~~Bulk Class B~~ residuals shall not be land applied to the land if the land application causes the ~~exceedance of the~~ cumulative pollutant loading ~~rate rate~~, on a dry weight basis, to be exceeded for any pollutant as stipulated in the following: ~~following~~ following ~~(i.e., on a dry weight basis)~~:

<u>Pollutant</u> <u>Loading Rate</u> <u>(kilograms per hectare)</u>	<u>Cumulative Pollutant</u>
Arsenic	41
Cadmium	39
Copper	1,500
Lead	300
Mercury	17
Nickel	420
Selenium	100
Zinc	2,800

(1) ~~A person shall determine compliance~~ Compliance with the cumulative pollutant

(d) ~~Bulk residuals~~ Residuals shall not be placed in a surface disposal unit if the concentration of any pollutant in the residuals exceeds the concentration for that ~~pollutant pollutant~~, as stipulated in the following on a dry weight basis: ~~(i.e., on a dry weight basis)~~:

Distance from Surface Disposal Unit
Boundary to Closest Property Line
(meters)

Ceiling Concentration
(milligrams per kilogram)

	<u>Arsenic</u>	<u>Chromium</u>	<u>Nickel</u>
0 to less than 25	30	200	210
25 to less than 50	34	220	240
50 to less than 75	39	260	270
75 to less than 100	46	300	320
100 to less than 125	53	360	390
125 and greater <u>to less than 150</u>	62	450	420

greater than 150

73

600

420

Authority G.S. 143-215.1; 143-215.3(a).

15A NCAC 02T .1106 PATHOGEN REDUCTION REQUIREMENTS

(a) The following pathogen requirements shall be met when biological residuals are land applied to the land or placed in a surface disposal unit:

- (1) The Class A pathogen requirements shall be met when ~~bulk~~ biological residuals are applied to a lawn, home garden, or public contact use ~~site~~ site, or sold or given away in a bag or other container for land application. ~~application to the land.~~
- (2) Biological residuals placed in a surface disposal unit shall be exempt from meeting the Class A or Class B pathogen requirements if the vector attraction reduction method in Rule .1107(b)(2) of this Section is met.
- (3) ~~Programs involving the land application of biological residuals generated by wastewater treatment facilities treating industrial wastewater only that are operational at the time of this Rule's effective date shall comply with the requirements stipulated in this Rule no later than five years from the effective date of this Rule unless the Permittee is adhering to an established schedule in an individual permit, settlement agreement, special order pursuant to G.S. 143-215.2, or other similar document that establishes a later deadline.~~
- (3) The pathogen reduction requirements in Subparagraph (b)(2) and Paragraph (c) of this Rule shall not apply for biological residuals

generated from treatment of waste shown to not contain pathogens.

(b) ~~For Class A biological residuals to be classified as Class A with respect to pathogens, shall meet the following requirements: shall be met:~~

- (1) The requirements in this Paragraph ~~are shall be met either prior to no later than meeting or at the same time as the~~ vector attraction reduction requirements in Rule .1107 of this Section. ~~Section are met,~~ unless the vector attraction reduction methods stipulated in Rule .1107(a)(6), Rule .1107(a)(7), and Rule .1107(a)(8) of this Section are met.
- (2) ~~The biological~~ Biological residuals ~~are shall be~~ monitored for the density of fecal coliform or Salmonella sp. bacteria at the time that the ~~biological~~ residuals are used or ~~disposed~~ disposed, or at the time they are prepared for sale or giving away in a bag or other container for land application to the land for the density of fecal coliform or Salmonella sp. bacteria to demonstrate that: the following:
 - (A) the density of fecal coliform is less than 1,000 Most Probable Number per gram of total solids on a dry weight basis; (i.e., dry weight basis), or
 - (B) the density of Salmonella Salmonella sp. bacteria is less than three Most Probable Number per four grams of total solids on a dry weight basis. (i.e., dry weight basis).

- (3) The biological residuals meet one of the following ~~alternatives:~~ requirements:
 - (A) Time/Temperature. The temperature of the biological residuals shall be maintained at a specific value for a period of consecutive time in accordance with the following:

Total Solids (percent)	Temperature (t) (degrees Celsius)	Time	Equation to Determine Minimum Holding Time (D) (days)
≥ 7	≥ 50	≥ 20 minutes	$\frac{131,700,000}{10^{0.1400t}}$
≥ 7	≥ 50	≥ 15 seconds ¹	$\frac{131,700,000}{10^{0.1400t}}$
< 7	≥ 50	≥ 15 seconds < 30 minutes	$\frac{131,700,000}{10^{0.1400t}}$
< 7	≥ 50	≥ 30 minutes	$\frac{50,070,000}{10^{0.1400t}}$

1 – when residuals are heated by warmed gases or an immiscible liquid

- (B) Alkaline Treatment. The pH of the biological residuals shall be raised to above 12 and ~~shall remain~~ remains above 12 for 72 consecutive hours. The temperature of the biological residuals shall be above 52 degrees

- Celsius for 12 hours or longer during the period that the pH of the biological residuals is above 12. At the end of the 72-hour period during which the pH is above 12, the biological residuals shall be air dried to achieve a total solids greater than 50 ~~percent~~, percent.
- (C) Prior Testing for Enteric Viruses/Viable Helminth Ova. The biological residuals shall be analyzed prior to pathogen reduction treatment to determine whether the biological residuals contain enteric viruses or viable helminth ova. The density of enteric viruses prior to pathogen reduction treatment shall be less than one Plaque-forming Unit per four grams of total solids on a dry weight basis (~~i.e., dry weight basis~~) or the density of viable helminth ova shall be less than one per four grams of total solids on a dry weight basis. (~~i.e., dry weight basis~~). When the density of enteric viruses or viable helminth ova are equal to or greater than these values, the biological residuals shall be considered ~~to be~~ Class A following pathogen reduction treatment if the resultant densities are less than these values and the operating parameters for the pathogen reduction treatment are documented. (~~documented to the satisfaction of the Division~~). After this demonstration, the biological residuals shall be considered ~~to be~~ Class A ~~as long as~~ if the operating parameters for the pathogen reduction treatment are met and documented; (~~documented to the satisfaction of the Division~~;
- (D) No Prior Testing for Enteric Viruses/Viable Helminth Ova. The density of enteric viruses in the biological residuals shall be less than one Plaque-forming Unit per four grams of total solids on a dry weight basis (~~i.e., dry weight basis~~) or the density of viable helminth ova in the biological residuals shall be less than one per four grams of total solids on a dry weight basis (~~i.e., dry weight basis~~) at the time that the biological residuals are used or disposed or ~~is~~ are prepared for sale or giving away in a bag or other container ~~contained~~ for land application; (~~application to the land~~;
- (E) Process to Further Reduce Pathogens - Composting. The biological residuals shall be composted using either the within-vessel method or the static aerated pile method, during which the temperature of the biological residuals is maintained at 55 degrees Celsius or higher for three consecutive days or longer. Alternatively, the biological residuals shall be composted using the windrow method, during which the temperature of the biological residuals is maintained at 55 degrees Celsius or higher for 15 consecutive days or longer. The windrow shall be turned five times during the period when the biological residuals are maintained at 55 degrees Celsius or ~~higher~~, higher. Natural decay of the biological residuals under uncontrolled conditions ~~are not sufficient to meet this process~~, shall not be deemed to comply with these composting requirements;
- (F) Process to Further Reduce Pathogens - Heat Drying. The biological residuals shall be dried by direct or indirect contact with hot gases to reduce the moisture content of the biological residuals to 10 percent or lower. During the process, either the temperature of the biological residuals particles ~~exceeds~~ shall exceed 80 degrees Celsius or the wet bulb temperature of the gas in contact with the biological residuals as they leave the dryer exceeds 80 degrees ~~Celsius~~, Celsius;
- (G) Process to Further Reduce Pathogens - Heat Treatment. The biological residuals shall be heated to a temperature of 180 degrees Celsius or higher for 30 minutes. This process ~~is only available to~~ shall be applied only to biological residuals that are in a liquid ~~state~~, state;
- (H) Process to Further Reduce Pathogens - Thermophilic Aerobic Digestion. The biological residuals shall be agitated with air or oxygen to maintain aerobic conditions, and the mean cell residence time of the biological residuals shall be 10 days at between 55 and 60 degrees Celsius. This process ~~is only available to~~ shall be applied only to biological residuals that are in a liquid ~~state~~, state;
- (I) Process to Further Reduce Pathogens - Beta Ray Irradiation. The biological residuals shall be irradiated with beta rays from an accelerator at dosages of

at least 1.0 megarad at room temperature (~~i.e., approximately 20 degrees Celsius~~), (i.e., approximately 20 degrees Celsius);

(J) Process to Further Reduce Pathogens - Gamma Ray Irradiation. The biological residuals shall be irradiated with gamma rays from certain isotopes, such as Cobalt 60 and Cesium 137, at room temperature (~~i.e., approximately 20 degrees Celsius~~), (i.e., approximately 20 degrees Celsius); or

(K) Process to Further Reduce Pathogens - Pasteurization. The temperature of the biological residuals shall be maintained at 70 degrees Celsius or higher for 30 minutes or longer.

(c) ~~For Class B biological residuals to be classified as Class B with respect to pathogens shall meet~~ one of the following ~~shall be met~~: requirements:

(1) Fecal Coliform Density Demonstration. Seven samples of the biological residuals ~~are shall be~~ collected at the time the residuals are used or disposed, and the geometric mean of the density of fecal coliform in the samples collected ~~is shall be~~ less than either 2,000,000 Most Probable Number per gram of total solids on a dry weight basis (~~i.e., dry weight basis~~) or 2,000,000 Colony Forming Units per gram of total solids on a dry weight basis. (~~i.e., dry weight basis~~).

(2) Process to Significantly Reduce Pathogens. The biological residuals meet one of the following requirements: ~~processed in a process to significantly reduce pathogens. The processes to significantly reduce pathogens are as follows:~~

(A) Aerobic Digestion. Biological residuals ~~are shall be~~ agitated with air or oxygen to maintain aerobic conditions for a specific mean cell time at a specific temperature. Values for the mean cell residence time and temperature ~~are shall be~~ between 40 days at 20 degrees ~~Celsius~~, Celsius; and 60 days at 15 degrees ~~Celsius~~, Celsius;

(B) Air Drying. Biological residuals ~~are shall be~~ dried on sand beds or on paved or unpaved basins for a ~~minimum of~~ three months. During two of the three months, the ambient average daily temperature ~~is shall be~~ above zero degrees ~~Celsius~~, Celsius;

(C) Anaerobic Digestion. Biological residuals ~~are shall be~~ treated in the absence of air for a specific mean cell residence time at a specific temperature. Values for the mean cell

residence time and temperature ~~are shall be~~ between 15 days at 35 to 55 degrees Celsius and 60 days at 20 degrees ~~Celsius~~, Celsius;

(D) Composting. Using either the within-vessel, static aerated pile, or windrow composting methods, the temperature of the biological residuals ~~is shall be~~ raised to 40 degrees Celsius or higher and ~~remains shall remain~~ at 40 degrees Celsius or higher for five days. For four hours during the five days, the temperature in the compost pile ~~exceeds shall exceed~~ 55 degrees Celsius. Natural decay of the biological residuals under uncontrolled conditions ~~are not sufficient to meet this process shall not be deemed to comply with these composting requirements; or~~

(E) Lime Stabilization. Sufficient lime ~~is shall be~~ added to the biological residuals to raise the pH to 12 after two hours of contact.

Authority G.S. 143-215.1; 143-215.3(a).

15A NCAC 02T .1107 VECTOR ATTRACTION REDUCTION REQUIREMENTS

(a) Biological residuals shall not be ~~land applied to the land~~ unless the requirements of one of the following vector attraction reduction alternatives have been ~~met~~: met. ~~Programs involving the land application of biological residuals generated by wastewater treatment facilities treating industrial wastewater only that are operational at the time of this Rule's effective date shall comply with the requirements stipulated in this Rule no later than five years from the effective date of this Rule unless the Permittee is adhering to an established schedule in an individual permit, settlement agreement, special order pursuant to G.S. 143-215.2, or other similar document that establishes a later deadline. The vector attraction reduction alternatives shall be as follows:~~

(1) 38-Percent Volatile Solids Reduction. The mass of the volatile solids in the biological residuals shall be reduced by a ~~minimum of~~ 38 percent between the time that the biological residuals enter the digestion process and the time it is land applied; ~~applied~~;

(2) 40-Day Bench Scale Test. A portion of previously anaerobically-digested biological residuals shall be further anaerobically-digested in the laboratory in a bench-scale unit for 40 additional days at a temperature between 30 and 37 degrees Celsius. The volatile solids in the biological residuals shall be reduced by less than 17 percent as measured from the beginning to the end of the ~~test~~; test;

(3) 30-Day Bench Scale Test. A portion of previously aerobically-digested biological residuals shall be further aerobically-digested

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- (4) in the laboratory in a bench-scale unit for 30 additional days at a temperature of 20 degrees Celsius. The previously aerobically-digested biological residuals shall either have a concentration of two percent total solids or less or shall be diluted with effluent down to two percent total solids at the start of the test. The volatile solids in the biological residuals shall be reduced by less than 15 percent as measured from the beginning to the end of the test; ~~test;~~ Specific Oxygen Uptake Rate Test. The specific oxygen uptake rate (SOUR) for biological residuals treated in an aerobic process shall be equal to or less than 1.5 milligrams of oxygen per hour per gram of total solids on a dry weight basis (i.e., dry weight basis) corrected to a temperature of 20 degrees ~~Celeius;~~ Celsius;
- (5) 14-Day Aerobic Processes. The biological residuals shall be treated in an aerobic process for 14 days or longer. During that time the temperature of the biological residuals shall be higher than 40 degrees Celsius, and the average temperature of the biological residuals shall be higher than 45 degrees ~~Celeius;~~ Celsius;
- (6) Alkaline Stabilization. The pH of the biological residuals shall be raised to 12 or higher by alkali addition and, without the addition of more alkali, shall remain at 12 or higher for two hours and then at 11.5 or higher for an additional 22 ~~hours;~~ hours;
- (7) Drying of Stabilized Residuals. The biological residuals shall be dried to 75 percent total solids if the biological residuals contain no unstabilized solids from a primary wastewater treatment process. The biological residuals shall not be mixed with other materials to meet this requirement; Mixing of the biological residuals with other materials shall not be used to meet this alternative.
- (8) Drying of Unstabilized Residuals. The biological residuals shall be dried to 90 percent total solids if the biological residuals contain unstabilized solids from a primary wastewater

- (9) Injection.
 - (A) Biological residuals shall be injected below the land surface ~~of the land~~ in accordance with ~~40 CFR 503.33(b)(9)(ii);~~ 40 CFR 503.33(b)(9)(ii); and
 - (B) ~~If Class A with respect to pathogens;~~ the biological residuals shall be injected below the land surface within eight hours after being discharged from the pathogen treatment ~~process;~~ process; or
- (10) Incorporation.
 - (A) ~~If Class B with respect to pathogens;~~ the biological residuals shall be incorporated into the soil within six hours after land application; and application to the land;
 - (B) ~~If Class A with respect to pathogens;~~ the biological residuals shall be land applied ~~to the land~~ within eight hours after being discharged from the pathogen treatment process.
- (b) Biological residuals shall not be placed in a surface disposal unit unless one of the following vector attraction reduction alternatives have been met:
 - (1) Any alternative stipulated in Paragraph (a) of this ~~Rule;~~ Rule; or
 - (2) Daily Cover. Biological residuals shall be covered with soil or ~~other~~ Division-approved material at the end of each operating day.
- (c) For biological residuals generated by wastewater treatment facilities treating industrial wastewater only, the vector attraction reduction requirements in Paragraph (a) of this Rule shall be met unless the Permittee demonstrates that the residuals are pathogen free or meet the pathogen requirements in Rule .1106(b)(2) of this Section.

Authority G.S. 143-215.1; 143-215.3(a).

15A NCAC 02T .1108 SETBACKS

(a) For residuals treatment and storage facilities, the following ~~minimum~~ setbacks in feet (i.e., in feet) shall be as follows; adhered to:

Habitable residences or places of public assembly under separate ownership or not to be maintained as part of the project site	100
Any private Private or public water supply source sources	100
Surface waters (streams – intermittent and perennial, lakes, perennial waterbodies, and wetlands)	50
Any well Wells with exception of to monitoring wells	100
Any property line Property lines	50

(b) For land onto which Class A bulk residuals are applied or stockpiled, the following ~~minimum~~ setbacks in feet (i.e., in feet) shall be as follows; adhered to:

- (1) ~~If the bulk residuals meet the requirements of Rules .1105(c), .1106(b), and .1107 of this Section:~~

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	Liquid Residuals	Cake Residuals
<u>Any private</u> Private or public water supply <u>source</u> sources	100	100
Surface waters (streams - intermittent and perennial, perennial waterbodies, and wetlands)	100	25
Surface water diversions (ephemeral streams, waterways, ditches)	25	0
Groundwater lowering ditches (where the bottom of the ditch intersects the SHWT)	25	0
<u>Any well</u> Wells with exception of <u>to</u> te monitoring wells	100	100
Bedrock outcrops	25	0

(c) For land onto which Class B residuals are applied or stockpiled, the following setbacks in feet shall be as follows:

(2) ~~If the bulk residuals do not meet the requirements of Rules .1105(e), .1106(b), and .1107 of this Section:~~

	Surface Application by Vehicle	Surface Application	Injection / Incorporation by Irrigation
Habitable residences or places of public assembly under separate ownership or not to be maintained as part of the project site	400	400	200
Habitable residences or places of public assembly owned by the <u>Permittee</u> , permittee , the owner of the land, or the lessee/operator of the land to be maintained as part of the project site	0	200	0
<u>Any property line</u> Property lines	50	150	50
Public <u>right</u> rights of way	50	50	50
<u>Any private</u> Private or public water supply <u>source</u> sources	100	100	100
Surface waters (streams - intermittent and perennial, perennial waterbodies, and wetlands)	100 <u>32.8</u>	100 <u>32.8</u>	50 <u>32.8</u>
Surface water diversions (ephemeral streams, waterways, ditches)	25	100 <u>25</u>	25
Groundwater lowering ditches (where the bottom of the ditch intersects the SHWT)	25	100	25
Subsurface groundwater lowering drainage systems	0	100	0
<u>Any well</u> Wells with exception of <u>to</u> te monitoring wells	100	100	100
Bedrock outcrops	25	25	25
Top of slope of embankments or cuts of two feet or more in vertical height	15	15	15
<u>Any building foundation</u> Building foundations or <u>basement</u> basements	0	15	0
<u>Any water line</u> Water lines	0	10	0
<u>Swimming pools</u>	100	100	100
Nitrification <u>field</u> fields	0	20	0

(d)(e) For the construction and operation of surface disposal units, the following minimum setbacks in feet (i.e., in feet) shall be as follows: ~~adhered to:~~

Habitable residences or places of public assembly under separate ownership or not to be maintained as part of the project site	400
<u>Any property line</u> Property lines	50
Public <u>right</u> rights of way	50
<u>Any private</u> Private or public water supply <u>source</u> sources	100
Surface waters (streams - intermittent and perennial, perennial waterbodies, and wetlands)	100
Surface water diversions (ephemeral streams, waterways, ditches)	25
Groundwater lowering ditches (where the bottom of the ditch intersects the SHWT)	100
Subsurface groundwater lowering drainage systems	100
<u>Any well</u> Wells with exception of <u>to</u> te monitoring wells	100
<u>Any water line</u> Water lines	10
<u>Swimming pools</u>	100

(e) Setback waivers from habitable residences or places of public assembly under separate ownership, or not to be maintained as part of the project site, shall be written, notarized, and signed by all parties involved.

(f) Setbacks to property lines established in Paragraphs (a), (c), and (d) of this Rule shall not be applicable when the Permittee; the entity from which the Permittee is leasing; or the entity that executed the notarized landowner agreement in 15A NCAC 02T .1104(c)(4) owns both parcels creating said property line.

(g) Habitable residences or places of public assembly under separate ownership constructed after the non-discharge facilities were originally permitted or subsequently modified, are exempt from the setback requirements in Paragraphs (a) and (d) of this Rule.

Authority G.S. 143-215.1; 143-215.3(a).

15A NCAC 02T .1109 OPERATION AND RESIDUALS MANAGEMENT PRACTICES

~~(a) For residuals that are sold or given away in a bag or other container for application to the land, either a label shall be affixed to the bag or other container or an information sheet shall be provided to the person who receives the residuals. The label/information sheet shall contain the following information:~~

- ~~(1) the name and address of the person who prepared the residuals and~~
- ~~(2) a statement that land application of the residuals shall be prohibited except with the instructions on the label/sheet.~~
- ~~(3) that residuals shall be applied at agronomic rates and recommended rates for intended uses.~~

~~(a)(b) Land applied residuals shall meet the following requirements: For land onto which bulk residuals are applied, the following shall apply:~~

~~(1) Residuals Bulk residuals shall not be land applied to the land under the following conditions:~~

- ~~(A) if the requirements specified by 40 CFR 503.14(a) as stated on January 1, 1996 and incorporated by reference cannot be have not been met;~~
- ~~(B) if the application causes prolonged nuisance conditions;~~
- ~~(C) if the land fails to assimilate the bulk residuals or the application causes the contravention of surface water or groundwater standards;~~
- ~~(D) if the land is flooded, frozen, or snow-covered or is otherwise in a condition such that runoff of the residuals would occur;~~
- ~~(E) within the 100-year flood elevation unless the bulk residuals are injected or incorporated within a 24-hour period following the application of residuals to land; land application event;~~
- ~~(F) during precipitation events or within 24 hours following a rainfall event of 0.5 inches or greater in a 24-hour period;~~
- ~~(G) if the slope of the land is greater than 10 percent when bulk liquid residuals~~

are surface applied, and if the slope of the land is greater than 18 percent when bulk liquid residuals are injected or incorporated;

(H) if the land does not have an established vegetative cover crop unless the land is in a state or federal no-till program or the bulk residuals are incorporated within a 24-hour period following the injection or application of residuals to land; ~~land application event or injected;~~

(I) if the vertical separation of the seasonal high water table and the depth of residuals application is less than one foot;

(J) if the vertical separation of the depth to bedrock and the depth of residuals application is less than one foot; or

(K) if the application exceeds agronomic rates rates, except for dedicated sites where the Applicant applicant has specifically requested higher rates in an applications pursuant to Rule .1104(d) of this Section.

(L) new land application sites located within a WS-I watershed pursuant to 15A NCAC 02B .0212 or within the Critical Area of a WS-II pursuant to Sub-Item (4)(g) of Rule 15A NCAC 02B .0212, or within the Critical Area of a WS-III or WS-IV watershed pursuant to Sub-Item (4)(h) of Rules 15A NCAC 02B .0215, and .0216.

(2) Class B land application sites shall have For land onto which bulk residuals that do not meet the requirements of Rule .1106(b) of this Section are applied, the following public access restrictions: restrictions shall be adhered to:

(A) public access to public contact sites shall be restricted for one calendar year after any residuals land application event; land application of residuals;

(B) public access to land that is not a public contact site shall be restricted for 30 days after any residuals land application event; land application of residuals; and

(C) public access to land associated with a dedicated land application site shall be restricted continuously while the land is permitted for active use and for one calendar year after the final residuals land application event. land application of residuals.

(3) Class B land application sites shall have For land onto which bulk residuals that do not meet the requirements of Rule .1106(b) of this

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~~Section are applied, the following harvesting and grazing restrictions: restrictions shall be adhered to:~~

- (A) ~~animals shall not be allowed to graze on land for 30 calendar days after any residuals land application event; land application of residuals;~~
- (B) ~~food crops, feed crops, and fiber crops shall not be harvested for 30 calendar days after any residuals land application event; land application of residuals;~~
- (C) ~~food crops with harvested parts that touch the residuals/soil mixture of residuals and soil and are totally above the land surface shall not be harvested for 14 months after any residuals land application event; land application of residuals;~~
- (D) ~~food crops with harvested parts below the land surface of the land shall not be harvested for 20 months after any residuals land application event land application of residuals when if the residuals remain on the land surface for four months or longer prior to incorporation into the soil;~~
- (E) ~~food crops with harvested parts below the land surface of the land shall not be harvested for 38 months after any residuals land application event land application of residuals when if the residuals remain on the land surface for less than four months prior to incorporation into the soil; and~~
- (F) ~~turf grown on land where residuals are applied shall not be harvested for one calendar year after any residuals land application event. land application of residuals.~~

(b) Class A residuals that are sold or given away in a bag or other container for land application are exempt from Paragraph (a) of this Rule.

(c) Class A residuals that are sold or given away in a bag or other container for land application, shall either have a label affixed to the bag or other container, or an information sheet shall be provided to the person who receives the residuals. The label or information sheet shall contain the following information:

- (1) the name and address of the person who prepared the residuals;
- (2) a statement that land application of the residuals shall be prohibited except with the instructions on the label or information sheet; and
- (3) that residuals shall be applied at agronomic rates and recommended rates for intended uses.

(d)(e) Surface disposal units shall meet the following requirements: For surface disposal units, the following conditions shall be met:

(1) For new and expanding surface disposal units shall meet the following requirements: ~~units, the following conditions shall be met.~~

- (A) ~~Surface disposal units shall not be located in a seismic impact zone unless designed to withstand the maximum recorded horizontal ground level acceleration; acceleration;~~
- (B) ~~Surface disposal units shall not be located less than 60 meters from a fault that has displacement in Holocene time; time;~~
- (C) ~~Surface disposal units shall not be located within an a geologically unstable area; area;~~
- (D) ~~Surface disposal units shall not be located within the 100-year floodplain; floodplain;~~
- (E) ~~Surface disposal units shall not restrict base flood flow; flow;~~
- (F) ~~The vertical separation of the seasonal high water table and the bottom of surface disposal units shall not be less than three feet; feet; and~~
- (G) ~~Surface disposal units shall be provided with a liner system with a maximum hydraulic conductivity of 10⁻⁷ centimeters per second. Units into which cake residuals are to be placed shall be equipped with a leachate collection system. Units into which liquid residuals are to be placed shall be equipped with a decanting system and freeboard marker. If cake residuals are to be placed in the unit, a leachate collection system shall be required. If liquid residuals are to be placed in the unit, a decanting system and freeboard marker shall be required.~~

(2) The following ~~conditions requirements~~ shall be met while surface disposal units are permitted for active use and for three calendar years after closure:

- (A) ~~The requirements specified by 40 CFR 503.24(a) as stated on January 1, 1996 and incorporated by reference shall be met; met;~~
- (B) ~~Surface disposal units shall not cause prolonged nuisance conditions; conditions;~~
- (C) ~~Surface disposal units shall not cause the contravention of surface water or groundwater standards; standards;~~
- (D) ~~Runoff from a 24-hour 25-year storm event, decant water, and leachate (i.e., as applicable) shall be collected from surface disposal units; units;~~

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- (E) If biological residuals are placed in the surface disposal unit, the concentration of methane gas shall not exceed 25 percent of the lower explosive limit for methane gas in any structure within the surface disposal unit ~~boundary, boundary;~~
 - (F) If biological residuals are placed in the surface disposal unit, the concentration of methane gas shall not exceed the lower explosive limit for methane gas at any property line of the surface disposal ~~unit, unit;~~
 - (G) Public access to surface disposal units shall be restricted ~~continuously, continuously;~~
 - (H) Animals shall not be allowed to graze on surface disposal ~~units, units; and~~
 - (I) Food crops, feed crops, and fiber crops shall not be harvested from surface disposal units.
- (3) Following active use, surface disposal units shall be closed. Permits for surface disposal units shall be maintained for ~~a minimum of~~ three years following successful closure. Requests for approval of closure plans shall be submitted to the Division at least 180 days prior to the date that a surface disposal unit is to be closed and shall include the following information:
- (A) how the surface disposal unit will be closed;
 - (B) a discussion of how the leachate collection system will be operated and maintained, if applicable;
 - (C) a description of the system used to monitor the air for methane gas in the air in any structures within the surface disposal unit boundary and at the property line of the surface disposal unit, if applicable;
 - (D) a discussion of how public access to the surface disposal unit will be restricted; and
 - (E) proof that the deed for the surface disposal unit property has been amended to provide permanent written notification to subsequent owners of the property that the property was used for the purposes of operating a surface disposal unit.

Authority G.S. 143-215.1; 143-215.3(a).

15A NCAC 02T .1110 OPERATION AND MAINTENANCE PLAN

(a) An Operation and Maintenance Plan shall be maintained for all residuals management programs. The plan shall:

- (1) describe the operation of the program and any ~~all~~ associated facilities and equipment in sufficient detail to show what operations are necessary for the program to function and by whom the functions are to be conducted;
- (2) describe anticipated maintenance of facilities and equipment that are associated with the ~~program, program;~~
- (3) include provisions for safety ~~measures~~ measures, including restriction of access to the site and equipment, as appropriate;
- (4) include spill control ~~provisions~~ provisions, including:
 - (A)(a) response to upsets and ~~bypasses~~ bypasses, including control, containment, and remediation; and
 - (B)(b) contact information for program personnel, emergency responders, and regulatory agencies;
- (5) detail procedures for sampling and monitoring to ensure that the program stays in compliance with this Section and ~~any~~ each issued permit; and
- (6) for surface disposal units, detail procedures for post-closure care management.

(b) The Permittee shall ensure that an electronic or physical copy of their permit and the Operation and Maintenance Plan required by Paragraph (a) of this Rule is available when land applying residuals.

(c) Residuals shall be stored or staged in a manner to prevent runoff of leachate and other wastewaters generated from residuals storage or staging.

(d) Class A residuals may be staged at the application site for up to 30 days for biological residuals and 60 days for non-biological residuals. Storage or staging that exceeds these limits shall require written approval from the Division.

(e) Class B residuals shall not be stored or staged at any land application site without prior written approval from the Division.

(f) The Permittee shall perform inspections and maintenance on storage, distribution, and application facilities.

(g) Class B land application areas shall be clearly marked on each site prior to and during any land application of residuals.

Authority G.S. 143-215.1; 143-215.3(a).

15A NCAC 02T .1111 MONITORING AND REPORTING

(a) Representative samples of residuals that are prepared for land ~~to the land~~ application or placed in a surface disposal unit shall be collected and analyzed.

(b) The analytical methods listed in 40 CFR 503.8(b) ~~503.8(b), incorporated by reference with subsequent amendments and editions, as stated on January 1, 1996 shall be incorporated into this Section by reference.~~

(c) Residuals land ~~applied to the land~~ applied or placed in a surface disposal unit shall be monitored for pollutants as listed in required by Rule .1105(a) and Rule .1105(d) of this Section and Rule .1106 and Rule .1107 of this Section, as applicable, at the following frequency: Rule .1105(a) and Rule .1105(d) of this Section as well

as Rule .1106 and Rule .1107 as applicable at the frequency as stipulated in the following:

- Metric Tons per 365 day period
- Monitoring Frequency
(Dry Weight Basis)
- Greater than zero but less than 290
Once per year
- Equal to or greater than 290 but less than 1,500
Once per quarter (four times per year)
- Equal to or greater than 1,500 but less than 15,000
Once per 60 days (six times per year)
- Equal to or greater than 15,000
Once per month (12 times per year)

(d) A report of all monitoring and reporting requirements as specified in the permit shall be submitted to the Division by the ~~Permittee~~ permittee annually on or before March 1st of each calendar year.

(e) All records shall be retained for a ~~minimum~~ of five years.

Authority G.S. 143-215.1; 143-215.3(a).

SECTION .1200 – COAL COMBUSTION PRODUCTS MANAGEMENT

15A NCAC 02T .1201 SCOPE

(a) This Section ~~shall apply~~ applies to the treatment, storage, transportation, ~~and beneficial reuse use, and disposal~~ of coal combustion products (CCPs) that ~~are defined as meet the definition of~~ wastewater treatment residuals. ~~Not regulated under this Section is~~ This Section shall not regulate the treatment, storage, transportation, use, or disposal of:

- (1) CCPs that are not generated from a wastewater treatment facility; ~~and~~
- (2) CCPs that are transported out of state for treatment, storage, use, or ~~disposal~~ disposal; ~~and~~
- (3) CCPs that are used for structural fill.

(b) CCPs may be distributed for the following ~~uses including~~ uses:

- (1) ~~fuel~~ Fuel for combustion ~~for energy recovery in equipment such as in boilers, boilers and furnaces, etc. for energy recovery~~ furnaces;
- (2) ~~material~~ Material for manufacturing of concrete products, asphalt products, brick products, lightweight aggregate, roofing materials, insulation products, plastics, paints, bowling balls, cosmetics, and other manufactured products in which the CCPs are encapsulated in the manufactured ~~product~~ product;
- (3) ~~daily~~ Daily, intermediate, and final cover as well as any other use at a landfill as approved by the Division of Waste ~~Management~~ Management;
- (4) ~~material~~ Material for traction control during snow and ~~ice events~~ ice events;
- (5) ~~substitute~~ Substitute for blasting grit, roofing granules, and filter cloth precoat for residuals ~~dewatering~~ dewatering;

- (6) ~~flowable~~ Flowable fill for backfill of trenches for potable water mains as approved by the Division of Environmental Health, sanitary sewers, storm drainage structures, and other similar uses where flowable fill is used in lieu of compacted ~~soil~~ soil;
- (7) ~~raw~~ Raw product for the stabilization of ~~residuals~~ residuals;
- (8) ~~soil~~ Soil nutrient additive, amendment, or other agricultural ~~purpose~~ purpose;
- (9) ~~overlay~~ Overlay for roads, residential driveways, farm roads, and high-traffic farm ~~areas~~ areas; ~~or~~
- (10) ~~bedding~~ Bedding for pipes, railroad beds, and underground storage tanks.
- (11) ~~Structural fill~~.

Authority G.S. 143-215.1; 143-215.3(a).

15A NCAC 02T .1202 DEFINITIONS

As used in this Section:

- (1) "Coal combustion products" or "CCPs" ~~is defined in G.S. 130A-309.201(4)~~ shall mean fly ash, bottom ash, boiler slag, flue gas emission control products, mill rejects, and cenospheres resulting from the combustion solely of coal, oil, or natural gas; the combustion of any mixtures of coal, oil, or natural gas; or the combustion of any mixture of coal and up to a 50 percent mixture of other fuels as provided for in 58 FR 42466.
- (2) "Dry weight basis" shall mean the weight calculated after the CCPs have been dried at 105 degrees Celsius until they reach a constant mass.
- (3) "Flowable fill" shall mean a controlled, low strength, cementitious material that is used primarily as a backfill in lieu of compacted soil and typically exhibits a compressive strength of greater than 30 pounds per square inch.
- (4) "Land application" shall mean the spraying or spreading of CCPs onto the land surface; the injection of CCPs below the land surface; or the incorporation of CCPs into the soil so that the CCPs can condition the soil or fertilize crops or vegetation grown in the soil.
- (5) "Monthly average" shall mean the arithmetic mean of all measurements taken during ~~the~~ a month.
- (6) "Pollutant limit" shall mean a numerical value that describes the amount of a pollutant allowed per unit amount of CCPs.
- (7) "Source of CCPs" shall mean the point of origin of the ~~CCPs~~ CCPs, such as a coal fired power plant's wastewater treatment system.
- (8) ~~"Structural fill" shall mean an engineered fill constructed using CCPs that is properly placed in accordance with this Section and compacted. This shall include fill used for embankments,~~

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~~greenscapes, foundations, construction foundations, and for bases/sub-bases under a structure or a footprint of a paved road, parking lot, sidewalk, walkway, or similar structure.~~

- (8)(9) "Toxicity Characteristic Leaching Procedure" shall mean EPA Test Method Number 1311 as described in EPA publication SW-846, entitled Test Methods for Evaluating Solid Waste, Physical/Chemical Methods.

Authority G.S. 143-215.1; 143-215.3(a).

15A NCAC 02T .1203 PERMITTING BY REGULATION

(a) The following activities ~~are shall be~~ deemed permitted in accordance with Rule .0113 of this Subchapter ~~provided if~~ the activity does not result in any violations of groundwater or surface water quality standards (i.e., ground or surface); standards, there is no direct discharge to surface waters, the generator of the CCPs, CCPs provides the information required by Rule .1207(a) of this Section to the recipient of the CCPs, and all other ~~specified~~ criteria required for the specific activity is are met:

- (1) ~~use~~ Use of CCPs as fuel for combustion in boilers, furnaces, etc. for energy ~~recovery~~ recovery;
- (2) ~~use~~ Use of CCPs as material for manufacturing concrete products, asphalt products, brick products, lightweight aggregate roofing materials, insulation products, plastics, paints, bowling balls, cosmetics and other manufactured products in which the CCPs are encapsulated in the manufactured ~~product~~ product;
- (3) ~~use~~ Use or disposal of CCPs in a solid waste facility permitted by the Division of Waste Management that is approved to receive the ~~CCPs~~ CCPs;
- (4) ~~use~~ Use of CCPs as material for traction control during snow and ice events, ~~provided that if~~ the CCPs do not exceed the leachate concentrations ~~of concern set forth~~ in Rule .1205(a) of this ~~Section~~ Section;
- (5) ~~use~~ Use of CCPs as a substitute for blasting grit, roofing granules, and filter cloth precoat for residuals dewatering, ~~provided that if~~ the CCPs do not exceed the leachate concentrations of concern in Rule .1205(a) of this ~~Section~~ Section;
- (6) ~~use~~ Use of CCPs in flowable fill for backfill of trenches for potable water mains as approved by the Division of Environmental Health, sanitary sewers, storm drainage structures, and other trenching uses ~~provided that if~~ the CCPs do not exceed the leachate concentrations of ~~concern set forth~~ in Rule ~~.1206(a)~~ .1205(a) of this ~~Section~~ Section;
- (7) ~~use~~ Use of CCPs as a raw product for the stabilization of ~~residuals~~ residuals; and

- (8) ~~land~~ Land application of sites onto which CCPs are land applied, provided that if the following criteria are met:

- (A) the CCPs meet the pollutant limits in Rule .1205 of this ~~Section~~ Section; and
 - (B) the land application activities meet all applicable conditions of Rule .1108(b)(1) and Rule.1109(b)(1) of this ~~Subchapter~~ Subchapter; and
 - (C) less than 12,400 tons are applied to any one site.
- (9) ~~Use of CCPs as a base or subbase under a structure or footprint of a paved road, parking lot, sidewalk, or similar structure as long as the total depth of CCPs does not exceed one foot.~~

(b) Unless otherwise specified in Rule .1203(a) of this Section, CCPs that are used for the activities deemed permitted in this Rule are not subject to the pollutant limits in Rule .1205 of this Section.
(c) The Director may determine that a system should not be deemed permitted in accordance with this Rule and Rule .0113 of this Subchapter. This determination shall be made in accordance with Rule .0113(e) of this Subchapter.

Authority G.S. 143-215.1; 143-215.3(a).

15A NCAC 02T .1204 APPLICATION REQUIREMENTS

(a) The requirements in this Rule shall apply to activities not deemed permitted under Rule .1203 of this Section.

(b) For new and modified sources of CCPs:

- (1) ~~site~~ Site plans or maps shall be provided to the Division by the Applicant ~~applicant~~ depicting the location of the ~~source~~ source;
- (2) ~~an~~ An analysis of the CCPs shall be provided to the Division by the Applicant ~~applicant~~. The analysis shall include all pollutants identified in Rule .1205 of this Section. If the CCPs are to be used in a land application, the analyses shall also include nutrients and ~~micronutrients~~ micronutrients; and
- (3) ~~a~~ A sampling/monitoring plan that describes how Rule .1205 of this Section shall be complied with shall be provided to the Division by the Applicant ~~applicant~~.

(c) For uses of CCPs not already approved by the ~~applicant's/Permittee's~~ Applicant's or Permittee's individual permit, information shall be provided to the Division by the Applicant ~~applicant~~ that describes and explains site-specific engineering or institutional controls proposed to prevent adverse impacts to public health and the environment.

(d) For the use of CCR for land application with greater than 12,400 tons of CCP to be applied to a single site, documentation shall be provided to the Division by the Applicant, showing that environmental releases to groundwater, surface water, and soil are comparable to or lower than those from analogous products made without CCR, or that environmental releases to groundwater, surface water, or soil will be at or below relevant regulatory and

health-based benchmarks for human and ecological receptors during use.

~~(d) For new and expanding structural fill sites or sites where CCPs are used for bedding if the bedding is applied at a depth greater than two feet underneath the structure:~~

- ~~(1) Site plans. If required by G.S. 89C, a professional land surveyor shall provide location information on boundaries and physical features not under the purview of other licensed professions. Site plans or maps shall be provided to the Division by the applicant depicting the location, orientation, and relationship of the CCPs use site's features including:~~

~~[Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via letter dated December 1, 2005, that locating boundaries and physical features, not under the purview of other licensed professions, on maps pursuant to this Paragraph constitutes practicing surveying under G.S. 89C.]~~

- ~~(A) a scaled map of the site, with topographic contour intervals not exceeding 10 feet or 25 percent of total site relief and showing all site-related structures and fences within the site;~~
- ~~(B) the location of all wells (including usage and construction details if available), streams (ephemeral, intermittent, and perennial), springs, lakes, ponds, and other surface drainage features within 500 feet of the CCPs use boundary and delineation of the review and compliance boundaries;~~
- ~~(C) setbacks as required by Rule .1206 of this Section; and~~
- ~~(D) site property boundaries within 500 feet of the CCPs use boundary.~~

~~(2) Information shall be provided to the Division that describes and explains site specific engineering or institutional controls proposed to prevent adverse impacts to public health and the environment.~~

~~(3) Property Ownership Documentation of the site where the CCPs are to be used shall be provided to the Division. This documentation shall consist of:~~

- ~~(A) legal documentation of ownership (i.e., contract, deed or article of incorporation);~~
- ~~(B) written notarized intent to purchase agreement signed by both parties, accompanied by a plat or survey map; or~~
- ~~(C) easements specifically indicating the intended use of the property, as well as a plat or survey map. Easements shall~~

~~adhere to the requirements of 15A NCAC 02L .0107.~~

~~(e) The submittal process for information Information listed in Paragraph (c) of this Rule shall not be required if a permit from the Division has been issued that specifically addresses the use of CCPs from the source of CCPs, at new and expanding structural fill sites or sites where CCPs are used for bedding.~~

~~(f) A compliance boundary shall be established for all structural fill sites not subject to Rule .1203 of this Section and the permittee shall comply with the provisions of 15A NCAC 02L .0107.~~

Authority G.S. 143-215.1; 143-215.3(a).

15A NCAC 02T .1205 POLLUTANT LIMITS

(a) Except as provided for in Rule .1203 of this Section, CCPs shall not be distributed for use or used if the concentration of any pollutant during the performance of a Toxicity Characteristic Leaching Procedure of the CCPs exceeds the leachate concentration of concern for that pollutant as follows: stipulated in the following:

Pollutant	Leachate Concentration of Concern (milligrams per liter)
Arsenic	5.0
Barium	100.0
Cadmium	1.0
Chromium	5.0
Lead	5.0
Mercury	0.2
Selenium	1.0
Silver	5.0

(b) Except as provided for in Rule .1203 of this Section, CCPs shall not be distributed for use or used if the concentration of any pollutant in the CCPs exceeds the ceiling concentration for that pollutant on a dry weight basis as stipulated in the following (i.e., on a dry weight basis): follows:

Pollutant	Ceiling Concentration (milligrams per kilogram)
Arsenic	75
Cadmium	85
Copper	4,300
Lead	840
Mercury	57
Molybdenum	75
Nickel	420
Selenium	100
Zinc	7,500

(c) Except as provided for in Rule .1203 of this Section, CCPs shall not be distributed for use or used if the concentration of any pollutant in the CCPs exceeds the concentration for that pollutant on a dry weight basis as follows: stipulated in the following (i.e., on a dry weight basis):

Pollutant	Monthly Concentration (milligrams per kilogram)	Average
Arsenic	41	
Cadmium	39	
Copper	1,500	

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Lead	300
Mercury	17
Molybdenum	75
Nickel	420
Selenium	100
Zinc	2,800

(d) CCPs may be distributed for use or used if the limits specified in Paragraphs (a), (b), or (c) of this Rule are not met ~~provided that~~ if the following criteria are met:

- (1) ~~the~~ The potential release of pollutants from the CCPs to the environment is minimized to the extent ~~practicable, practicable;~~ practicable; and
- (2) ~~the~~ The Applicant applicant demonstrates that it will meet the applicable surface water and groundwater quality standards at the compliance boundary at the site of use. shall demonstrate to the Division the ability to meet the applicable surface water quality or groundwater quality standards at the compliance boundary at the site of use is demonstrated.

Authority G.S. 143-215.1; 143-215.3(a).

15A NCAC 02T .1206 SETBACKS

For areas for the storage of CCPs ~~and sites where CCPs are used for structural fill and bedding, where the bedding is applied at a depth greater than two feet underneath the structure,~~ the following ~~minimum~~ setbacks (~~i.e., in feet~~) in feet shall be adhered to:

Private or public water supply sources	100
Surface waters (streams - intermittent and perennial, lakes, perennial waterbodies, and wetlands)	50
Wells with exception to monitoring wells	100
Seasonal high water table	2

All distances are horizontal distances except for the distance from a seasonal high water ~~table~~ table, which is a measured as a vertical distance.

Authority G.S. 143-215.1; 143-215.3(a).

15A NCAC 02T .1207 OPERATION AND MANAGEMENT PRACTICES

(a) For CCPs to be distributed for use, the following shall be provided by the Permittee ~~permittee~~ to the person who receives the CCPs:

- (1) the name and address of the person who distributed the CCPs;
- (2) materials safety data, pursuant to 29 CFR 1910.1200, for the CCPs;
- (3) guidance regarding how to comply with Paragraphs (b), (c), and (d) of this Rule;
- (4) guidance regarding requirements ~~stipulated~~ required by this Section that are specific to the intended use and must be followed by the recipient of the CCPs; and
- (5) a statement that use of the CCPs ~~shall be~~ is prohibited unless in compliance with the guidance provided.

(b) CCPs shall be transported in a manner that does not cause nuisances and hazards to public health or safety or otherwise cause an adverse impact.

(c) The person distributing CCPs shall take preparatory measures to store CCPs prior to distribution for use, as well as prior to use, to prevent unpermitted runoff to surface waters.

(d) The person distributing CCPs shall take actions necessary to prevent wind erosion and surface runoff from conveying CCPs onto adjacent property or into any surface waters prior to distribution for use as well as after use.

Authority G.S. 143-215.1; 143-215.3(a).

15A NCAC 02T .1208 OPERATION AND MAINTENANCE PLAN

(a) An Operation and Maintenance Plan shall be maintained for all CCPs management programs. The plan shall:

- (1) describe the operation of the program and any associated wastewater treatment systems and equipment in sufficient detail to show what operations are necessary for the program to function and by whom the functions are to be conducted;
- (2) describe anticipated maintenance of wastewater treatment systems and equipment that are associated with the program;
- (3) include provisions for safety ~~measures~~ measures, including restriction of access to the site and equipment, as appropriate;
- (4) include spill control ~~provisions~~ provisions, including:
 - (a) response to ~~spills~~ spills, including control, containment, and ~~remediation~~ remediation; and
 - (b) contact information for program personnel, emergency responders, and regulatory ~~agencies~~ agencies; and
- (5) describe the sampling and analysis protocol used to ensure that the program complies with this Section and ~~any~~ all issued permits.

Authority G.S. 143-215.1; 143-215.3(a).

15A NCAC 02T .1209 MONITORING AND REPORTING

(a) Records shall be maintained by the Permittee ~~permittee~~ of all CCPs distributed for use or used and shall include the following:

- (1) the source, volume and type of CCPs distributed for use or used;
 - (2) the date of CCPs distributed for use or used; and
 - (3) the name of the initial recipient of the CCPs and a description of their intended use.
- (b) A report of all monitoring and reporting requirements as specified in the permit shall be submitted annually to the Division by the Permittee on or before March 1st of each calendar year.
- (c) All records shall be retained for ~~a minimum of~~ five years.

Authority G.S. 143-215.1; 143-215.3(a).

SECTION .1300 – ANIMAL WASTE MANAGEMENT SYSTEMS

15A NCAC 02T .1301 SCOPE (READOPTION WITHOUT SUBSTANTIVE CHANGES)

15A NCAC 02T .1302 DEFINITIONS

The definitions used for the purpose of this Section shall be as defined in G.S. 143-215.10B, in Rule .0103 of this Subchapter, of Rule .1102 in this Subchapter, and as follows:

- (1) "Animal waste management plan" means a plan to properly collect, store, treat or apply animal waste to the land in an environmentally safe manner developed in accordance with G.S. 143-215.10C.
- (2) "Animal Waste Residuals" means residuals that have been generated during the treatment of animal waste.
- (3) "Bag or other container" shall mean a bag, bucket, bin, box, carton, vehicle, trailer, tanker, or an open or closed receptacle with a load capacity of 1.102 short tons or one metric ton or less.
- (4) "Bulk animal waste residuals" shall mean animal waste residuals that are transported and not sold or given away in a bag or other container for application to the land.
- ~~(2)(5)~~ "~~Expanded animal waste management system~~" means ~~animal waste treatment and storage facilities which require an increase over the existing animal waste design treatment and storage capacity due to an increase in the permitted steady state live weight at the feedlot.~~
- ~~(3)(6)~~ "New animal waste management system" means animal waste management systems which are constructed and operated at a site where no feedlot existed previously or ~~where a system serving a feedlot has been abandoned or unused for a period of four years or more and is then put back into service, where a permit for a system has been rescinded and is then reissued when the permittee confines animals in excess of the thresholds established in G.S. 143-215.10B. Notwithstanding Rule .1307(a) of this Section, a 'new animal waste management system' shall not apply to a facility where a system serving a feedlot which has been abandoned or unused for a period of less than five years and then put back into service or if all of the following conditions are met:~~
 - (A) Has had no animals on site for five continuous years or more;
 - (B) Notifies the Division in writing at least 60 days prior to bringing any animals back on to the site;
 - (C) The system depopulated after January 1, 2005, and the system ceased operation no longer than 10 years prior to the current date;
 - (D) At the time the system ceased operation, the system was in

compliance with an individual permit or a general permit issued pursuant to G.S. 143-215.10C;

- ~~(E) The Division issues an individual permit or certificate of coverage under a general permit issued pursuant to G.S. 143-215.10C for operation of the system before any animals are brought on the facility;~~
- ~~(F) The permit for the animal waste management system does not allow production, measured by steady state live weight, to exceed the greatest steady state live weight previously permitted for the system under G.S. 143-215.10C;~~
- ~~(G) No component of the animal waste management system, other than an existing barn or land application site, shall be constructed on land that is located within the 100-year floodplain; and~~
- ~~(H) The inactive animal waste management system was not closed using the expenditure of public funds and was not closed pursuant to a settlement agreement, court order, cost share agreement, or grant condition.~~
- ~~(4)(7)~~ "NRCS" means the U.S. Department of Agriculture - Natural Resources Conservation Service.

Authority G.S. 143-215.1; 143-215.3(a); 143-215.10A.

15A NCAC 02T .1303 PERMITTING BY REGULATION

(a) The following systems are deemed permitted pursuant to Rule .0113 of this Subchapter provided the system meets the criteria in Rule .0113 of this Subchapter and all criteria required for the specific system in this Rule:

- (1) Systems that do not meet the criteria of an animal operation permitted under Rule .1304 or Rule .1305 of this Subchapter and all other systems not specifically mentioned in this Section. ~~If Section if:~~
 - (A) the waste is land applied at no greater than agronomic rates to land owned by the waste generator or under the waste generators authority; authority; agronomic rates must be met.
 - (B) the storage and land application of waste is not closer than 100 feet of a well;
 - (C) animal waste is not applied on land that is flooded, saturated with water, frozen, or snow covered at the time of land application; and
 - (D) no animal waste is land applied during precipitation events.

- (2) Poultry operations which use a dry litter system with more than 30,000 birds and that do not meet the criteria specified in Rule .1305 of this Subchapter if:

(A) records are maintained for a minimum of three years which include the dates the litter was removed, the estimated amount of litter removed and the location of the sites where the litter was land applied by the poultry operation;

(B) the waste is applied at no greater than agronomic rates;

(C) a vegetative buffer (separation) of at least 25 feet is maintained from a perennial stream or perennial waterbody for land application sites;

(D) land application of litter is not closer than 100 feet from a well;

~~(C)~~(E) litter is stockpiled not closer than 100 feet from a perennial ~~stream~~ stream, or perennial waterbody; waterbody, or well;

~~(D)~~(F) litter is not stockpiled uncovered for greater than 15 days; ~~and~~

(G) animal waste is not applied on land that is flooded, saturated with water, frozen, or snow covered at the time of land application;

(H) no animal waste is land applied during precipitation events; and

~~(E)~~(I) if a manure hauler is used, records must be maintained of the dates the litter was removed, the estimated amount of litter removed, and name, address and phone number of the manure hauler.

- (3) Land application sites under separate ownership from the waste generator, receiving animal waste from animal waste management systems which are deemed permitted, when all the following conditions are met:

(A) the waste is applied at no greater than agronomic rates; ~~and~~

(B) the storage and land application of animal waste is not closer than 100 feet from a well;

~~(B)~~(C) a vegetative buffer (separation) of at least 25 feet is maintained from a perennial stream or perennial ~~waterbody;~~ waterbody;

(D) animal waste is not applied on land that is flooded, saturated with water, frozen, or snow covered at the time of land application; and

(E) no animal waste is land applied during precipitation events.

(b) The Director may determine that a system should not be deemed permitted in accordance with this Rule and Rule .0113 of

this Subchapter. This determination shall be made in accordance with Rule .0113(e) of this Subchapter.

Authority G.S. 143-215.1; 143-215.3(a); 143-215.10A.

15A NCAC 02T .1304 STATE PERMITTING REQUIREMENTS

(a) This rule applies to animal waste management systems that meet the definition of an animal operation in G.S. 143-215.10B but are not subject to regulation under Rule .1305.

(b) An animal waste management plan shall be submitted as follows:

(1) The animal waste management practices or combination of practices which are selected to comprise a plan for a specific facility must meet NRCS standards, or the standard of practices adopted by the Soil and Water Conservation Commission pursuant to ~~15A NCAC 06F .0104,~~ 02 NCAC 59E .0104, or standards for any combination of practices which provide water quality protection and are approved by one of these two agencies; and all applicable state statutes and rules at the time of development or design. NRCS standards relating to phosphorus application rates for animal waste are not incorporated as part of this rule.

(2) As required by G.S. 143-215.10C, plans must be approved by a technical specialist and the certificate must be submitted to the Division on Division supplied forms or forms approved by the Division as providing the same information as required by the Division's forms. The technical specialist must certify that the best management practices that comprise the plan meet the applicable standards and specifications.

~~(5)~~(3) The waste shall not be applied at greater than agronomic rates.

~~(3)~~(4) The land application and siting setbacks must meet the applicable conditions established in G.S. 106-803 and NRCS standards at the time of ~~construction.~~ site construction or at the time the land application site is first put into use.

(5) Notwithstanding Rule .1304(b)(4) of this Section, land application of waste shall be no closer than 100 feet from a well and no closer than 200 feet from a dwelling not owned by the waste generator at the time the land application site is first put into use.

(6) Notwithstanding Rule .1304(b)(4) of this Section, a vegetative buffer (separation) of at least 25 feet is maintained from a perennial stream or perennial waterbody for land application sites.

(7) The waste shall not be applied on land that is flooded, saturated with water, frozen, or snow covered at the time of land application.

- (8) Land application of waste is prohibited during precipitation events.
- (9) All waste application equipment must be tested and calibrated at least once every two calendar years, and the results must be documented on forms supplied by or approved by the Division as providing the same information as required by the Division's forms.
- (10) Highly visible waste-level gauges shall be installed and maintained to mark the level of the waste in each animal waste lagoon or storage pond that does not gravity feed through a free flowing transfer pipe into a subsequent waste storage structure. The gauge shall have readily visible permanent markings.
- ~~(4)~~(11) New and expanded animal waste treatment systems such as lagoons and waste storage structures shall be located at least 100 feet from a perennial stream or perennial waterbody. For new and expanding systems, this setback requirement shall also apply to areas in feedlots where an established vegetative cover will not be maintained because of the concentration of animals, with the exception of stock trails and stream crossings.
- ~~(6)~~(12) For animal waste management facilities desiring to increase their animal population beyond that permitted, a new individual permit or new certificate of coverage to operate under a general permit must be issued before the additional animals are stocked.

(c) For each change of ownership of the system, the new owner must notify the Division in writing within 60 days of transfer of ownership.

(d) New and expanding swine facilities must demonstrate compliance with Rule .1307 of this Section prior to receiving a permit from the Division.

Authority G.S. 143-215.1; 143-215.3(a); 143-215.10A; 143-215.10I.

15A NCAC 02T .1305 NPDES PERMITTING REQUIREMENTS

(a) This Rule applies to animal waste management systems subject to regulation under G.S. 143-215.10C and ~~40 CFR § 122.23~~ 40 CFR 122.23, which is incorporated by reference including subsequent amendments and editions and shall apply throughout this Rule. 40 CFR 122.23 can be accessed free of charge at <http://www.gpo.gov/fdsys/> and G.S. 143-215.10C.

(b) With the exception of dry litter poultry systems, an animal waste management plan shall be submitted as follows:

- (1) The animal waste management practices or combination of practices which are selected to comprise a plan for a specific facility must meet NRCS standards, or the standard of practices adopted by the Soil and Water Conservation Commission pursuant to ~~15A NCAC 06F .0104~~, 02 NCAC 59E .0104, or standards for any combination of practices which provide

water quality protection and are approved by one of these two agencies; and all applicable state statutes and rules and all applicable federal requirements at the time of development or design.

- (2) As required by G.S. 143-215.10C, plans must be approved by a technical specialist and the certificate must be submitted to the Division on Division supplied forms or forms approved by the Division as providing the same information as required by the Division's forms. The technical specialist must certify that the best management practices that comprise the plan meet the applicable standards and specifications.
- ~~(5)~~(3) The waste shall not be applied at greater than agronomic rates.
- ~~(3)~~(4) The land application and siting setbacks must meet the applicable conditions established in G.S. 106-803, and NRCS standards and ~~40 CFR Part 412~~ at the time of site construction or at the time the land application site is first put into use.
- (5) The land application and siting setbacks must meet the applicable conditions established in 40 CFR Part 412.
- (6) Notwithstanding Subparagraph (b)(4) of this Rule, land application of waste shall be no closer than 100 feet from a well and no closer than 200 feet from a dwelling not owned by the waste generator at the time the land application site is first put into use.
- (7) The waste shall not be applied on land that is flooded, saturated with water, frozen, or snow covered at the time of land application.
- (8) Land application of waste is prohibited during precipitation events.
- (9) All waste application equipment must be tested and calibrated at least once every calendar year, and the results must be documented on forms supplied by or approved by the Division as providing the same information as required by the Division's forms.
- (10) Highly visible waste-level gauges shall be installed and maintained to mark the level of the waste in each animal waste lagoon or storage pond that does not gravity feed through a free flowing transfer pipe into a subsequent waste storage structure. The gauge shall have readily visible permanent markings.
- ~~(4)~~(11) New and expanded animal waste treatment systems such as lagoons and waste storage structures shall be located at least 100 feet from a perennial stream or perennial waterbody. For new and expanding systems, this setback requirement shall also apply to areas in feedlots where an established vegetative cover will not be maintained because of the concentration of

animals, with the exception of stock trails and stream crossings.

- (6)(12) For animal waste management facilities desiring to increase their animal population beyond that permitted, a new individual permit or new certificate of coverage to operate under a general permit must be issued before the additional animals are stocked.

(c) Dry litter poultry systems, for the purpose of this Rule and G.S. 143-215.10C, shall submit an animal waste management plan as follows:

- (1) The animal waste management practices or combination of practices which are selected to comprise a plan for a specific facility must meet NRCS standards, or the standard of practices adopted by the Soil and Water Conservation Commission, or standards for any combination of practices which provide water quality protection and are approved by one of these two agencies; and all applicable state statutes and rules and all applicable federal requirements at the time of development or design.
- (2) The land application and siting setbacks must meet the conditions established in NRCS standards and 40 CFR Part 412 at the time of construction.
- (3) New and expanded animal waste structures such as houses and dry stacks shall be protected from the 100-year flood as determined by the Federal Emergency Management Agency.
- (4) The waste shall not be applied at greater than agronomic rates.
- (5) Notwithstanding Subparagraph (c)(2) of this Section, land application of waste shall be no closer than 100 feet from a well and no closer than 200 feet from a dwelling not owned by the waste generator.
- (6) The waste shall not be applied on land that is flooded, saturated with water, frozen, or snow covered at the time of land application.
- (7) Land application of waste is prohibited during precipitation events.
- (8) All waste application equipment must be tested and calibrated at least once every calendar year, and the results must be documented on forms supplied by or approved by the Division as providing the same information as required by the Division's forms.
- (9) Highly visible waste-level gauges shall be installed and maintained to mark the level of the waste in each animal waste lagoon or storage pond that does not gravity feed through a free flowing transfer pipe into a subsequent waste storage structure. The gauge shall have readily visible permanent markings.

- (5)(10) For animal waste management facilities desiring to increase their animal population beyond that permitted, a new individual permit or new certificate of coverage to operate under

a general permit must be issued before the additional animals are stocked.

- (d) For each change of ownership of the system, the new owner must notify the Division in writing within 60 days of transfer of ownership.
- (e) Systems shall meet all applicable requirements of 40 CFR Part 122 and 40 CFR Part 412.
- (f) New and expanding swine facilities must demonstrate compliance with Rule .1307 of this Section prior to receiving a permit from the Division.

Authority G.S. 143-215.1; 143-215.3(a); 143-215.10A; 143-215.10I.

15A NCAC 02T .1306 CLOSURE REQUIREMENTS

(a) Any containment basin, such as a lagoon or a waste storage structure, permitted at an animal operation other than a cattle facility under this Section shall continue to be subject to the conditions and requirements of the facility's permit until closed to NRCS standards and the permit is rescinded by the Division. Closure shall include pre-notification to the Division and submittal of closure form supplied by the Division or forms approved by the Division as providing the same information as required by the Division's forms within 15 days of completion of closure.

(b) Any Containment basin, such as a lagoon or a waste storage structure, permitted at a cattle facility under this Section shall continue to be subject to the conditions and requirements of the facility's permit until that permit is rescinded by the Division. Upon request of the permittee, the permit may be rescinded by the Division prior to closure of the containment basin if the cattle facility has not met the definition of an animal operation as established in G.S. 143-215.120B for the previous three years or longer. Upon permit rescission, the following requirements shall apply:

- (1) The cattle facility shall be subject to the requirements of Rule .1303 of this Section and Rule .0113 of the Subchapter until the containment basin is closed to NRCS standards.
- (2) The farm owner shall maintain records of land application and weekly records of containment basin waste levels on forms provided by or approved by the Division.
- (3) Closure shall include pre-notification to the Division and submittal of closure form supplied by the Division or forms approved by the Division as providing the same information as required by the Division's forms within 15 days of completion of closure.

(c) The Division shall have the authority to deny a request for permit rescission based on the factors set out in Rule .0113(e) of this Subchapter.

Authority G.S. 143-215.1; 143-215.3(a); 143-215.10A.

15A NCAC 02T .1307 SWINE WASTE MANAGEMENT SYSTEM PERFORMANCE STANDARDS

(a) This Rule applies to animal waste management systems subject to regulation under ~~G.S. 143-215.10I~~. G.S. 143-215. 10I and S.L. 2015-263.

(b) An animal waste management system that serves a swine farm subject to regulation under G.S. 143-215.10I, shall meet all of the following performance standards:

(1) Eliminate the discharge of animal waste to surface waters and groundwater through direct discharge, seepage, or runoff. To meet this standard:

(A) Earthen structures must be designed and constructed with synthetic liners to eliminate seepage.

(B) Solids storage structures shall meet applicable engineering practices and NRCS design standards.

(C) The Certified Animal Waste Management Plan (CAWMP) must include all components as listed in G.S. 143-215.10C(e) and meet current NRCS standards for a Comprehensive Nutrient Management Plan (CNMP) as defined by Part ~~600 600, Subpart E~~ of the NRCS National Planning Procedures Handbook, which are hereby incorporated by reference, including any subsequent additions or amendments. The handbook may be downloaded at no cost from the NRCS website:

http://www.nrcs.usda.gov/technica/afnmp_guide_index.html

<http://www.nrcs.usda.gov/wps/portal/nrcs/site/national/home/>.

(D) Swine waste treatment structures that automatically convey swine waste using pumps must have audible and visible high water alarms with an auto dialer device set to contact the farm owner or farm manager; a gravity overflow to a basin that can contain the flow rate of the largest pump in the system for the maximum amount of time that an operator will not be on-site; or a secondary containment structure designed, constructed, and operated to contain the volume of the largest animal waste treatment structure and the flow rate of the largest pump in the system for the maximum amount of time that an operator will not be on-site.

(E) No more than the equivalent volume of one month of design flow of untreated swine waste shall be accumulated and stored prior to the initiation of treatment.

(2) Substantially eliminate atmospheric emission of ammonia. To meet this standard:

(A) Combined ammonia emissions from swine waste treatment and storage structures may not exceed an annual average of 0.2 kg NH₃-N/wk/1,000 kg of steady-state live weight;

(B) Ammonia emissions from land application sites shall not exceed an annual average of 0.2 kg NH₃-N/wk/1,000 kg of steady-state live weight; and

(C) Ammonia emissions from the swine farm must not exceed an annual average of 0.9 kg NH₃-N/wk/1,000 kg of steady-state live weight.

(3) Substantially eliminate the emission of odor that is detectable beyond the boundaries of the parcel or tract of land on which the swine farm is located. To meet this standard, swine waste management systems must reduce odor levels, frequency, and duration from the whole farm, such that the requirements of 15A NCAC 02D .1808 are met at the property boundary.

(4) Substantially eliminate the release of disease-transmitting vectors and airborne pathogens. To meet this standard:

(A) Swine waste management systems shall meet the vector attraction reduction requirements in Rule .1107 of this Subchapter for the land application of separated solids and animal waste residuals.

(B) Swine waste management systems shall meet the pathogen reduction requirements in Rule .1106 of this Subchapter for Class A biosolids that are to be land applied pursuant to Rule .1106(a)(1) or for Class B biosolids that are to be otherwise applied to land.

(C) Fecal coliform concentrations in the final liquid effluent shall not exceed an annual average of 7,000 Most Probable Number/100mL.

(5) Substantially eliminate nutrient and heavy metal contamination of soil and groundwater. To meet this standard, swine waste management systems that land apply effluent shall:

(A) Meet the current NRCS requirements for a Comprehensive Nutrient Management Plan (CNMP) as defined by Part ~~600, Subpart E 600~~ of the NRCS National Planning Procedures Handbook; and

(B) Demonstrate through predictive calculations or modeling that land application of swine waste at the

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proposed rate will not cause or contribute to a violation of groundwater standards under 15A NCAC 02L.

Authority G.S. 143-215.1; 143-215.3(a); 143-215.10A; 143-215.10I.

15A NCAC 02T .1308 EVALUATION AND APPROVAL OF SWINE WASTE MANAGEMENT SYSTEMS (READOPTION WITHOUT SUBSTANTIVE CHANGES)

15A NCAC 02T .1309 LAGOON CONVERSION REQUIREMENTS (READOPTION WITHOUT SUBSTANTIVE CHANGES)

15A NCAC 02T .1310 ANIMAL WASTE RESIDUALS MANAGEMENT

(a) This Rule applies to the treatment, storage, transportation, use, and disposal of animal waste residuals to be applied to a lawn, home garden, or public contact use site or sold or given away in a bag or other container for application to the land. Not regulated under this Rule is the treatment, storage, transportation, use, or disposal of:

- (1) animal waste residuals applied to agricultural land in accordance with Rule .1303, Rule .1304, Rule 1305, Rule .1307 of this Section, or Rule .1403 of this Subchapter;
- (2) up to four cubic yards of animal waste residuals distributed from a facility subject to regulation under Rule .1303 or Rule .1304 of this Section per visit to individuals for personal use, with a maximum of ten cubic yards per year per individual;
- (3) oil, grease, grit and screenings from wastewater treatment facilities;
- (4) septage from wastewater treatment facilities;
- (5) ash that is regulated in accordance with Section .1200 of this Subchapter;
- (6) residuals that are regulated in accordance with Section .1100 of this Subchapter;
- (7) residuals that are prepared for land application, used, or disposed of in a solid waste management facility permitted by the Division of Waste Management;
- (8) residuals that are disposed of in an incinerator permitted by the Division of Air Quality;
- (9) residuals that are transported out of state for treatment, storage, use, or disposal; and
- (10) residuals that meet the definition of a hazardous waste in accordance with 40 CFR 260.10 as adopted by reference in 15A NCAC 13A .0102(b) or that have a concentration of polychlorinated biphenyls equal to or greater than 50 milligrams per kilogram of total solids (i.e., dry weight basis).

(b) For new and modified sources of animal waste residuals, the application shall submit a permit application in writing to the Division that includes the following:

- (1) Site maps shall be provided to the Division by the applicant depicting the location of the source and demonstrate compliance with siting setbacks applicable to animal waste management systems established in G.S. 106-803, and NRCS standards at the time of construction;
- (2) A complete analysis of the animal waste residuals. The analysis may include all pollutants identified in Paragraph (c) in this Rule, nutrients and micronutrients, and proof of compliance with pathogen and vector requirements in Paragraphs (f) and (g) of this Rule if applicable;
- (3) A sampling/monitoring plan that describes how compliance with Paragraphs (c), (f), and (g) of this Rule if applicable shall be provided to the Division by the applicant;
- (4) A marketability statement detailing destinations and approximate amounts of the final product to be distributed; and
- (5) A copy of the label/information sheet that complies with Paragraph (h) of this Rule.

(c) Bulk animal waste residuals shall not be applied to a lawn, home garden, or public contact use site nor shall animal waste residuals be sold or given away in a bag or other container for application to the land if the concentration of any pollutant in that residual exceeds the ceiling concentration for that pollutant as stipulated in the following (i.e., on a dry weight basis):

<u>Pollutant</u>	<u>Ceiling Concentration (milligrams per kilogram)</u>
<u>Arsenic</u>	<u>75</u>
<u>Cadmium</u>	<u>85</u>
<u>Copper</u>	<u>4,300</u>
<u>Lead</u>	<u>840</u>
<u>Mercury</u>	<u>57</u>
<u>Molybdenum</u>	<u>75</u>
<u>Nickel</u>	<u>420</u>
<u>Selenium</u>	<u>100</u>
<u>Zinc</u>	<u>7,500</u>

(d) Bulk animal waste residuals shall not be applied to a lawn, home garden, or public contact use site nor shall animal waste residuals be sold or given away in a bag or other container for application to the land if the concentration of any pollutant in that residual exceeds the concentration for that pollutant as stipulated in the following (i.e., on a dry weight basis):

<u>Pollutant</u>	<u>Monthly Average Concentration (milligrams per kilogram)</u>
<u>Arsenic</u>	<u>41</u>
<u>Cadmium</u>	<u>39</u>
<u>Copper</u>	<u>1,500</u>
<u>Lead</u>	<u>300</u>
<u>Mercury</u>	<u>17</u>
<u>Nickel</u>	<u>420</u>
<u>Selenium</u>	<u>100</u>
<u>Zinc</u>	<u>2,800</u>

(e) The Class A pathogen requirements shall be met when bulk animal waste residuals are applied to a lawn, home garden, or public contact use site or sold or given away in a bag or other container for application to the land.

(f) For animal waste residuals to be classified as Class A with respect to pathogens, the requirements of Rule .1106(b) of this Subchapter shall be met.

(g) Animal waste residuals shall not be applied to a lawn, home garden, or public contact use site or sold or given away in a bag or other container for application to the land unless the requirements of one of the vector attraction reduction alternatives have been met. The vector attraction reduction alternatives shall be as follows:

- (1) 38-Percent Volatile Solids Reduction. The mass of the volatile solids in the animal waste residuals shall be reduced by a minimum of 38 percent between the time that the animal waste residuals enter the digestion process and the time it is land applied.
- (2) 40-Day Bench Scale Test. A portion of previously anaerobically-digested animal waste residuals shall be further anaerobically-digested in the laboratory in a bench-scale unit for 40 additional days at a temperature between 30 and 37 degrees Celsius. The volatile solids in the animal waste residuals shall be reduced by less than 17 percent as measured from the beginning to the end of the test.
- (3) 30-Day Bench Scale Test. A portion of previously aerobically-digested animal waste residuals shall be further aerobically-digested in the laboratory in a bench-scale unit for 30 additional days at a temperature of 20 degrees Celsius. The previously aerobically-digested animal waste residuals shall either have a concentration of two percent total solids or less or shall be diluted with effluent down to two percent total solids at the start of the test. The volatile solids in the animal waste residuals shall be reduced by less than 15 percent as measured from the beginning to the end of the test.
- (4) Specific Oxygen Uptake Rate Test. The specific oxygen uptake rate (SOUR) for animal waste residuals treated in an aerobic process shall be equal to or less than 1.5 milligrams of oxygen per hour per gram of total solids (i.e., dry weight basis) corrected to a temperature of 20 degrees Celsius.
- (5) 14-Day Aerobic Processes. The animal waste residuals shall be treated in an aerobic process for 14 days or longer. During that time the temperature of the animal waste residuals shall

be higher than 40 degrees Celsius, and the average temperature of the animal waste residuals shall be higher than 45 degrees Celsius.

(6) Alkaline Stabilization. The pH of the animal waste residuals shall be raised to 12 or higher by alkali addition and, without the addition of more alkali, shall remain at 12 or higher for two hours and then at 11.5 or higher for an additional 22 hours.

(7) Drying of Stabilized Residuals. The animal waste residuals shall be dried to 75 percent total solids if the animal waste residuals contain no unstabilized solids from a primary wastewater treatment process. Mixing of the animal waste residuals with other materials shall not be used to meet this alternative.

(8) Drying of Unstabilized Residuals. The animal waste residuals shall be dried to 90 percent total solids if the animal waste residuals contain unstabilized solids from a primary wastewater treatment process. Mixing of the animal waste residuals with other materials shall not be used to meet this alternative.

(h) For animal waste residuals that are sold or given away in a bag or other container for application to the land, either a label shall be affixed to the bag or other container or an information sheet shall be provided to the person who receives the animal waste residuals. The label/information sheet shall contain the following information:

- (1) The name and address of the person who prepared the animal waste residuals;
- (2) A statement that land application of the animal waste residuals shall be prohibited except in accordance with the instructions on the label/information sheet;
- (3) A statement that animal waste residuals shall be applied at agronomic rates and recommended rates for intended uses;
- (4) A statement that the animal waste residuals shall not be applied to any site that is flooded, frozen, or snow covered;
- (5) A statement that adequate procedures shall be provided to prevent surface runoff from carrying any disposed or stored animal waste residuals into any surface waters;
- (6) A statement which identifies that this material shall be prevented from entering any public or private water supply source (including wells), stream, lake, or river;
- (7) Pollutant concentration for pollutants listed in Paragraph (c) of this Rule; and
- (8) Nitrogen and phosphorous concentration.

(i) Monitoring and Reporting.

- (1) Animal waste residuals applied shall be monitored for pollutants as listed in Paragraph (b) of this Rule as well as Paragraph (e) of this Rule and Paragraph (f) of this Rule as applicable at the frequency as stipulated in the following for each residuals source facility:

	<u>Metric Tons per 365 day period (Dry Weight Basis)</u>	<u>Monitoring Frequency</u>
	<u>Greater than zero but less than 290</u>	<u>Once per year</u>
	<u>Equal to or greater than 290 but less than 1,500</u>	<u>Once per quarter (four times per year)</u>
	<u>Equal to or greater than 1,500 but less than 15,000</u>	<u>Once per 60 days (six times per year)</u>
	<u>Equal to or greater than 15,000</u>	<u>Once per month (12 times per year)</u>
(2)	<u>A report of all monitoring and reporting requirements as specified in the permit shall be submitted to the Division by the permittee annually on or before March 1st of each calendar year.</u>	
(3)	<u>All records shall be retained for a minimum of five years.</u>	

Authority G.S. 143-215.1; 143-215.3(a); 143-215.10A.

SECTION .1400 – MANURE HAULER OPERATIONS

**15A NCAC 02T .1401 SCOPE (READOPTIO
WITHOUT SUBSTANTIVE CHANGES)**

**15A NCAC 02T .1402 DEFINITIONS (READOPTIO
WITHOUT SUBSTANTIVE CHANGES)**

15A NCAC 02T .1403 PERMITTING BY REGULATION

(a) The following systems are deemed permitted pursuant to Rule .0113 of this Subchapter provided the system meets the criteria in Rule .0113 of this Subchapter and all criteria required for the specific system in this Rule:

- (1) Manure Hauler that land apply a total of 100 tons or less of animal waste per calendar year if:
 - (A) animal waste is applied at no greater than agronomic rates; and
 - (B) a setback vegetated buffer (separation) of at least 25 feet is maintained from a perennial stream or perennial waterbody during land application.
- (2) Manure Hauler that land apply a total of more than 100 tons of animal waste per calendar year if:
 - (A) animal waste is applied at no greater than agronomic rates;
 - (B) animal waste is not stockpiled uncovered for greater than 15 days;
 - (C) animal waste is not stockpiled within 100 feet of a perennial stream or perennial waterbody;
 - (D) a setback vegetated buffer (separation) of at least 25 feet is maintained from a perennial stream or perennial waterbody during land application;
 - (E) the Manure Hauler registers with the Division by one year from the effective date of this Rule. Manure Hauler that begin operation following the effective date of this Rule must register with the Division prior to accepting or purchasing manure.
 - (F) the Manure Hauler submits an annual report, as specified in this Section, to the Division by March 1 of each year, and keeps records of land application

activity including the date, location and amount of all animal waste received, and the date locations, application rate, acreage, waste analysis, and receiving crops of all animal waste land application; and
(G) the field on which animal waste is applied has had a representative Standard Soil Fertility Analysis within the last three years from a Division certified laboratory pursuant to 15A NCAC 02H .0800.

(b) The Director may determine that a system should not be deemed permitted in accordance with this Rule and Rule .0113 of this Subchapter. This determination shall be made in accordance with Rule .0113(e) of this Subchapter.

Authority G.S. 143-215.1; 143-215.3(a).

15A NCAC 02T .1404 ANNUAL REPORTS

~~(a) Manure Haulers that land apply more than 100 tons but less than 750 tons of animal waste per calendar year shall submit to the Division a report of the activities for the calendar year that includes the following:~~

- ~~(1) Name, mailing address, and phone number of the Manure Hauler;~~
- ~~(2) Date, location, and amount of all animal waste received; and~~
- ~~(3) Date, location, amount, and acreage of all animal waste land application.~~

~~(b) Manure Haulers that land apply 750 tons or more of animal waste per calendar year shall submit to the Division a report of the activities for the calendar year that includes the following:~~

- ~~(1) Name, mailing address, and phone number of the Manure Hauler;~~
- ~~(2) Dates, locations, and amounts of animal waste received; and~~
- ~~(3) Dates, locations, application rate, acreage, waste analysis, and receiving crop of all animal waste land applied.~~

~~(c) Annual reports shall be submitted by March 1 for the preceding calendar year, on Division supplied forms or forms approved by the Division as providing the same information as required by the Division's forms.~~

Authority G.S. 143-215.1; 143-215.3(a).

SECTION .1600 –GROUNDWATER REMEDIATION SYSTEMS

15A NCAC 02T .1601 SCOPE

The rules in this Section apply to all persons proposing to construct, modify, expand, or operate a groundwater treatment system that extracts and treats contaminated groundwater and reintroduces the treated groundwater. These include closed-loop groundwater remediation systems as defined in G.S. 143-215.1A. Such systems typically use infiltration galleries or injection wells. This Section does not apply to in-situ groundwater remediation wells, as defined by ~~15A NCAC 02C .0209(e)(3)(C)~~, 15A NCAC 02C .0225(a), unless such a system includes the withdrawal, treatment, and reintroduction of the treated groundwater.

Authority G.S. 143-214.2(b); 143-215.1; 143-215.1A.

**15A NCAC 02T .1602 DEFINITIONS (READOPTIO
WITHOUT SUBSTANTIVE CHANGES)**

**15A NCAC 02T .1604 APPLICATION SUBMITTAL
(READOPTIO WITHOUT SUBSTANTIVE CHANGES)**

**15A NCAC 02T .1605 DESIGN CRITERIA
(READOPTIO WITHOUT SUBSTANTIVE CHANGES)**

**15A NCAC 02T .1606 SETBACKS (READOPTIO
WITHOUT SUBSTANTIVE CHANGES)**

**15A NCAC 02T .1607 MONITORING AND
REPORTING REQUIREMENTS (READOPTIO
WITHOUT SUBSTANTIVE CHANGES)**

**15A NCAC 02T .1608 REQUIREMENTS FOR
CLOSURE (READOPTIO WITHOUT SUBSTANTIVE
CHANGES)**

SUBCHAPTER 02U – RECLAIMED WATER

SECTION .0100 – GENERAL REQUIREMENTS

15A NCAC 02U .0101 PURPOSE

(a) The rules in this Subchapter shall apply to reclaimed water systems. This includes the generation and utilization of ~~tertiary treated wastewater effluent meeting the standards in Rule .0301 of this Subchapter~~, used in a beneficial manner and for the purpose of conservation of the State's water resources by reducing the use of a potable water, surface water, and groundwater resource (~~potable water, surface water, groundwater~~).

(b) The disposal of treated wastewater effluent that does not serve in place of the use of a water resource is ~~covered~~ governed by Subchapter 02T of this Chapter.

(c) Reclaimed water utilization systems permitted pursuant to this Subchapter ~~de~~ shall not exempt any discharge to waters of the State from meeting the permitting requirements established by the National Pollutant Discharge Elimination System (NPDES) permitting program pursuant to G.S. 143-215.1 and 15A NCAC 02H .0100.

~~(e)(d)~~ Any use of reclaimed water for Aquifer Storage and Recovery shall be in accordance with G.S. 143-214.2.

~~(e) Requirements for closed-loop recycle systems are provided in Section .1000 of Subchapter 02T of this Chapter.~~

~~(e) The reuse or return of wastewater from a permitted animal waste facility for waste flushing is governed by 15A NCAC 02T .1300.~~

~~(f) The recycling of wastewater from groundwater remediation systems through an Injection Well or Infiltration Gallery is governed by 15A NCAC 02T .1600.~~

~~(f)(g)~~ The rules in this subchapter set forth the requirements and procedures for application and issuance of permits for the following reclaimed water systems:

- (1) treatment works;
- (2) utilization systems;
- (3) bulk distribution programs; and
- (4) local program approval.

Authority G.S. 143-215.1; 143-215.1(f); 143-215.3(a)(1); 143-355.5.

15A NCAC 02U .0102 SCOPE

The rules in this Subchapter shall apply to all persons proposing to construct, alter, extend, or operate any reclaimed water treatment works or utilization system. The rules in this Section are general requirements that apply to all program rules (~~found in individual sections~~) in this Subchapter.

Authority G.S. 143-215.1; 143-215.3(a)(1).

15A NCAC 02U .0103 DEFINITIONS

The terms used in this Subchapter shall have the meanings set forth ~~are defined~~ in G.S. 143-212 and 143-213, ~~and 15A NCAC 02T .0103~~ 15A NCAC 02T .0103, in this Rule, and in program-specific rules in this Subchapter; except as provided in this Rule as follows:

- (1) "Beneficial manner" means the use of water as a necessary part of an activity or process ~~to which that~~ the water is being added.
- (2) "Beneficial Reuse" means the utilization of reclaimed water in a beneficial manner and for the purpose of conservation of the State's water resources by reducing the use of other potable water, surface water, and groundwater resources. ~~resources (potable water, surface water, groundwater).~~
- (3) "Conjunctive system" means a system where the reclaimed water option is in addition to ~~not necessary to meet the wastewater disposal needs of the facility and where~~ other wastewater utilization or disposal methods (e.g., NPDES permit) that are available to the facility at all ~~times~~. times, and reclaimed water utilization is not necessary to meet the wastewater disposal needs of the facility.
- (4) "Dedicated system" means a system where the reclaimed water utilization is necessary to meet the wastewater disposal needs of the facility and where other wastewater utilization or

- disposal methods to accommodate the entire wastewater flow generated at the facility are not available.
- (5) "Closed-loop recycle facility" means a system in which non-domestic wastewater is repeatedly recycled back through the process in which the waste was generated.
- (4)(6) "Direct contact irrigation" means application methods that result in the direct contact of reclaimed water on the portion of the crop intended for human consumption.
- (5)(7) "Five-day side stream detention pond" means a basin capable of holding five days worth of treatment plant effluent based on the (permitted flow capacity) permitted flow capacity in the event that the reclaimed water does not meet the required quality standards for the approved use.
- (6)(8) "Indirect contact irrigation" means application methods that ~~will~~ preclude direct contact of reclaimed water on the portion of the crop intended for human consumption.
- (7)(9) "Net environmental benefit" associated with wetlands augmentation sites is documented evidence supporting continued maintenance of natural conditions, and the protection of endangered species as required in Rule .0105(c)(10) of this Section. Wetland augmentation systems shall provide documentation of the protection of existing wetland uses in accordance with 15A NCAC 02B .0201(f) and ~~.0231~~ .0231, and shall not result in net degradation of the wetland.
- (8)(10) "Reclaimed Water" means treated wastewater ~~effluent~~, effluent meeting effluent standards established pursuant to Rule .0301 of this Subchapter, and used for beneficial reuse.

Authority G.S. 143-213; 143-215.3(a)(1).

15A NCAC 02U .0104 ACTIVITIES WHICH REQUIRE A PERMIT

~~No person shall do any of the things or carry out any of the activities contained in G.S. 143-215.1(a) until or unless the person has applied for and received a permit from the Division (or if appropriate a local program approved by the Division pursuant to this Subchapter) and has complied with the conditions prescribed in the permit or is deemed permitted by rules in this Subchapter.~~

Authority G.S. 143-215.1; 143-215.3(a)(1).

15A NCAC 02U .0105 GENERAL REQUIREMENTS (READOPTION WITHOUT SUBSTANTIVE CHANGES)

15A NCAC 02U .0106 SUBMISSION OF PERMIT APPLICATIONS (READOPTION WITHOUT SUBSTANTIVE CHANGES)

15A NCAC 02U .0107 STAFF REVIEW AND PERMIT PREPARATION (READOPTION WITHOUT SUBSTANTIVE CHANGES)

15A NCAC 02U .0108 FINAL ACTION ON PERMIT APPLICATIONS TO THE DIVISION (READOPTION WITHOUT SUBSTANTIVE CHANGES)

15A NCAC 02U .0109 PERMIT RENEWALS (READOPTION WITHOUT SUBSTANTIVE CHANGES)

15A NCAC 02U .0110 MODIFICATION AND REVOCATION OF PERMITS (READOPTION WITHOUT SUBSTANTIVE CHANGES)

15A NCAC 02U .0111 CONDITIONS FOR ISSUING GENERAL PERMITS (READOPTION WITHOUT SUBSTANTIVE CHANGES)

15A NCAC 02U .0112 DELEGATION OF AUTHORITY (READOPTION WITHOUT SUBSTANTIVE CHANGES)

15A NCAC 02U .0113 PERMITTING BY REGULATION (SEE S.L. 2011-48)

(a) The following utilizations of reclaimed water and closed-loop recycle activities ~~are~~ shall be deemed to be permitted pursuant to ~~G.S. 143-215.1(b)~~ G.S. 143-215.1(b), and it is not necessary for the Division to issue individual permits or coverage under a general permit for construction or operation of the following utilization systems provided the system does not result in any violations of surface water or groundwater standards, there is no unpermitted direct discharge to surface waters, and all criteria required for the specific system ~~is~~ are met:

- (1) Discharges to the land surface from flushing and hydrostatic testing water associated with utility distribution systems, new ~~sewer extensions~~ sewer extensions, or new reclaimed water distribution lines;
- (2) Overflow from elevated and covered or enclosed reclaimed water storage facilities ~~where if~~ no viable alternative exists and all possible reasonable measures are taken to reduce the risk of overflow;
- (3) Any de minimus runoff from reclaimed water used during fire fighting or extinguishing, dust control, soil compaction for construction purposes, street sweeping, overspray on yard inlets, overspray on golf cart paths, or vehicle washing provided the use is approved in a permit issued by the Division;
- (4) Incidental discharge to a municipal separate storm sewer system (MS4) that occurs as a result of reclaimed water utilization activities provided ~~the use such activity~~ is approved in a reclaimed water utilization permit issued by the Division, and the discharge does not violate water quality standards. This does not exempt the reclaimed water user from complying with

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- any applicable local ordinances that may prohibit such discharges;
- (5) Rehabilitation, repair, or replacement of reclaimed water lines in kind (~~i.e., size~~) with the same horizontal and vertical alignment;
- (6) In accordance with 15A NCAC 02H .0106(f)(5), ~~flushing flushing, (including air release valve discharge)~~ including air release valve discharge, and hydrostatic testing water discharges associated with reclaimed water distribution systems ~~provided that if~~ no water quality standards are violated;
- (7) Utilization of reclaimed water received from a reclaimed water bulk distribution program permitted under Rule .0601 of this Subchapter;
- (8) Irrigation of residential lots or commercial (~~non-residential~~) application areas less than ~~one acre~~ two acres in size that are supplied with reclaimed water as part of a conjunctive ~~use~~ reclaimed water system meeting the requirements of Rules .0301, .0401, .0403, .0501, and .0701 of this Subchapter; Chapter 89G of the General Statutes; approved by the local building inspection department; and installed by a North Carolina Licensed Irrigation Contractor pursuant to G.S. 89G. A scaled site map showing the location of the reclaimed water irrigation system and all features necessary to show compliance with applicable setbacks in Rule .0701 of this Subchapter shall be submitted to the reclaimed water provider;
- (9) Irrigation of agricultural ~~erops~~ crops, including irrigation of ornamental crops by field nurseries and aboveground container nurseries, supplied with reclaimed water as part of a conjunctive ~~use~~ reclaimed water system meeting the requirements of this Subchapter and approved by the reclaimed water provider;
- (10) Drip irrigation sites supplied with reclaimed water as part of a conjunctive ~~use~~ reclaimed water system generated from an onsite wastewater treatment facility meeting the criteria of this Subchapter and ~~where~~ the conjunctive system has been approved by the Department and is permitted under 18A .1900; ~~and~~
- (11) Reuse of produced waters and flowback waters from oil and gas wells regulated by Article 27 of G.S. 113 for reuse in accordance with water and waste management plans approved pursuant to rules of the Mining and Energy Commission as set forth in ~~15A NCAC 05H~~. 15A NCAC 05H;
- (12) Toilet and urinal flushing systems supplied by reclaimed water as part of a conjunctive reclaimed water system meeting the applicable requirements of Rules .0301, .0401, .0403, .0501, and .0701 of this Subchapter; Chapter 89G of the General Statutes; approved by the local building inspection department; and installed by a North Carolina Licensed Plumbing Contractor pursuant to G.S. 89;
- (13) Return of wastewater within an industrial or commercial process where there is no anticipated release of wastewater provided the facility develops and maintains a spill control plan in the event of a release, no earthen basins are used, and the system is contained and under roof;
- (14) Recycling of rinse water at concrete mixing facilities for concrete mix removal from equipment provided the wastewater is contained within concrete structures, there is sufficient storage capacity to contain the runoff from a 24-hour, 25-year storm event plus one foot freeboard and the facility develops and maintains a spill control plan in the event of a wastewater release. The facility shall notify the appropriate Division regional office in writing noting the owner, location, and that the design complies with the above criteria;
- (15) Recycling of wash and rinse water at vehicle wash facilities provided the wastewater is contained within concrete, steel or synthetic structures, all vehicle washing is conducted under roof or there are no direct or indirect precipitation inputs, and the facility develops and maintains a spill control plan in the event of a wastewater release;
- (16) The reuse or return of wastewater within the treatment works of a permitted wastewater treatment system;
- (17) Recycle systems that are part of a stormwater management systems permitted under 15A NCAC 02H .1000, and the wastewater is recycled back through the process in which the waste was generated; and
- (18) Recycling of rinse water for separating gems from gravel, sand, or rock in a flume at commercial gem mine facilities with total system flow of less than 100,000 gpd, provided the wastewater is contained within storage structures, no biological or chemical additives are used, and the facility develops and maintains a spill control plan in the event of a wastewater release. The facility shall notify the appropriate Division regional office in writing noting the owner, location, and that the design complies with the required criteria.
- (b) Nothing in this Rule shall be deemed to allow the violation of any ~~assigned~~ surface water, groundwater, or air quality standards, and in addition any such violation is a violation of a condition of a permit.
- (c) The reclaimed water user shall report any violation of this Rule or any discharge to surface waters from the utilization systems listed in Paragraph (a) of this ~~Rule~~. Rule to the Division and in accordance with 15A NCAC 02B .0506.

(d) Utilization systems deemed permitted under this Subchapter shall remain deemed permitted, notwithstanding any violations of surface water or groundwater standards or violations of this Rule or other Permitted By Regulation rules in this Subchapter, until such time as the Director determines that they ~~should~~ **shall** not be deemed permitted in accordance with the criteria established in this Rule.

(e) The Director may determine that a utilization system ~~should~~ **shall** not be deemed to be permitted in accordance with this Rule and require the utilization system to obtain an individual permit or a certificate of coverage under a general permit. This determination shall be made based on existing or projected environmental impacts, compliance with the provisions of this Rule and the compliance history of the facility owner.

Authority G.S. 130A-300; 143-215.1(a)(1); 143-215.1(b)(4)(e); 143-215.3(a), (d).

15A NCAC 02U .0114 WASTEWATER DESIGN FLOW RATES (READOPTION WITHOUT SUBSTANTIVE CHANGES)

15A NCAC 02U .0115 OPERATIONAL AGREEMENTS (READOPTION WITHOUT SUBSTANTIVE CHANGES)

15A NCAC 02U .0116 CERTIFICATION OF COMPLETION (READOPTION WITHOUT SUBSTANTIVE CHANGES)

15A NCAC 02U .0117 TREATMENT FACILITY OPERATION AND MAINTENANCE (READOPTION WITHOUT SUBSTANTIVE CHANGES)

15A NCAC 02U .0118 DEMONSTRATION OF FUTURE WASTEWATER TREATMENT CAPACITIES
Demonstration of future wastewater treatment capacities shall be completed pursuant to 15A NCAC 02T .0118.

Authority G.S. 143-215.3.

15A NCAC 02U .0120 HISTORICAL CONSIDERATION IN PERMIT APPROVAL (READOPTION WITHOUT SUBSTANTIVE CHANGES)

SECTION .0200 - APPLICATION REQUIREMENTS

15A NCAC 02U .0201 APPLICATION SUBMITTAL – CONJUNCTIVE SYSTEMS

(a) The requirements in this Rule shall apply to all new and expanding ~~conjunctive~~ **reclaimed water and closed-loop recycle facilities, as applicable. facilities.**

(b) A soil evaluation of the utilization site where the reclaimed water is applied to the land surface or otherwise used in a ground absorption manner shall be provided to the Division by the ~~Applicant. applicant.~~ Evaluations shall include recommended loading rates of liquids, solids, and other constituents. For systems that utilize reclaimed water through irrigation, the evaluation shall also include recommended maximum irrigation precipitation

rates. If required by G.S. 89F, a soil scientist shall prepare this evaluation.

[Note: The North Carolina Board for Licensing of Soil Scientists has determined, via letter dated December 1, 2005, that preparation of soils reports pursuant to this Paragraph constitutes practicing soil science ~~under~~ **pursuant to G.S. 89F.**]

(c) Engineering design documents. If required by G.S. 89C, a professional engineer shall prepare engineering design documents. The following documents shall be provided to the Division by the ~~Applicant. applicant.~~

- (1) engineering plans for the entire system, including treatment, storage, application, and utilization facilities and equipment except those previously permitted unless those previously permitted are directly tied into the new units or are ~~critical~~ **necessary to the** understanding of the complete process;
- (2) specifications describing materials to be used, methods of construction, and means for ensuring quality and integrity of the finished ~~product~~ **product**, including leakage testing; and
- (3) engineering ~~calculations~~ **calculations**, including hydraulic and pollutant loading for each treatment unit, treatment unit sizing criteria, hydraulic profile of the treatment system, total dynamic head and system curve analysis for each pump, buoyancy calculations, and irrigation design.
- (4) closed-loop facilities utilizing storage ponds shall provide a water balance calculation documenting all inputs and losses.

[Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via letter dated December 1, 2005, that preparation of engineering design documents pursuant to this Paragraph constitutes practicing engineering under G.S. 89C. In addition, the North Carolina Board of Examiners for Engineers and Surveyors has determined that design of residential reclaimed irrigations systems owned by the property owner does not constitute engineering ~~under~~ **pursuant to G.S. 89C.**]

(d) Site plans. If required by G.S. 89C, a professional land surveyor shall provide location information on boundaries and physical features not under the purview of other licensed professions. The ~~Applicant. applicant.~~ shall provide site plans or maps for treatment and storage facilities and where the reclaimed water is applied to the land surface or otherwise used in a ground absorption manner, except where reclaimed water is utilized for irrigation to single-family residential lots, showing the location, orientation and relationship of facility components including:

- (1) a scaled map of the site showing all facility-related structures and fences within 500 feet of the treatment, storage, and utilization areas;
- (2) for land application sites and other ground absorption uses, the site map shall include topography; ~~and~~
- (3) to the extent needed to determine compliance with setbacks, the location of all features included in Rule .0701 of this ~~Subchapter.~~ **Subchapter; and**

- (4) setbacks as required by Rule .0701 of this Subchapter and delineation of the review and compliance boundaries.

[Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via letter dated December 1, 2005, that locating boundaries and physical features, not under the purview of other licensed professions, on maps pursuant to this Paragraph constitutes practicing surveying ~~under~~ pursuant to G.S. 89C.]

(e) The Applicant ~~applicant~~ shall provide property ownership documentation to the Division consisting of:

- (1) legal documentation of ownership (e.g., contract, deed or article of incorporation);
- (2) written notarized intent to purchase agreement an agreement of an intent to purchase the property that is written, notarized, and signed by both parties, accompanied by a plat or survey map;
- (3) an easement running with the land indicating the intended use of the property and meeting the condition of 15A NCAC 02L .0107(f); or
- (4) written notarized lease agreement an agreement to lease the property that is written, notarized, and signed by both parties, indicating the intended use of the property, as well as accompanied by a plat or survey map. When this Subparagraph is utilized to document property ownership, groundwater standards must be met across the entire site and a compliance boundary need not be provided. Lease agreements shall adhere to the requirements of 15A NCAC 02L .0107.

(f) Public utilities shall submit a Certificate of Public Convenience and Necessity or a letter from the NC Utilities Commission to the Division stating that it has received a franchise application has been received. application.

(g) For reclaimed or recycled water generated from industrial wastewater, the The Applicant applicant shall provide a complete chemical analysis of the typical reclaimed water to be utilized utilized, and a listing of any toxic pollutant that the Applicant currently uses or manufactures as an intermediate or final product or byproduct (the Director may waive or modify this requirement for any Applicant if the Applicant demonstrates that it would be unduly burdensome to identify each toxic pollutant and the Director has adequate information to issue the permit). for industrial waste. The Director may determine that subsequent toxicity testing is required based on the provided information. New facilities may provide chemical analysis of the source water along with predictive calculations for chemical characteristics prior to utilization. The analysis shall include:

- (1) Total Organic Carbon;
- (2) 5-day Biochemical Oxygen Demand (BOD5);
- (3) Chemical Oxygen Demand (COD);
- (4) Nitrate Nitrogen (NO3-N);
- (5) Ammonia Nitrogen (NH3-N);
- (6) Total Kjeldahl Nitrogen (TKN);
- (7) pH;
- (8) Chloride;
- (9) Total Phosphorus;
- (10) Phenol;

- (11) Total Volatile Organic Compounds;
- (12) Escherichia coli (E.coli) or Fecal Coliform;
- (13) Coliphage (Type 2 reclaimed water only);
- (14) Clostridium perfringens (Type 2 reclaimed water only);
- (15) Calcium;
- (16) Sodium;
- (17) Magnesium;
- (18) Sodium Adsorption Ratio (SAR);
- (19) Total Trihalomethanes; and
- ~~(20) Toxicity Test Parameters; and~~
- ~~(21)~~(20) Total Dissolved Solids.

(h) For irrigation sites, the Applicant ~~applicant~~ shall provide to the Division a project evaluation and a receiver site agronomic management plan and recommendations concerning cover crops and their ability to accept the proposed application rates of liquid, solids, minerals and other constituents of the wastewater.

Authority G.S. 143-215.1; 143-215.3(a).

**15A NCAC 02U .0202 APPLICATION SUBMITTAL
FOR -NON-CONJUNCTIVE DEDICATED RECLAIMED
WATER SYSTEMS**

(a) In addition to the Application Submittal Requirements established Rule .0201 of this Section, the The requirements in this Rule shall apply to all new and expanding non-conjunctive dedicated reclaimed water facilities, as applicable. facilities.

(b) Soils Report. A soil evaluation of the utilization site shall be provided to the Division by the Applicant ~~applicant~~. If required by G.S. 89F, a soil scientist shall prepare this evaluation. This evaluation shall be presented in a report that includes the following:

- (1) A field ~~Field~~ description of the soil profile, based on examinations of excavation pits and auger borings, within seven feet of land surface or to bedrock describing the following parameters by individual diagnostic horizons:
 - (A) the thickness of the horizon;
 - (B) the texture;
 - (C) the color and other diagnostic features;
 - (D) the structure;
 - (E) the internal drainage;
 - (F) the depth, thickness, and type of restrictive horizon(s); ~~horizons;~~ and
 - (G) presence or absence and depth of evidence of any seasonal high water ~~table (SHWT); table;~~

Applicants shall dig pits when necessary for proper evaluation of the soils at the site;

- (2) Recommendations concerning loading rates of liquids, solids, other wastewater constituents and ~~amendments; amendments.~~ Annual annual hydraulic loading rates shall be based on in-situ measurement of saturated hydraulic conductivity in the most restrictive horizon for each soil mapping ~~unit; unit.~~ Maximum maximum irrigation precipitation rates shall be provided for each soil mapping unit;

- (3) A field-delineated soil map delineating soil mapping units within each land application site and showing all physical features, location of pits and auger borings, legends, scale, and a north arrow; ~~arrow.~~ The legends shall also include dominant soil series name and family or higher taxonomic class for each soil mapping unit; and
- (4) A ~~representative soils analysis (i.e., Standard Soil Fertility Analysis)~~ Standard Soil Fertility Analysis conducted on each land application site. The Standard Soil Fertility Analysis shall include the following parameters:
 - (A) ~~Acidity; acidity;~~
 - (B) Base Saturation (by calculation); base saturation (by calculation);
 - (C) ~~Calcium; calcium;~~
 - (D) Cation Exchange Capacity; cation exchange capacity;
 - (E) ~~Copper; copper;~~
 - (F) Exchangeable Sodium Percentage (by calculation); exchangeable sodium percentage (by calculation);
 - (G) ~~Magnesium; magnesium;~~
 - (H) ~~Manganese; manganese;~~
 - (I) ~~Percent Humic Matter; percent humic matter;~~
 - (J) ~~pH; pH;~~
 - (K) ~~Phosphorus; phosphorus;~~
 - (L) ~~Potassium; potassium;~~
 - (M) ~~Sodium; sodium; and~~
 - (N) Zinc; zinc.

[Note: The North Carolina Board for Licensing of Soil Scientists has determined, via letter dated December 1, 2005, that preparation of soils reports pursuant to this Paragraph constitutes practicing soil science under pursuant to G.S. 89F.]

~~(e) Engineering design documents. If required by G.S. 89C, a professional engineer shall prepare these documents. The applicant shall provide the following documents to the Division:~~

- ~~(1) engineering plans for the entire system, including treatment, storage, application, and utilization facilities and equipment except those previously permitted unless those previously permitted are directly tied into the new units or are critical to the understanding of the complete process;~~
- ~~(2) specifications describing materials to be used, methods of construction, and means for ensuring quality and integrity of the finished product including leakage testing; and~~
- ~~(3) engineering calculations including hydraulic and pollutant loading for each treatment unit, treatment unit sizing criteria, hydraulic profile of the treatment system, total dynamic head and system curve analysis for each pump, buoyancy calculations, and irrigation design.~~

~~[Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via letter dated December 1, 2005, that preparation of engineering design documents pursuant to this~~

~~Paragraph constitutes practicing engineering under G.S. 89C. In addition, the North Carolina Board of Examiners for Engineers and Surveyors has determined that design of residential reclaimed irrigations systems owned by the property owner does not constitute engineering under G.S. 89C.]~~

~~(d) Site plans. If required by G.S. 89C, a professional land surveyor shall provide location information on boundaries and physical features not under the purview of other licensed professions. The applicant shall provide site plans or maps to the Division where the reclaimed water is applied to the land surface or otherwise used in a ground absorption manner depicting the location, orientation and relationship of facility components including:~~

- ~~(1) a scaled map of the site, with topographic contour intervals not exceeding 10 feet or 25 percent of total site relief and showing all facility related structures and fences within the treatment, storage and utilization areas, soil mapping units shown on all utilization sites;~~
- ~~(2) the location of all wells (including usage and construction details if available), streams (ephemeral, intermittent, and perennial), springs, lakes, ponds, and other surface drainage features within 500 feet of all waste treatment, storage, and utilization site(s) and delineation of the review and compliance boundaries;~~
- ~~(3) setbacks as required by Rule .0701 of this Subchapter; and~~
- ~~(4) site property boundaries within 500 feet of all waste treatment, storage, and utilization site(s).~~

~~[Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via letter dated December 1, 2005, that locating boundaries and physical features, not under the purview of other licensed professions, on maps pursuant to this Paragraph constitutes practicing surveying under G.S. 89C.]~~

~~(e)(c) Hydrogeologic report. A hydrogeologic description of the subsurface, prepared by a Licensed Geologist, Licensed Soil Scientist, or Professional Engineer if required by Chapters 89E, 89F, or 89C89C, respectively respectively, of the subsurface to a depth of 20 feet or bedrock, whichever is less, shall be provided to the Division by the Applicant applicant for systems treating industrial waste and any system reclaimed water land application sites with a design flow of over 25,000 gallons per day. Industrial facilities generating less than 25,000 gallons per day of wastewater, and can demonstrate that the effluent will be of quality similar to domestic wastewater, including effluent requirements established in 15A NCAC 02U .0301(b), shall, upon request, be exempted from this requirement. A greater depth of investigation is required if the respective depth is used in predictive calculations. This evaluation shall be based on borings for which the numbers, locations, and depths are sufficient to define the components of the hydrogeologic evaluation. In addition to borings, other techniques may be used to investigate the subsurface conditions at the site. These techniques may include geophysical well logs, surface geophysical surveys, and tracer studies. This evaluation shall be presented in a report that includes a mounding analysis to predict the level of the seasonal high water table after reclaimed water application, if the seasonal~~

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high water table is within six feet of the surface. The report shall also consider that includes the following components:

- (1) a description of the regional and local geology and hydrogeology based on research of literature for the area;
- (2) a description, based on field observations of the site, of the site topographic setting, streams, springs and other groundwater discharge features, drainage features, existing and abandoned wells, rock outcrops, and other features that may affect the movement of the reclaimed water; contaminant plume and treated wastewater;
- (3) changes in the lithology underlying the site;
- (4) the depth to bedrock and the occurrence of any rock outcrops;
- (5) the hydraulic conductivity and transmissivity of the affected aquifer(s); aquifer;
- (6) the depth to the seasonal high water table;
- (7) a discussion of the relationship between the affected aquifers of the site to local and regional geologic and hydrogeologic features; and
- (8) a discussion of the groundwater flow regime of the site prior to the operation of the proposed facility and the post operation of the proposed facility focusing on the relationship of the system to groundwater receptors, groundwater discharge features, and groundwater flow media; and media.
- (9) ~~if the SHWT is within six feet of the surface, a mounding analysis to predict the level of the SHWT after wastewater reclaimed water application.~~

[Note: The North Carolina Board for Licensing of Geologists, via letter dated April 6, 2006, North Carolina Board for Licensing of Soil Scientists, via letter dated December 1, 2005, and North Carolina Board of Examiners for Engineers and Surveyors, via letter dated December 1, 2005, have determined that preparation of hydrogeologic description documents pursuant to this Paragraph constitutes practicing geology under pursuant to G.S. 89E, soil science under pursuant to G.S. 89F, or engineering under pursuant to G.S. 89C.]

~~(f) The applicant shall provide property ownership documentation to the Division consisting of:~~

- (1) ~~legal documentation of ownership (i.e., contract, deed or article of incorporation);~~
- (2) ~~written notarized intent to purchase agreement signed by both parties, accompanied by a plat or survey map;~~
- (3) ~~an easement running with the land specifically indicating the intended use of the property and meeting the condition of 15A NCAC 02L .0107(f); or~~
- (4) ~~written notarized lease agreement signed by both parties, indicating the intended use of the property, as well as a plat or survey map. Groundwater standards shall be met across the entire site, and a compliance boundary shall not be provided.~~

~~(g) Public utilities shall submit a Certificate of Public Convenience and Necessity or a letter from the NC Utilities Commission stating that a franchise application has been received.~~

~~(h) The applicant shall provide to the Division a complete chemical analysis of the typical reclaimed water to be utilized for industrial waste. The analysis shall include:~~

- (1) ~~Total Organic Carbon;~~
- (2) ~~5 day Biochemical Oxygen Demand (BOD5);~~
- (3) ~~Chemical Oxygen Demand (COD);~~
- (4) ~~Nitrate Nitrogen (NO3 N);~~
- (5) ~~Ammonia Nitrogen (NH3 N);~~
- (6) ~~Total Kjeldahl Nitrogen (TKN);~~
- (7) ~~pH;~~
- (8) ~~Chloride;~~
- (9) ~~Total Phosphorus;~~
- (10) ~~Phenol;~~
- (11) ~~Total Volatile Organic Compounds;~~
- (12) ~~Escherichia coli (E. coli) or Fecal Coliform;~~
- (13) ~~Coliphage (Type 2 reclaimed water only);~~
- (14) ~~Clostridium perfringens (Type 2 reclaimed water only);~~
- (15) ~~Calcium;~~
- (16) ~~Sodium;~~
- (17) ~~Magnesium;~~
- (18) ~~Sodium Adsorption Ratio (SAR);~~
- (19) ~~Total Trihalomethanes;~~
- (20) ~~Toxicity Test Parameters; and~~
- (21) ~~Total Dissolved Solids.~~

~~(i) For irrigation sites, the applicant shall provide to the Division a project evaluation and a receiver site agronomic management plan and recommendations concerning cover crops and their ability to accept the proposed application rates of liquid, solids, minerals and other constituents of the wastewater.~~

~~(j)(d) The Applicant applicant shall provide to the Division a residuals management plan as required by Rule .0802 Rule .0802(a) of this Subchapter. A written commitment is not required at the time of application; however, it shall be provided prior to operation of the permitted system.~~

~~(e) The Applicant shall provide to the Division a water balance that determines the required effluent storage based on the following most limiting factor:~~

- (1) ~~hydraulic loading based on the most restrictive horizon;~~
- (2) ~~hydraulic loading based on the groundwater mounding analysis;~~
- (3) ~~nutrient management based on agronomic rates for the specified cover crop; or~~
- (4) ~~nutrient management based on crop management.~~

~~(k) The shall provide a water balance to the Division that determines required storage based upon the most limiting factor of the hydraulic loading based on either the most restrictive horizon or groundwater mounding analysis; or nutrient management based on either agronomic rates for a specified cover crop or crop management requirements.~~

Authority G.S. 143-215.1; 143-215.3(a).

SECTION .0300 - EFFLUENT STANDARDS*Authority G.S. 143-215.1; 143-215.3(a).***15A NCAC 02U .0301 RECLAIMED WATER EFFLUENT STANDARDS**

(a) Reclaimed water treatment processes classified as Type 2 by the rules in this Subchapter shall produce an effluent quality a tertiary quality effluent (filtered or equivalent) prior to storage, distribution, or utilization that meets the parameter limits listed below:

- (1) monthly average BOD₅ of less than or equal to ~~5 mg/l~~ mg/L and a daily maximum BOD₅ of less than or equal to ~~10 mg/l~~ mg/L;
- (2) monthly average TSS of less than or equal to ~~5 mg/l~~ mg/L and a daily maximum TSS of less than or equal to ~~10 mg/l~~ mg/L;
- (3) monthly average NH₃ ~~NH₃-N~~ of less than or equal to ~~1 mg/l~~ mg/L and a daily maximum ~~NH₃-N~~ NH₃-N of less than or equal to ~~2 mg/l~~ mg/L;
- (4) monthly geometric mean Escherichia coli (E. coli) or fecal coliform level of less than or equal to ~~3/100 ml~~ ml and a daily maximum E. coli or fecal coliform level of less than or equal to ~~25/100 ml~~ ml;
- (5) monthly geometric mean Coliphage level of less than or equal to ~~5/100 ml~~ ml and a daily maximum Coliphage level of less than or equal to ~~25/100 ml~~ ml;
- (6) monthly geometric mean Clostridium perfringens level of less than or equal to ~~5/100 ml~~ ml and a daily maximum Clostridium perfringens level of less than or equal to ~~25/100 ml~~ ml; and
- (7) maximum Turbidity of 5 Nephelometric Turbidity Units (NTUs).

(b) Reclaimed water treatment processes classified as Type 1 by the rules in this Subchapter shall produce an effluent quality a tertiary quality effluent (filtered or equivalent) prior to storage, distribution, or utilization that meets the parameter limits listed below:

- (1) monthly average BOD₅ of less than or equal to ~~10 mg/l~~ mg/L and a daily maximum BOD₅ of less than or equal to ~~15 mg/l~~ mg/L;
- (2) monthly average TSS of less than or equal to ~~5 mg/l~~ mg/L and a daily maximum TSS of less than or equal to ~~10 mg/l~~ mg/L;
- (3) monthly average NH₃ ~~NH₃-N~~ of less than or equal to ~~4 mg/l~~ mg/L and a daily maximum ~~NH₃-N~~ NH₃-N of less than or equal to ~~6 mg/l~~ mg/L;
- (4) monthly geometric mean E. coli or fecal coliform level of less than or equal to ~~14/100 ml~~ ml and a daily maximum E. coli or fecal coliform level of less than or equal to ~~25/100 ml~~ ml; and
- (5) maximum Turbidity of 10 NTUs.

(c) Reclaimed water produced by industrial facilities are not required to meet the criteria in this Rule if the reclaimed water is used at the facility in an industrial process and the area of use has no public access and does not result in employee exposure.

SECTION .0400 - DESIGN STANDARDS**15A NCAC 02U .0401 DESIGN CRITERIA FOR RECLAIMED WASTEWATER WATER TREATMENT FACILITIES CONJUNCTIVE SYSTEMS**

(a) The requirements in this Rule shall apply to all new and expanding conjunctive reclaimed water treatment facilities, as applicable, facilities.

(b) Continuous on-line monitoring and recording for turbidity or particle count and flow shall be provided prior to storage, distribution or utilization.

(c) Effluent from the treatment facility shall not be discharged to the storage, distribution or utilization system if either the turbidity exceeds 10 NTUs or if the permitted pathogen levels cannot be met. The facility shall have the ability to utilize use alternate wastewater management options when the effluent quality is not sufficient.

(d) An automatically activated standby power source or other means to prevent improperly treated wastewater from entering the storage, distribution or utilization system shall be provided.

(e) The permit shall require an operator certified by the Water Pollution Control System Operators Certification Commission (WPCSOCC) of a grade equivalent or greater than the facility classification to be on call 24 hours per day.

(f) No storage facilities are required as long as if it can be demonstrated that other permitted means of disposal are available if 100 percent of the reclaimed water cannot be utilized. used. When provided, storage basins shall meet the design requirements in Rule .0402 ~~(g)(f)~~ of this Section.

(g) Reclaimed water irrigation system design shall not exceed the recommended precipitation rates in the soils report prepared pursuant to ~~Rule .0201~~ Section .0200 of this Subchapter. Single family Single-family residential irrigation systems and commercial (non-residential) irrigation systems less than one acre in size that are permitted by regulation under Rule .0113(8) of this Subchapter do not require preparation of a soils report.

(h) All open-atmosphere treatment lagoons and ponds, and open-atmosphere storage units shall have at least two feet of freeboard.

~~(h)(i)~~ (i) Type 2 reclaimed water treatment facilities shall provide dual disinfection systems containing UV disinfection and chlorination or equivalent dual disinfection processes to meet pathogen control requirements.

~~(i)(j)~~ (j) Type 2 reclaimed water treatment facilities shall provide documentation that the combined treatment and disinfection processes are capable of the following:

- (1) log 6 or greater reduction of E. coli;
- (2) log 5 or greater reduction of Coliphage; and
- (3) log 4 or greater reduction of Clostridium perfringens.

(k) Automatically activated irrigation systems shall be connected to a rain or moisture sensor to prevent irrigation during precipitation events, or wet conditions that would cause runoff.

Authority G.S. 143-215.1; 143-215.3(a).

15A NCAC 02U .0402 DESIGN CRITERIA FOR DEDICATED RECLAIMED WATER TREATMENT FACILITIES

- (a) ~~In addition to the Design Criteria established in Rule .0401 of this Section. The the requirements in this Rule shall apply to all new and expanding non-conjunctive dedicated reclaimed water facilities, as applicable, unless specified otherwise.~~
- (b) ~~Each facility, except for those using septic tanks or lagoon treatment, shall provide flow equalization with either a capacity based upon a representative diurnal hydrograph or a capacity of 25 percent of the daily system design flow. Aerated flow equalization facilities shall be provided with a capacity based upon either a representative diurnal hydrograph or at least 25 percent of the daily system design flow.~~
- (c) Dual facilities shall be provided for all essential treatment units.
- (d) ~~Continuous on-line monitoring and recording for turbidity or particle count and flow shall be provided prior to storage, distribution, or utilization.~~
- (e)(d) ~~Effluent from the treatment facility shall be discharged to a five-day side-stream detention pond unit if either the turbidity exceeds 10 NTUs or if the permitted pathogen levels cannot be met. The facility shall have the ability to return the effluent in the five-day side-stream detention pond unit back to the head of the treatment facility.~~
- (f)(e) ~~There shall be no public access to the wastewater treatment facility or the five-day side-stream detention pond unit. The five-day side-stream detention pond shall have either a liner of natural material at least one foot in thickness and having a hydraulic conductivity of no greater than 1×10^{-6} centimeters per second when compacted, or a synthetic liner of sufficient thickness to exhibit structural integrity and an effective hydraulic conductivity no greater than that required of the natural material liner. Liner requirements of the five day side stream detention pond or separation distances between the bottom of the five day side-stream detention pond and the groundwater table may be reduced if it can be demonstrated by predictive calculations or modeling methods that satisfy the Director, that construction and use of the five day side stream detention pond will not result in contravention of assigned groundwater standards at the compliance boundary.~~
- (g)(f) ~~The storage basin and five-day side-stream detention units shall have either a liner of natural material at least one foot in thickness and having a hydraulic conductivity of no greater than 1×10^{-6} centimeters per second when compacted, or a synthetic liner of sufficient thickness to exhibit structural integrity and an effective hydraulic conductivity no greater than that required of the natural material liner. Liner requirements of the storage-basin unit or separation distances between the bottom of storage basin and the groundwater table may be reduced if it can be demonstrated by predictive calculations or modeling methods that satisfy the Director, that construction and use of the storage-basin unit will not result in contravention of assigned groundwater standards at the compliance boundary.~~
- (h) ~~Automatically activated standby power supply onsite, capable of powering all essential treatment units under design conditions shall be provided.~~
- (i) ~~The permit shall require an operator certified by the Water Pollution Control System Operators Certification Commission~~

- (WPCSOCC) of a grade equivalent or greater than the facility classification to be on call 24 hours per day.
- (j)(g) ~~By-pass and overflow lines are shall be prohibited.~~
- (k)(h) ~~Multiple pumps shall be provided if wherever pumps are used.~~
- (l)(i) ~~A water-tight seal on all treatment/storage treatment and storage units or minimum of two feet of protection from the 100-year flood elevation shall be provided.~~
- (m) ~~Reclaimed water irrigation system design shall not exceed the recommended precipitation rates in the soils report prepared pursuant to Rule .0202 of this Subchapter.~~
- (n)(j) ~~A minimum of 30 days of residual storage shall be provided.~~
- (o)(k) ~~Utilization areas shall be designed to maintain a one-foot vertical separation between the seasonal high water table and the ground surface.~~
- (p)(l) ~~Influent pump stations shall meet the sewer minimum design criteria as provided set forth in 15A NCAC 02T .0300.~~
- (q) ~~Type 2 reclaimed water treatment facilities shall provide dual disinfection systems containing UV disinfection or equivalent and chlorination or equivalent to provide pathogen control.~~
- (r) ~~Type 2 reclaimed water treatment facilities shall provide documentation that the combined treatment and disinfection processes are capable of the following:~~
- (1) ~~log 6 or greater reduction of E. coli;~~
 - (2) ~~log 5 or greater reduction of Coliphage; and~~
 - (3) ~~log 4 or greater reduction of Clostridium perfringens.~~

(m) Domestic, commercial, or industrial dedicated reclaimed water systems, including single-family residence facilities, with flow less than 1,000 gallons per day (gpd), are exempt from meeting Paragraphs (c) and (h) of this Rule, if repair or replacement of essential treatment units can be completed within five days.

Authority G.S. 143-215.1; 143-215.3(a).

15A NCAC 02U .0403 DESIGN CRITERIA FOR DISTRIBUTION LINES (SEE S.L. 2011-218)

- (a) The requirements in this Rule shall apply to all new distribution lines.
- (b) All reclaimed water valves, storage facilities facilities, and outlets shall be tagged or labeled to warn the public or employees that the water is not intended for drinking.
- (c) All reclaimed water piping, valves, outlets outlets, and other appurtenances shall be color-coded, taped, or otherwise marked to identify the source of the water as being reclaimed water as follows:
- (1) All reclaimed water piping and appurtenances shall be either colored purple (Pantone 522 or equivalent) and embossed or integrally stamped or marked "CAUTION: RECLAIMED WATER - DO NOT DRINK" or be installed with a purple (Pantone 522 or equivalent) identification tape or polyethylene vinyl wrap. The warning shall be stamped on opposite sides of the pipe and repeated every three feet or less;
 - (2) Identification tape shall be at least three inches wide and have white or black lettering on purple

(Pantone 522 or equivalent) field stating "CAUTION: RECLAIMED WATER - DO NOT DRINK". Identification tape shall be installed on top of reclaimed water pipelines, fastened at least every 10 feet to each pipe length and run continuously the entire length of the pipe; and

- (3) Existing underground distribution systems retrofitted for the purpose of utilizing conveying reclaimed water shall be taped or otherwise identified as in Subparagraphs (1) or (2) of this Paragraph. This identification need not extend the entire length of the distribution system but shall be incorporated within 10 feet of crossing any potable water supply line or sanitary sewer line.

(d) All reclaimed water valves and outlets shall be of a type, or secured in a manner, that permits operation by personnel authorized by the entity that operates the reclaimed water system.

(e) Hose bibs shall be located in locked, below grade vaults that shall be labeled as being of nonpotable quality. As an alternative to the use of locked vaults with standard hose bib services, other locking mechanisms such as hose bibs ~~which that~~ can only be operated by a tool may be placed above ground and labeled as nonpotable water.

(f) ~~Cross-Connection Control~~ There shall be no direct cross-connections between the reclaimed water and potable waters systems, unless such connection has been approved by the Department pursuant to 15A NCAC 18C .0406.

- (1) ~~There shall be no direct cross-connections between the reclaimed water and potable waters systems;~~
- (2) ~~Where both reclaimed water and potable water are supplied to a reclaimed water use area in residential or commercial (irrigation) applications, a dual check valve device (or a device providing equal or better protection) shall be installed at the potable water service connection to the use area;~~
- (3) ~~Where both reclaimed water and potable water are supplied to a reclaimed water use area in industrial or commercial (non-irrigation) applications, a reduced pressure principle backflow prevention device or an approved air gap separation pursuant to 15A NCAC 18C shall be installed at the potable water service connection to the use area; and~~
- (4) ~~Where potable water is used to supplement a reclaimed water system, there shall be an air gap separation, approved and regularly inspected by the potable water supplier, between the potable water and reclaimed water systems.~~

(g) Irrigation system piping shall be considered part of the distribution system for the purposes of this Rule.

(h) Reclaimed water distribution lines shall be located ~~to~~ at least 2 feet horizontally from and 18 inches below any water line where if practicable. Where If these separation distances cannot be met,

the piping and integrity testing procedures shall meet water main standards in accordance with 15A NCAC 18C.

(i) Reclaimed water distribution lines shall not be less than 50 feet from a well unless the piping and integrity testing procedures meet water main standards in accordance with 15A NCAC 18C, but in no case shall they be less than 25 feet from a private well.

(j) Reclaimed water distribution lines shall meet the separation distances to sewer lines in accordance with 15A NCAC 02T .0305.

Authority G.S. 143-215.1; 143-215.3(a).

15A NCAC 02U .0404 DESIGN CRITERIA FOR CLOSED-LOOP RECYCLE SYSTEMS

(a) The requirements in this Rule shall apply to all new and expanding closed-loop recycle facilities.

(b) Design criteria related to closed-loop recycle systems in general.

- (1) There shall be no public access to the wastewater treatment equipment, wastewater storage structures, or to the wastewater within a closed-loop recycle facility.
- (2) If potable water is used to supplement a closed-loop recycle water system, there shall be no direct cross-connections between the closed-loop system and potable water systems, unless such connection has been approved by the Department pursuant to 15A NCAC 18C .0406.

(c) Design criteria related to treatment and storage units used in closed-loop recycle systems.

- (1) The facility shall have the ability to stop production of effluent, return the effluent back to the treatment facility, store the effluent, or discharge the effluent to another permitted wastewater treatment facility when recycling cannot be conducted.
- (2) Essential treatment units shall be provided in duplicate if proper operation of the treatment unit is essential to the operation of the closed-loop recycle system and the operation cannot safely or efficiently be immediately stopped or altered to operate without the closed-loop recycle system.
- (3) An automatically activated standby power source, system shutdown, or other means shall be employed to prevent improperly treated wastewater from entering a treated waste water storage structure or from being recycled if loss of power would create an unsafe condition.
- (4) If they are suitable for reuse, residues recovered during the treatment process may be recycled through the processes that generated the wastewater rather than disposed of as a waste.
- (5) A water tight seal on all treatment and storage units or two feet of protection from the 100-year flood elevation shall be provided.
- (6) Storage units in a closed-loop recycle system shall be designed to contain the accumulation of water from a 25-year, 24-hour storm event

- with 1 foot freeboard, unless the system is protected from rainfall and runoff.
- (7) The bottoms of earthen impoundments, trenches or other similar excavations shall be at least four feet above the bedrock surface, except that the bottom of excavations that are less than four feet above bedrock shall have a liner with a hydraulic conductivity no greater than 1×10^{-7} centimeters per second. Liner thickness shall be that thickness necessary to achieve a leakage rate consistent with the sensitivity of classified groundwaters. Liner requirements may be reduced if the Applicant demonstrates through predictive calculations or modeling methods that construction and use of these treatment and disposal units will not result in contravention of surface water or groundwater standards.
- (8) Treatment works and disposal systems using earthen basins, lagoons, ponds or trenches, excluding holding ponds containing non-industrial treated effluent prior to irrigation, for treatment, storage or disposal shall have either a liner of natural material at least one foot in thickness and having a hydraulic conductivity of no greater than 1×10^{-6} centimeters per second when compacted, or a synthetic liner of sufficient thickness to exhibit structural integrity and an effective hydraulic conductivity no greater than that of the natural material liner.

- (5) The reclaimed water generator shall develop and maintain a routine review and inspection program for all uses of reclaimed water on property not owned by the generator;
- (6) The compliance boundary and the review boundary for groundwater are established at the irrigation area boundaries. No deed restrictions or easements shall be required to be filed on adjacent properties. Land application of effluent shall be on property controlled by the generator unless an easement is provided in accordance with ~~15A NCAC 02L .0107~~ 15A NCAC 02L .0107, except in cases where a compliance boundary is not established; and
- (7) Reclaimed water irrigated on designed soil matrix, such as artificial or natural turf athletic fields with subsurface drainage shall meet the following conditions:
 - (A) Annual hydraulic loading and maximum precipitation rates shall be designed to irrigate a volume not to exceed the design water capacity of the designed soil matrix above the drainage system; and
 - (B) Outlets of the drainage system shall not be allowed to discharge directly to surface waters (intermittent or perennial) or to storm water conveyance systems that do not allow for infiltration prior to discharging to surface waters.

Authority G.S. 143-215.1; 143-215.3(a).

SECTION .0500 - GENERAL UTILIZATION REQUIREMENTS

15A NCAC 02U .0501 RECLAIMED WATER UTILIZATION (SEE S.L. 2011-48)

(a) Reclaimed water utilized in a manner that includes application to the land surface shall meet the following criteria:

- (1) The reclaimed water shall meet requirements for Type 1 reclaimed water in Rule .0301(b) of this Subchapter;
- (2) Notification shall be provided by the Permittee ~~permittee~~ or its representative to inform the public and employees of the use of reclaimed water (~~Non Potable Water~~) and that the reclaimed water is not intended for drinking. Notification material shall be provided to employees in a language they understand;
- (3) The reclaimed water generator shall develop and maintain a record keeping program for distribution of reclaimed water;
- (4) The reclaimed water generator shall develop and maintain an education and approval program for all use of reclaimed water. Educational material shall be provided to employees in a language they understand;

(b) ~~Reclaimed water used for activities other than land application (such as industrial and commercial uses)~~ industrial and commercial uses shall meet the criteria below:

- (1) The reclaimed water shall meet requirements for Type 1 reclaimed water;
- (2) Notification shall be provided by the Permittee ~~permittee~~ or its representative to inform the public and employees of the use of reclaimed water (~~Non Potable Water~~) and that the reclaimed water is not intended for drinking, and notification material shall be provided to employees in a language they understand;
- (3) The reclaimed water generator shall develop and maintain an education and approval program for all reclaimed water users, and educational material shall be provided to employees in a language they understand;
- (4) The reclaimed water generator shall develop and maintain a record keeping program for distribution of reclaimed water;
- (5) The reclaimed water generator shall develop and maintain a routine review and inspection program for all reclaimed water users; and
- (6) Reclaimed water used for activities other than land application shall not be used in a manner that causes exposure to aerosols.

~~(c) Reclaimed water used in commercial or industrial facilities for the purposes of urinal and toilet flushing or fire protection in~~

~~sprinkler systems shall be approved by the Director if the applicant can demonstrate to the Division that public health and the environment will be protected.~~

~~(d)(c) Reclaimed water shall not be used for swimming pools, hot-tubs, spas or similar uses.~~

~~(e) Reclaimed water shall not be used for direct reuse as a raw potable water supply.~~

Authority G.S. 143-215.1; 143-215.3(a).

SECTION .0600 - BULK DISTRIBUTION OF RECLAIMED WATER

Any private or public water supply source	feet
Surface waters (streams – intermittent and perennial, perennial waterbodies, and wetlands)	100
Any well with exception of monitoring wells	50
Any property line for facilities constructed on or after June 18, 2011	100
<u>Any property line for facilities constructed prior to June 18, 2011</u>	50
	<u>0</u>

Otherwise storage facilities shall meet the provisions of Paragraph (a) of this Rule.

(c) The setbacks for utilization areas where reclaimed water is discharged to the ground shall be as follows:

Surface waters (streams – intermittent and perennial, perennial waterbodies, and wetlands) not classified SA	feet
<u>Surface waters (streams – intermittent and perennial, perennial waterbodies, and wetlands) not classified SA, provided that the reclaimed water to be utilized contains no more than 10 mg/L of Total Nitrogen and no more than 2 mg/L of Total Phosphorus in addition to applicable requirements of Section .0300 of this Subchapter</u>	25
Surface waters (streams – intermittent and perennial, perennial waterbodies, and wetlands) classified SA	<u>0</u>
Any well with exception to monitoring wells	100
	100

(d) No setback between the application area and property lines is required.

(e) Setbacks between reclaimed water storage ponds and property lines or wells under separate ownership may be waived by the adjoining property owner. A copy of the signed waiver shall be provided to the Department.

(f) Setbacks between reclaimed water storage ponds and wells under the same ownership as the reclaimed water storage pond may be waived by the property owner.

(g) Setback waivers, other than those allowed in Paragraphs (e) and (f) of this Rule, shall be written, notarized, signed by all parties involved and recorded with the County Register of Deeds. Setback waivers involving the compliance boundary shall be in accordance with 15A NCAC 02L .0107.

(h) Setbacks to property lines established in Paragraph (b) of this Rule shall not be applicable when the Permittee, or the entity from which the Permittee is leasing, owns both parcels creating said property line.

(f) Habitable residences or places of public assembly under separate ownership constructed after the non-discharge facilities were originally permitted or subsequently modified, are exempt from the setback requirements in Paragraph (a) of this Rule.

Authority G.S. 143-215.1; 143-215.3(a).

15A NCAC 02U .0601 BULK DISTRIBUTION OF RECLAIMED WATER (READOPTED WITHOUT SUBSTANTIVE CHANGES)

SECTION .0700 - SETBACKS

15A NCAC 02U .0701 SETBACKS

(a) Treatment and storage facilities associated with systems permitted under this Subchapter shall adhere to the setback requirements in 15A NCAC 02T ~~.0500~~ .0500, except as provided in this Rule.

(b) Final effluent storage facilities shall meet all setback requirements for riparian buffer rules pursuant to 15A NCAC ~~02B~~ 02B, as well as the following setbacks:

feet
100

50
100

50
0

feet

25

0

100

100

SECTION .0800 – OPERATIONAL PRACTICES (PLANS)

15A NCAC 02U .0801 OPERATION AND MAINTENANCE PLAN

(a) An Operation and Maintenance Plan shall be maintained by the Permittee ~~permittee~~ for all reclaimed water ~~systems~~ generators and closed-loop recycle systems. The plan shall:

- (1) describe the operation of the system in sufficient detail to show what operations are necessary for the system to function and by whom the functions ~~operations~~ are to be conducted;
- (2) include a sampling and monitoring plan to evaluate quality of reclaimed water within the distribution system to provide quality assurance at the time of reuse, and specify actions to be taken in response to unsatisfactory monitoring results;
- (3) provide a map of all reclaimed water distribution lines and record drawings of all reclaimed water utilization systems under the Permittee's ~~permittee's~~ control;
- (4) describe anticipated maintenance of the system;

- (5) include provisions for safety ~~measures~~ measures, including restriction of access to the site and equipment, as required in this Subchapter; and
- (6) include spill control ~~provisions~~ provisions, including:
 - ~~(a)(A)~~ response to upsets and ~~bypasses~~ bypasses, including control, containment, and remediation; and
 - ~~(b)(B)~~ contact information for plant personnel, emergency responders, and regulatory agencies.

(b) Irrigation areas shall have a year-round vegetative cover.

(c) Irrigation shall not result in ponding or runoff of treated effluent.

(d) Irrigation and metering equipment shall be tested and calibrated annually, or as established by permit.

(e) Automobiles and heavy machinery shall not be allowed on the irrigation area, except during installation or maintenance activities.

(f) Water level gauges shall be provided for all open-atmosphere treatment lagoons and ponds, and open-atmosphere storage units.

(g) Vegetative cover shall be maintained on all earthen embankments.

(h) The Permittee shall keep a log of maintenance activities that occur at the facility.

(i) The Permittee shall perform inspections and maintenance to ensure proper operation of the facility.

Authority G.S. 143-215.1; 143-215.3(a).

15A NCAC 02U .0802 RESIDUALS MANAGEMENT PLAN

(a) A Residuals Management Plan shall be maintained for all reclaimed water and closed-loop recycle systems that generate residuals. The plan shall include the following:

- (1) an explanation as to how the residuals will be collected, handled, processed, stored and disposed;
- (2) an evaluation of the residuals storage requirements for the treatment ~~facility~~ facility, based upon the maximum anticipated residuals production rate and the ability to remove residuals;
- (3) a permit for residuals ~~disposal or utilization~~, utilization or a written commitment to the Permittee of a Department-approved Department-approved residuals ~~disposal/utilization~~ disposal or utilization program accepting the residuals ~~which that~~ demonstrates that the approved program has adequate capacity to accept the ~~residuals~~, residuals or that an application for approval has been submitted; and
- (4) if oil, grease, grit, or screenings removal and collection is a designed unit process, an explanation as to how ~~the oil/grease these~~ materials will be collected, handled, processed, stored and disposed.

(b) The Permittee shall maintain a record of all residuals removed from the facility.

Authority G.S. 143-215.1; 143-215.3(a).

SECTION .0900 - LOCAL PROGRAM APPROVAL

15A NCAC 02U .0901 LOCAL PROGRAM APPROVAL

(a) Municipalities, counties, local boards or commissions, water and sewer authorities, or groups of municipalities and counties may apply to the Division for approval of programs for permitting construction, modification, and operation of reclaimed water distribution lines and permitting users under their authority, unless prohibited by other rules in this Subchapter. Construction of and modifications to treatment works, including pump stations for reclaimed water distribution, require Division approval. Permits issued by approved local programs shall serve in place of permits issued by the Division. Local program approval shall not be granted for ~~non-conjunctive~~ dedicated reclaimed water ~~systems.~~ uses.

(b) Applications. Applications for approval of local programs shall provide ~~adequate~~ information to assure compliance with the requirements of this Subchapter and the following:

- (1) Include two copies of the permit application forms, intended ~~permits~~ permits, including types of uses, ~~minimum design criteria~~ criteria, ~~(specifications)~~, flow chart of permitting, inspection and certification procedures, and other relevant documents to be used in administering the local program; and
- (2) Certification that the local authority has procedures in place for processing permit applications, setting permit requirements, enforcement, and penalties that are compatible with those for permits issued by the Division.

(c) Any amendments to the requirements of this Subchapter shall be incorporated into the local program within 60 days of the effective date of the amendments.

(d) If required by G.S. 89C, a North Carolina registered Professional Engineer shall be on the staff of the local program or retained as a consultant to review unusual situations or designs and to answer questions that arise in the review of proposed projects. The local program shall also provide staff or retain a consultant to review all other non-engineering related program areas.

(e) Each project permitted by the local program shall be inspected for compliance with the requirements of the local program at least once during construction.

(f) Approval of Local Programs. The Division staff shall acknowledge receipt of an application for a local ~~program~~ program, ~~in writing~~, review the application, notify the ~~Applicant~~ applicant of additional information that may be required, and make a recommendation to the Commission on the acceptability of the proposed local program.

(g) All permitting actions, ~~bypasses from distribution lines~~, enforcement actions, and monitoring of the distribution system shall be summarized and submitted to the Division ~~at a minimum~~ on an annual basis on Division-approved forms ~~provided by the Division~~. The report shall also provide a listing and summary of

all enforcement actions taken or pending during the year. The report shall be submitted within 30 days after the end of each year.

(h) ~~A copy of all program documents such as specifications, permit applications, permit shells and shell certification forms shall be submitted to the Division on an annual basis along with a summary of any other program changes. A summary of any program changes shall be submitted to the Division on an annual basis.~~ Program changes to note include staffing, processing fees, and ordinance revisions.

(i) Modification of a Local Program. After a local program has been approved by the Commission, any modification of the program procedures or requirements specified in this Rule shall be approved by the Director to assure that the procedures and requirements remain at least as stringent as the state-wide requirements in this Subchapter.

(j) Appeal of Local Decisions. Appeal of individual permit denials or issuance with conditions the permit ~~Applicant~~ ~~applicant~~ finds unacceptable shall be made according to the approved local ordinance. The Commission shall not consider individual permit denials or issuance with conditions to which a ~~Permittee~~ ~~permittee~~ objects. This Paragraph does not alter the enforcement authority of the Commission as specified in G.S. 143-215.1(f).

Authority G.S. 143-215.1; 143-215.1(f); 143-215.3(a).

SECTION .1100 - WETLANDS AUGMENTATION

15A NCAC 02U .1101 WETLANDS AUGMENTATION

(a) Wetland augmentation shall be limited as follows:

- (1) Wetland augmentation shall be limited to pine flat and hardwood flat wetlands as defined in the most current version of the N.C. Wetland Assessment Method (NC WAM) User Manual developed by the N.C. Wetland Functional Assessment Team (NC WFAT), excluding riparian zones. ~~The NC WAM User Manual can be accessed at the following web address: <http://portal.ncdenr.org/web/wq/swp/ws/pdu/nwam>; zones;~~
- (2) Reclaimed water discharge to Salt Water Wetlands (SWL) or Unique Wet Lands (UWL), as defined in 15A NCAC 02B .0101, is not permitted under the rules in this Subchapter; and
- (3) Reclaimed water discharge to wetlands areas shall be limited to times when the depth to groundwater is greater than or equal to one foot.

(b) In addition to the requirements established in Rule .0201 or Rule .0202 of this ~~Subchapter~~ ~~Subchapter~~, as applicable, all new and expanding wetlands augmentation ~~facilities~~, facilities as applicable, shall:

- (1) Identify the classification of the existing wetlands according to the most current version of the N.C. Wetlands Assessment Method (NC WAM) User Manual and information provided by the North Carolina Natural Heritage Program (NC NHP);
- (2) Identify the existing beneficial uses of the reclaimed water to the wetlands in accordance

- (3) with 15A NCAC 02B .0231, and support any demonstration of net environmental benefit;
- (3) Determine the hydrologic regime of the wetlands, including depth and duration of inundation, and average monthly water level fluctuations. An estimated monthly water budget shall be provided by the Applicant ~~applicant~~ and compared to actual conditions during operation;
- (4) Identify class of reclaimed water to be discharged, associated parameter concentrations, and annual loading rates to the wetlands;
- (5) Determine whether the wetland occurs in a ground water recharge or discharge area;
- (6) Provide baseline monitoring information for wetlands sufficient to allow determination of reference conditions, to be performed for at least one representative year prior to initiation of discharge;
- (7) Provide a project evaluation and receiver site agronomic plan that includes a hydraulic loading recommendation based on the soils report, hydrogeologic description, agronomic investigation, wetland type, local topography, aquatic life, wildlife, and all other investigative results to support that there will be no negative effects on the uses of the ~~wetlands~~, wetlands including the biological criteria and net environmental benefits will be gained. Hydraulic loading recommendations shall reflect seasonal changes to ~~wetlands~~ wetlands, including restrictions during times of high water table levels;
- (8) For ~~non-conjunctive~~ dedicated wetlands augmentation systems, provide 200 percent of the land requirements based on the recommended hydraulic loading rate. After five years of operation the Permittee may request and receive a reduction in the additional land requirement ~~provided that if~~ operational data supports that sufficient utilization capacity exists for the reclaimed water generator;
- (9) 10 percent of the land requirements shall remain in a natural state to be used as a basis of comparison to the wetlands receiving reclaimed water;
- (10) For application of reclaimed water exhibiting parameter concentrations greater than 100 percent of the groundwater standards, provide a site-specific hydrogeologic investigation (i.e., evaluation of wetlands/groundwater interaction, groundwater recharge/discharge, gradient, project proximity to water supply wells) to show that hydrogeologic conditions are adequate to prevent degradation of groundwater quality and demonstrate through hydrogeological modeling that groundwater

- standards will not be exceeded at the compliance boundary; and
- (11) Provide documentation that any applicable NPDES program requirements have been met, pursuant to 15A NCAC 02H .0100.
- (c) All renewal applications for wetlands augmentation facilities, shall submit documentation that the project continues to function as designed and that the net environmental benefit aspects remain applicable.
- (d) Reclaimed water utilized for wetlands augmentation shall meet the following reclaimed water effluent standards:
- (1) Reclaimed water discharged to natural wetlands shall be treated to Type 1 reclaimed water standards;
 - (2) In addition to water quality requirements associated with Type 1 reclaimed water, reclaimed water discharged to wetlands shall not exceed the following concentrations, unless net environmental benefits are provided:
 - (A) Total Nitrogen (as Nitrogen) of 4.0 ~~mg/l; mg/L;~~ and
 - (B) Total Phosphorus (as Phosphorus) of 1 ~~mg/l; mg/L;~~
 - (3) Metal concentrations in reclaimed water discharged to wetlands shall not exceed North Carolina surface water quality standards, unless acute whole effluent toxicity testing demonstrates absence of toxicity.
- (e) Reclaimed water facilities utilizing wetlands augmentation, shall meet the criteria below:
- (1) Notification shall be provided by the Permittee ~~permittée~~ or its representative to inform the public of the use of reclaimed water (~~Non Potable Water~~) and that the reclaimed water is not intended for drinking;
 - (2) The reclaimed water generator shall develop and maintain a wetlands monitoring program. This monitoring will be conducted during the first five growing seasons after initiation of the application of reclaimed water, after which the Applicant ~~applicant~~ may apply for ~~and receive~~ reduced monitoring. The monitoring requirements ~~must~~ shall include the following items:
 - (A) vegetation, macroinvertebrates, amphibians, fish, birds, and threatened or endangered species surveys;
 - (B) water chemistry;
 - (C) surface water and ground water depth readings; and
 - (D) groundwater monitoring plan except for those projects receiving reclaimed water characterized by average annual parameter concentrations less than or equal to 50 percent of ground water quality criteria, and less than 50 percent of required surface water discharge concentrations;

- (3) The reclaimed water generator shall develop and maintain an education program for all users of reclaimed water on property not owned by the generator;
 - (4) The reclaimed water generator shall develop and maintain a routine review and inspection program for the wetlands augmentation system; and
 - (5) The compliance boundary and the review boundary for groundwater shall be established at the property line. No deed restrictions or easements are required to be filed on adjacent properties. Land application of reclaimed water shall be on property controlled by the generator unless a contractual agreement is provided in accordance with ~~15A NCAC 02L .0107~~ 15A NCAC 02L .0107, except ~~when in cases where~~ a compliance boundary is not established.
- (f) Permitting of wetlands augmentation uses shall not be delegated to local programs.

Authority G.S. 143-215.1; 143-215.3(a); S.L. 2006-250.

SECTION .1400 - IRRIGATION TO FOOD CHAIN CROPS

15A NCAC 02U .1401 IRRIGATION TO FOOD CHAIN CROPS

- (a) Irrigation to food chain crops shall be limited as follows:
- (1) Reclaimed water utilized for direct or indirect contact irrigation of food chain crops that will be peeled, skinned, cooked or thermally processed before consumption shall be treated to Type 1 reclaimed water standards;
 - (2) For the purposes of this Rule, tobacco is not considered a food chain crop;
 - (3) Reclaimed water shall not be utilized for direct contact irrigation of food chain crops that will not be peeled, skinned, cooked or thermally processed before consumption except as approved in Subparagraph (5) of this Paragraph;
 - (4) Reclaimed water utilized for indirect contact irrigation of food chain crops that will not be peeled, skinned, cooked or thermally processed before consumption shall be treated to Type 2 reclaimed water standards; and
 - (5) If requested, the Department shall authorize demonstration projects to collect and present data related to the direct application of reclaimed water on crops that are not peeled, skinned, cooked, or thermally processed before consumption. Crops produced during such demonstration projects may be used as animal feed or may be thermally processed, cooked, or otherwise prepared for human consumption in a manner approved by the North Carolina Department of Agriculture and Consumer Services. If the Applicant, ~~applicant~~, based on

the data collected, demonstrates to the Department that public health will be protected if their reclaimed water is directly applied to crops which that are not peeled, skinned, cooked, or thermally processed, the Department shall waive the prohibition described in Subparagraph (3) of this Paragraph for that project. When considering such demonstration projects, the Department shall seek the advice of the North Carolina Department of Agriculture and Consumer Services.

(b) In addition to the requirements established in Rule .0201 or Rule .0202 of this Subchapter ~~Subchapter~~, as applicable, all new and expanding irrigation to food chain crops systems shall submit a ~~representative soil analysis for standard soil fertility~~ Standard Soil Fertility Analysis for each field to be irrigated. A The Standard Soil Fertility Analysis shall include the following parameters:

- (1) Acidity;
- (2) Base Saturation (by calculation);
- (3) Calcium;
- (4) Cation Exchange Capacity;
- (5) Copper;
- (6) Exchangeable Sodium Percentage (by calculation);
- (7) Magnesium;
- (8) Manganese;
- (9) Percent Humic Matter;
- (10) pH;
- (11) Phosphorus;
- (12) Potassium;
- (13) Sodium; and
- (14) Zinc.

(c) When a water balance is required by Rule .0202(k) of this Subchapter ~~Subchapter~~, the water balance shall include seasonal water requirements for the crops.

(d) For irrigation sites not owned by the Permittee, ~~permittee~~, a ~~notarized~~ land owner agreement shall be provided to the Division. The land owner agreement shall include the following:

- (1) a description of the approved uses and conditions for use of the reclaimed water consistent with the requirements of this Rule;
- (2) a condition requiring the reclaimed water supplier shall provide the landowner with the results of sampling performed to document compliance with the reclaimed water effluent standards; and
- (3) a condition requiring the landowner to report to the Permittee ~~permittee~~ any use of the reclaimed water inconsistent with the uses in the agreement.

(e) All renewal Applicants ~~applicants~~ for dedicated irrigation to food chain crop systems shall submit:

- (1) A ~~representative soil analysis for standard soil fertility~~ Standard Soil Fertility Analysis for each field to be irrigated. A Standard Soil Fertility Analysis shall include the following parameters:
 - (A) Acidity;

- (B) Base Saturation (by calculation);
- (C) Calcium;
- (D) Cation Exchange Capacity;
- (E) Copper;
- (F) Exchangeable Sodium Percentage (by calculation);
- (G) Magnesium;
- (H) Manganese;
- (I) Percent Humic Matter;
- (J) pH;
- (K) Phosphorus;
- (L) Potassium;
- (M) Sodium; and
- (N) Zinc;

(2) The inventory of commercial agricultural operations using reclaimed water to irrigate food chain crops required in Subparagraph (d)(7) of this Rule; and

(3) For irrigation sites not owned by the Permittee, ~~permittee~~, a ~~notarized~~ land owner agreement pursuant to Paragraph (d) of this Rule.

(f) Reclaimed water facilities providing reclaimed water for the irrigation of food chain crops shall meet the criteria below:

- (1) Crops irrigated by direct contact with reclaimed water shall not be harvested within 24 hours of irrigation with reclaimed water;
- (2) Notification at the utilization site shall be provided by the Permittee ~~permittee~~ or its representative to inform the public of the use of reclaimed water (~~Non-Potable Water~~) and that the reclaimed water is not intended for drinking;
- (3) The reclaimed water generator shall develop and maintain a record keeping program for distribution of reclaimed water;
- (4) The Permittee ~~permittee~~ shall develop and maintain an education program for users of reclaimed water for irrigation to food chain crops;
- (5) The reclaimed water generator shall provide all landowners receiving reclaimed water for irrigation of food chain crops a summary of all reclaimed water system performance as required in G.S. 143-215.1C;
- (6) The reclaimed water generator shall develop and maintain a routine review and inspection program for all irrigation to food chain crop systems; and
- (7) The Permittee ~~permittee~~ shall maintain an inventory of commercial agricultural operations using reclaimed water to irrigate food chain crops for each year of operation. The inventory shall be maintained for five years. The inventory of food chain crop irrigation shall include the following:

- (A) name of the agricultural operation;
- (B) name and telephone number of the owner or operator of the agricultural operation;

- (C) address of the agricultural operation;
- (D) food chain crops irrigated with reclaimed water;
- (E) type of application (~~e.g., irrigation~~) method used; and
- (F) approximate irrigation area where under irrigation on which food chain crops are grown.

Commission, please call a Commission staff attorney at 919-431-3000.

Fiscal impact (check all that apply).

- State funds affected
- Environmental permitting of DOT affected Analysis submitted to Board of Transportation
- Local funds affected
- Substantial economic impact (≥\$1,000,000)
- Approved by OSBM
- No fiscal note required by G.S. 150B-21.4
- No fiscal note required by G.S. 150B-21.3A(d)(2)

Authority G.S. 143-215.1; 143-215.3(a); S.L. 2006-250.

TITLE 19A – DEPARTMENT OF TRANSPORTATION

Notice is hereby given in accordance with G.S. 150B-21.2 and G.S. 150B-21.3A(c)(2)g. that the Department of Transportation intends to readopt with substantive changes the rules cited as 19A NCAC 06D .0203.

Link to agency website pursuant to G.S. 150B-19.1(c): <https://www.ncdot.gov/about/regulations/rules/>

Proposed Effective Date: January 1, 2018

Public Hearing:

Date: Monday, October 16, 2017

Time: 3:00 p.m.

Location: Transportation Mobility and Safety Conference Room 161, 750 Greenfield Parkway, Garner, NC 27529

Reason for Proposed Action: Pursuant to G.S. 150B-21.3A, Periodic Review and Expiration of Existing Rules, all rules are reviewed at least every 10 years or they shall expire. As a result of the periodic review of Subchapter 19A NCAC 06C, this rule was determined as "Necessary With Substantive Public Interest" thus necessitating readoption. Upon review for the readoption process, the agency deemed the rule to be unnecessary and is recommending repeal.

Comments may be submitted to: Helen Landi, 1501 Mail Service Center, Raleigh, NC 27699-1501; email hlandi@ndot.gov

Comment period ends: November 14, 2017

Procedure for Subjecting a Proposed Rule to Legislative Review:

If an objection is not resolved prior to the adoption of the rule, a person may also submit written objections to the Rules Review Commission after the adoption of the Rule. If the Rules Review Commission receives written and signed objections after the adoption of the Rule in accordance with G.S. 150B-21.3(b2) from 10 or more persons clearly requesting review by the legislature and the Rules Review Commission approves the rule, the rule will become effective as provided in G.S. 150B-21.3(b1). The Commission will receive written objections until 5:00 p.m. on the day following the day the Commission approves the rule. The Commission will receive those objections by mail, delivery service, hand delivery, or facsimile transmission. If you have any further questions concerning the submission of objections to the

CHAPTER 06 – TRANSIT, RAIL, AND AVIATION

SUBCHAPTER 06D - BICYCLE AND BIKEWAY PROGRAM

SECTION .0200 - BOARD POLICY RELATING TO BIKEWAYS

19A NCAC 06D .0203 DESIGNING FOR BICYCLES AND BIKEWAYS

~~Bicycle transportation facilities shall be designed in conjunction with state and federal highway projects, consistent with the following guidelines:~~

- (1) ~~New bridges, grade separated interchanges, tunnels, and viaducts are to be designed to give safe access to bicycles.~~
- (2) ~~All improvements to bridges, grade separated interchanges, tunnels, and viaducts are to be designed to give safe access to bicycles where feasible.~~
- (3) ~~Secondary bicycle facilities shall be designed to be within highway rights-of-way.~~
- (4) ~~Paved shoulders shall be designed in a manner which will accommodate bicycle traffic.~~

Authority G.S. 136-71.10; 136-71.11; 143B-350(f).

TITLE 21 – OCCUPATIONAL LICENSING BOARDS AND COMMISSIONS

CHAPTER 06 – BOARD OF BARBER EXAMINERS

Notice is hereby given in accordance with G.S. 150B-21.2 that the Board of Barber Examiners intends to amend the rules cited as 21 NCAC 06F .0102 and 06L .0116.

Link to agency website pursuant to G.S. 150B-19.1(c): <https://www.ncbarbers.com/news.html>

Proposed Effective Date: January 1, 2018

Public Hearing:

Date: October 4, 2017

Time: 10:00 a.m.

Location: 5809 Departure Drive, Suite 102, Raleigh, NC 27616

Regulatory Impact Analysis

Rule Citation Number: 15A NCAC 02T, Sections .0100, 0500, 0600, 0700, 0800, 1000, 1100 and 1200

Rule Topic: Revision of Rules 02T

DEQ Division: Division of Water Resources (DWR)

Staff Contact: Nathaniel Thornburg, Supervisor Non-Discharge Permitting, DWR
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Jucilene Hoffmann: Economist II, Classification & Standards, DWR
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(919) 707-9016

Impact Summary: State government: No
Local government: No
Private entities: No
Substantial Impact: No
Federal government: No

Necessity: N.C. Gen. Stat. §150B-21.3A requires state agencies to review existing rules every 10 years, determine which rules are still necessary, and either re-adopt or repeal each rule as appropriate. The proposed rulemaking satisfies these requirements for a portion of the Department's rules.

1. Summary

The Division of Water Resources reviewed its General Requirements for Non-Discharge rules in accordance with G.S. §150B-21.3A and proposes to re-adopt all the rules.

The Division identified necessary technical changes in some rules, including:

- Correction of agency names and addresses;
- Correction of cross-references and other regulatory citations;
- Correction of spelling and typographical errors;
- Topographical correction;
- Minor clarifications; and
- Removal or modification of provisions superseded by statutes.

The Branch anticipates that those technical changes are not going to have major impact on those rules. Some of the language removed or added have the intend to reduce burden to the applicants; some of the language review has the intend to be in accordance with current General Statutes and Rules. While some of those revisions could have a positive economic impact to some of the applicants, those impacts are not monetarily quantifiable here. Then, no new

economic & environmental impacts or environmental & economic benefits are anticipated to result from these proposed rule changes.

2. Background

G.S. §150B-21.3A requires the Department to evaluate each of its existing rules and make an initial determination as to whether the rules are:

1. Necessary with substantive public interest – the agency has received public comment on the rule within the past two years or the rule affects the property interest of the regulated public, and the agency knows or suspects that any person may object to the rule.
2. Necessary without substantive public interest – the agency determines that the rule is needed, and the rule has not had public comment in the last two years. This category includes rules that identify information that is readily available to the public, such as an address or telephone number.
3. Unnecessary – the agency determines that the rule is obsolete, redundant or otherwise not needed.

The Department must then determine which rules are still necessary and propose to re-adopt, with or without modifications, or to repeal each rule as appropriate.

The Division categorized all but one of the subject rules as ‘Necessary with substantive public interest’. The Rules Review Commission reviewed and approved these determinations, as did the General Assembly’s Joint Legislative of Administrative Procedure Oversight Committee (JLAPO), and the Review Process was completed in December 2014.

The Division prepared draft rules and solicited input on the proposed actions from stakeholders in an outreach meeting on April 2015 and April 2017. The meeting gave the stakeholders the opportunity to review the Division’s draft rules and an opportunity to submit comments on the proposed rules. The draft rules were posted on the Division’s webpage at least 30 days prior to this meeting. Stakeholders voiced and submitted comments to the Division on/before the meeting.

3. Economic Impact Analysis

The following tables briefly describe the proposed rule changes and summarize the anticipated impact of each.

3.1: Subchapter 02T – Wastes Not Discharged to Surface Waters

a. Section .0100 – General Requirements for Non-Discharge

Rule	Proposed Change	Source of Change	Economic Impact	Environment Impact
15A NCAC 02T .0101 Purpose	NONE	Staff Review	None	None
15A NCAN 02T .0102 Scope	Removed language indicating that rules apply to wastes discharged below the surface and added language better defining stormwater systems applicable to referenced administrative code.	Staff Review	None	None
15A NCAC 02T .0103	Remove and replace reference.	Staff review	None	None

Definitions				
15A NCAC 02T .0104 Activities Which Require a Permit	Deleted rule because it is covered under General Statutes.	Staff review	None	None
15A NCAC 02T .0105 General Requirements	Technical changes and added language to reduce burden on applicants.	Staff review	None	None
15A NCAC 02T .0106 Submission of Permit Applications	NONE	Staff review	None	None
15A NCAC 02T .0107 Staff Review and Permit Preparation	Deleted by mail requirement.	Staff review	None	None
15A NCAC 02T .0108 Final Action on Permit Applications to the Division	Language clarification, reduce burden for permits to be issued to the maximum time allowed by statute.	Staff review	None	None
15A NCAC 02T .0109 Permit Renewals	NONE	Staff review	None	None
15A NCAC 02T .0110 Modification and Revocation of Permits	Added language.	Staff review	None	None
15A NCAC 02T .0111 Conditions for Issuing General Permits	Removed language that is already covered and made technical corrections.	Staff review	None	None
15A NCAC 02T .0112 Delegation of Authority	Made technical corrections	Staff review	None	None
15A NCAC 02T .0113 Permitting by Regulation	Technical corrections, added language that provide permitting alternative for low risk wastewater.	Staff review	None	None
15A NCAC 02T .0114 Wastewater Design Flow Rates	Technical changes, removed reference, removed unclear language and added a clarification language.	Staff review	None	None
15A NCAC 02T .0115 Operational Agreements	Technical changes.	Staff review	None	None
15A NCAC 02T .0116 Certification of Completion	Language clarification and language added.	Staff review	None	None
15A NCAC 02T .0117 Treatment Facility Operation and Maintenance	Technical change and reference removed.	Staff review	None	None
15A NCAC 02T .0118 Demonstration of Future Wastewater Treatment Capacities	Technical changes.	Staff review	None	None
15A NCAC 02T .0119 Reserved for Future Codification	NONE	Staff review	None	None
15A NCAC 02T .0120 Historical Consideration in Permit Approval	Technical corrections and added requirement that permits for renewing facilities will not be granted if annual fees have not been paid, that is consistent with existing rules.	Staff review	None	None

b. Section .0500 - Waste Water Irrigation Systems

Rule	Proposed Change	Source of Change	Economic Impact	Environment Impact
15A NCAC 02T .0501 Scope	NONE	Staff review	None	None
15A NCAC 02T .0502 Reserved for Future Codification	NONE	Staff review	None	None
15A NCAC 02T .0503 Reserved for Future Codification	NONE	Staff review	None	None
15A NCAC 02T .0504 Application Submittal	Technical corrections, language added to reduce burden for applicants and language added for clarification.	Staff review	None	None
15A NCAC 02T .0505 Design Criteria	Removed expired requirement, and streamlines remaining effluent limit rules; added language for clarification and made technical changes; and removed burden on small facilities where flow measurement is not critical.	Staff review	None	None
15A NCAC 02T .0506 Setbacks	Technical corrections, removed setbacks for swimming pool already covered by public assembly requirement; removed a regulatory and financial burden that requires the permittee to either combine parcels, or record setback waivers (this may lead to a positive impact for the permittee).	Staff review	Positive	None
15A NCAC 02T .0507 Operation and Maintenance	Technical change and added language that is already a current permit requirement.	Staff review	None	None
15A NCAC 02T .0508 Residuals Management	Technical change and added language that is already a current permit requirement.	Staff review	None	None

c. Section .0600 - Single Family Residence Waste Water Irrigation Systems

Rule	Proposed Change	Source of Change	Economic Impact	Environment Impact
15A NCAC 02T .0601 Scope	Clarifying language: single-family systems generating and utilizing reclaimed water must meet reclaimed water rules.	Staff review	None	None
15A NCAC 02T .0602 Reserved for Future Codification	NONE	Staff review	None	None
15A NCAC 02T .0603 Reserved for Future Codification	NONE	Staff review	None	None
15A NCAC 02T .0604 Application Submittal	Technical changes and remove requirement for notarization of the	Staff review	None	None

	Operation and Maintenance Agreement (reduce burden to applicants)			
15A NCAC 02T .0605 Design Criteria	Remove requirement that is currently not being enforced. Proposed language will ensure that system is designed with safety equipment, but leave it up to the owner to utilize the equipment; expand the available options to include disinfection.	Staff review & Public comment	None	None
15A NCAC 02T .0606 Setbacks	Technical corrections, removed setbacks for swimming pool already covered by public assembly requirement; removed a regulatory and financial burden that requires the permittee to either combine parcels, or record setback waivers (this may lead to a positive impact for the permittee).	Staff review	Positive	None
15A NCAC 02T .0607 Connection to Regional System	NONE	Staff review	None	None
15A NCAC 02T .0608 Operation and Maintenance	Added language that is already a current permit requirement.	Staff review	None	None

d. Section .0700 - High-Rate Infiltration Systems

Rule	Proposed Change	Source of Change	Economic Impact	Environment Impact
15A NCAC 02T .0701 Scope	Technical change.	Staff review	None	None
15A NCAC 02T .0702 Definitions	Clarifying language: Combine the separate coastal and non-coastal requirements into one state-wide loading rate.	Staff review	None	None
15A NCAC 02T .0703 Reserved for Future Codification	NONE	Staff review	None	None
15A NCAC 02T .0704 Application Submittal	Technical changes, language clarification and remove permitting burden for wastewater shown to be of low risk or a quality where the evaluation is not required.	Staff review	None	None
15A NCAC 02T .0705 Design Criteria	Updated chemistry terminology; clarify language; proposed language that will ensure that system is designed with safety equipment; exempted facilities with an average daily flow less than 10,000 GPD from installing a flow meter and this way reducing burden on small facilities; added requirement for facilities serving residential communities to provide a minimum of five days of effluent storage (already	Staff review & Public comment	Positive	None

	policy/guidance under 02T.0600 and 02U rule requirements).			
15A NCAC 02T .0706 Setbacks	Made technical corrections; Restructured the entire setback requirement to reflect the three types of infiltration: spray, drip and basin infiltration. It provides the applicant less restrictive setbacks, a clearer setback structure, and remove burdensome policy requirements.	Staff review	Positive	None
15A NCAC 02T .0707 Operation and Maintenance	Added requirement to maintain vegetative cover on the specified infiltration areas and other requirements. Those are already a current permit requirement;	Staff review	None	None
15A NCAC 02T .0708 Residual Management	Added language that is already a current permit requirement (to maintain records of all residuals removed from the facility).	Staff review	None	None

e. Section .0800 -Other Non-discharge Wastewater Systems

Rule	Proposed Change	Source of Change	Economic Impact	Environment Impact
15A NCAC 02T .0801 Scope	NONE	Staff review	None	None
15A NCAC 02T .0804 Application Submittal	NONE	Staff review	None	None
15A NCAC 02T .0805 Design Criteria	NONE	Staff review	None	None
15A NCAC 02T .0806 Setbacks	NONE	Staff review	None	None
15A NCAC 02T .0807 Operation and Maintenance	Added reference.	Staff review	None	None
15A NCAC 02T .0808 Residual Management	Added language and reference.	Staff review	None	None

f. Section .1100 – Residual Management

Rule	Proposed Change	Source of Change	Economic Impact	Environment Impact
15A NCAC 02T .1101 Scope	Technical changes and clarifying language (Clarifies the scope of the rule and limits permitting of wastes as specified in GS 143-215).	Staff review	None	None
15A NCAC 02T .1102 Definitions	Deleted definition for “Bulk residuals, that Simplifies the rules, and allows for residuals to be noted as Class A or Class B.	Staff review	None	None
15A NCAC 02T .1103 Permitting by Regulation	Language review and clarify rules.	Staff review	None	None

15A NCAC 02T .1104 Application Submittal	Technical changes and language review.	Staff review	None	None
15A NCAC 02T .1105 Pollutant Limits	Technical changes, language review, removal of redundant rule and Reduce surface disposal ceiling concentration limits to meet 40 CFR 503 requirement, what might reduce some facilities' requirements.	Staff review	None	None
15A NCAC 02T .1106 Pathogen Reduction Requirements	Technical corrections; language review; and removed unnecessary requirements for industrial wastes free from human pathogens.	Staff review	None	None
15A NCAC 02T .1107 Vector Attraction Reduction Requirements	Technical corrections; language review; and removed unnecessary requirements for industrial wastes free from human pathogens.	Staff review	None	None
15A NCAC 02T .1108 Setbacks	Create paragraphs for Class A and B Setbacks, what clarifies the rules and allows for residuals to be noted as Class A or Class B; updated setback requirement to surface waters to match 40 CFR 503.14, what might impact negatively the environment (water surface); and provided setback waiver allowances for habitable residences. It provides the applicant less restrictive setbacks, a clearer setback structure, and remove burdensome policy requirements.	Staff review	None	None
15A NCAC 02T .1109 Residuals Management Practices	Technical changes and clarify language.	Staff review	None	None
15A NCAC 02T .1110 Operation and Maintenance	Technical changes and added language that are already current permit requirements.	Staff review	None	None
15A NCAC 02T .1111 Monitoring and Reporting	Technical changes and removed reference date.	Staff review	None	None

g. Section .1200 – Coal Combustion Products Management

Rule	Proposed Change	Source of Change	Economic Impact	Environment Impact
15A NCAC 02T .1201 Scope	Removed requirements for structural fill activities, what removes conflict with, SL 2014 - 211 (S729), which established requirements for structural fill activities.	Staff review	None	None
15A NCAC 02T .1202 Definitions	Updated definition for Coal Combustion Residuals (CCR), what is set by Statute.	Staff review	None	None

15A NCAC 02T .1203 Permitting by Regulation	Updated reference, added requirements for land application events less than 12,400.	Staff review	None	None
15A NCAC 02T .1204 Application Requirements	Updated reference, added requirements for land application events less than 12,400 and removed requirements for structural fill activities, what removes conflict with, SL 2014 – 211.	Staff review	None	None
15A NCAC 02T .1205 Pollutant Limits	NONE	Staff review	None	None
15A NCAC 02T .1206 Setbacks	Removed restrictions for “structural fill” type uses. This way, it removes conflict with, SL 2014- 211 (S729) which established requirements structural fill activities.	Staff review	None	None
15A NCAC 02T .1207 Operation and Management Practice	NONE	Staff review	None	None
15A NCAC 02T .1208 Operation and Maintenance Plan	NONE	Staff review	None	None
15A NCAC 02T .1209 Monitoring and Reporting	NONE	Staff review	None	None

3.2 Costs and Benefits Analysis

State Government, Local Government, Private Entities, Federal Government, and the Environment

The proposed revision of Rule 15A NCAC 02T, Sections .0100, 0500, 0600, 0700, 0800, 1000, 1100 and 1200 will not require members of the State Government, Local Government, Private Entities, and Federal Government to deviate from current practices; as such, there will be neither a direct or indirect cost as a result of this proposed rules revision to them. Some of the language removed or added have the intend to reduce burden to the applicants; some of the language review has the intend to be in accordance with current General Statutes and Rules. While some of those revisions could have a positive economic impact to some of the applicants, those impacts are not monetarily quantifiable here. No new adverse environmental impacts or new environmental benefits are anticipated to result from the revised rule.

4. Total Economic Impact

The economic impacts of the proposed amendments, both in terms of cost and benefit, are not monetarily quantifiable as measured from the baseline conditions. Consequently, there were no specific cost or benefit estimations to report in this fiscal analysis.

Regulatory Impact Analysis

Rule Citation Number: 15A NCAC 02T, Sections .0200, 0300 and .0400

Rule Topic: Revision of Rules 02T - Pretreatment, Emergency Response and Collection System Unit (PERCS) rules

DEQ Division: Division of Water Resources

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Impact Summary: State government: No
Local government: No
Private entities: No
Substantial Impact: No
Federal government: No

Necessity: N.C. Gen. Stat. §150B-21.3A requires state agencies to review existing rules every 10 years, determine which rules are still necessary, and either re-adopt or repeal each rule as appropriate. The proposed rulemaking satisfies these requirements for a portion of the Department's rules.

1. Summary

The Division of Water Resources reviewed its Pretreatment, Emergency Response and Collection System Unit (PERCS) rules in accordance with G.S. §150B-21.3A and proposes to re-adopt all the rules.

The Division identified necessary technical changes in some rules, including:

- Correction of agency names and addresses;
- Correction of cross-references and other regulatory citations;
- Correction of spelling and typographical errors;
- Topographical correction;
- Minor clarifications; and
- Removal or modification of provisions superseded by statutes.

The Branch anticipates that those technical changes there are not going to have major impact on those rules. No new economic & environmental impacts or environmental & economic benefits are anticipated to result from these proposed rule changes.

2. Background

G.S. §150B-21.3A requires the Department to evaluate each of its existing rules and make an initial determination as to whether the rules are:

1. Necessary with substantive public interest – the agency has received public comment on the rule within the past two years or the rule affects the property interest of the regulated public, and the agency knows or suspects that any person may object to the rule.
2. Necessary without substantive public interest – the agency determines that the rule is needed, and the rule has not had public comment in the last two years. This category includes rules that identify information that is readily available to the public, such as an address or telephone number.
3. Unnecessary – the agency determines that the rule is obsolete, redundant or otherwise not needed.

The Department must then determine which rules are still necessary and propose to re-adopt, with or without modifications, or to repeal each rule as appropriate.

The Division categorized all but one of the subject rules as ‘Necessary with substantive public interest’. The Rules Review Commission reviewed and approved these determinations, as did the General Assembly’s Joint Legislative of Administrative Procedure Oversight Committee (JLAPO), and the Review Process was completed in December 2014.

The Division prepared draft rules and solicited input on the proposed actions from stakeholders in an outreach meeting on April 7, 2015 and April 2017. The meeting gave the stakeholders the opportunity to review the Division’s draft rules and an opportunity to submit comments on the proposed rules. The draft rules were posted on the Division’s webpage at least 30 days prior to this meeting. Stakeholders voiced and submitted comments to the Division on/before the meeting.

3. Economic Impact Analysis

The following tables briefly describe the proposed rule changes and summarize the anticipated impact of each.

3.1: Subchapter 02b – Wastes Not Discharged to Surface Waters

a. Section .0200 - Wastewater Pump and Haul Systems

Rule	Proposed Change	Source of Change	Economic Impact	Environment Impact
15A NCAC 02T .0201 Scope	NONE	Staff Review	None	None
15A NCAN 02T .0202 Reserved For Future Codification	NONE	Staff Review	None	None
15A NCAC 02T .0203 Permitting by Regulation	Technical correction: Corrected reference to Division of Public Health	Staff review	None	None
15A NCAC 02T .0204 Permitting	Clarified conditions for issuing pump & haul permits for construction delays	Staff review & Public comment	None	None

b. Section .0300 - Sewer Extensions

Rule	Proposed Change	Source of Change	Economic Impact	Environment Impact
15A NCAC 02T .0301 Scope	NONE	Staff review	None	None
15A NCAC 02T .0302 Definitions	Clarification; #5 - added the word "minimum" to design criteria	Staff review	None	None
	Clarification: #9 - deleted "A sewer system may also be referred to as a collection system"	Staff review & Public comment	None	None
15A NCAC 02T .0303 Permitting By Regulation	Added requirement that large flow contributors must obtain DWR approval. Very few large contributors would meet the requirements to be a deemed permitted system so would have to apply for permit anyway. Prevents violations of G.S.143-215.67.	Staff review	None	None
	Clarified flow threshold for deemed permitted criteria for pump stations and force mains. Removes burden for some single family residential units and small commercial businesses from obtaining an individual permit.	Staff review	None	None
	Clarification, added requirements to obtain easements. Has always been necessary to obtain easements to cross another's property.	Staff review	None	None
	Typographical correction: Deleted (i.e. is not part of an alternative sewer system)	Staff review	None	None
15A NCAC 02T .0304 Application Submittal	Clarification: (d) Clarified what sewer extension projects can be permitted through fast track process	Staff review	None	None
	Clarification: [e] deleted unnecessary language. Clarified that an Environmental Impact Statement is required along with the Record of Decision.	Staff review & Public comment	None	None
	(f) deleted as unnecessary	Staff review	None	None
	Clarification: (g) becomes (f) Clarified what sewer extension projects must have a full review	Staff review	None	None
	Ensures compliance with G.S. 143-215.67: (h) becomes (g) Revised to require flow tracking form dated within 12 months of application	Staff review	None	None
15A NCAC 02T .0305 Design Criteria	Clarification: Revised separation requirements to be consistent	Staff review	None	None
	Clarified wetlands separation requirements	Staff review	None	None
	Clarification. Removes burden for some single family residential units and small commercial businesses from	Staff review	None	None

	having to use a duplex pump station or apply for a variance. Revised to allow simplex pump stations at buildings with flow <600 gpd			
	Provides safety against a spill. Revised to require a minimum of 6 hours of wastewater storage	Staff review	None	None
15A NCAC 02T .0306 Local Programs For Sewer Systems	Clarified when a project must still be reviewed by the Division	Staff review	None	None
	Clarified when the Division may cede projects to a local program	Staff review & Public comment	None	None
	Revised reporting requirement from quarterly to annually. Reduces reporting burden on local delegated program.	Staff review & Public comment	None	None

c. Section .0400 -System-Wide Collection System Permitting

Rule	Proposed Change	Source of Change	Economic Impact	Environment Impact
15A NCAC 02T .0401 Scope	NONE	Staff review	None	None
15A NCAC 02T .0402 Definitions	Clarification: Revised definition of collection system to be consistent with .0302	Staff review & Public comment	None	None
15A NCAC 02T .0403 Permitting by Regulation	Consistency with definitions: Revised use of "sewer system" to 'collection system"	Staff review & Public comment	None	None
15A NCAC 02T .0404 Multiple Collection Systems Under A Common Ownership	NONE	Staff review	None	None
15A NCAC 02T .0405 Implementation	Revised to state when a permit application is not due 180 days prior to expiration. Allows Division Director to extend application deadline.	Staff review & Public comment	None	None
	Clarified that individual permit owners are also subject to the rules in 15A NCAC .0400.	Staff review		

3.2 Costs and Benefits Analysis

State Government, Local Government, Private Entities, Federal Government, and the Environment

The proposed revision of Rule 15A NCAC 02T, Sections .0200, 0300 and .0400 will not require members of the State Government, Local Government, Private Entities, and Federal Government to deviate from current practices; as such, there will be neither a direct or indirect cost as a result of this proposed rules revision to them. No new adverse

environmental impacts or new environmental benefits are anticipated to result from the revised rule.

4. Total Economic Impact

The economic impacts of the proposed amendments, both in terms of cost and benefit, are not monetarily quantifiable as measured from the baseline conditions. Consequently, there were no specific cost or benefit estimations to report in this fiscal analysis.

Regulatory Impact Analysis

Rule Citation Number: 15A NCAC 02T, Sections .1300 and .1400

Rule Topic: Revision of Rules 02T - Animal Waste Management and Manure Hauler Operations.

DEQ Division: Division of Water Resources (DWR)

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Impact Summary: State government: No
Local government: No
Private entities: No
Substantial Impact: No
Federal government: No

Necessity: N.C. Gen. Stat. §150B-21.3A requires state agencies to review existing rules every 10 years, determine which rules are still necessary, and either re-adopt or repeal each rule as appropriate. The proposed rulemaking satisfies these requirements for a portion of the Department's rules.

1. Summary

The Division of Water Resources reviewed its Animal Waste Management and Manure Hauler operations rules in accordance with G.S. §150B-21.3A and proposes to re-adopt all the rules.

The Division identified necessary technical changes in some rules, including:

- Correction of agency names and addresses;
- Correction of cross-references and other regulatory citations;
- Correction of spelling and typographical errors;
- Topographical correction;
- Minor clarifications; and
- Removal or modification of provisions superseded by statutes.

The Division proposes to make these technical changes but no substantive changes. No new economic & environmental impacts or benefits are anticipated to result from these proposed rule changes.

2. Background

G.S. §150B-21.3A requires the Department to evaluate each of its existing rules and make an initial determination as to whether the rules are:

1. Necessary with substantive public interest – the agency has received public comment on the rule within the past two years or the rule affects the property interest of the regulated public, and the agency knows or suspects that any person may object to the rule.
2. Necessary without substantive public interest – the agency determines that the rule is needed, and the rule has not had public comment in the last two years. This category includes rules that identify information that is readily available to the public, such as an address or telephone number.
3. Unnecessary – the agency determines that the rule is obsolete, redundant or otherwise not needed.

The Department must then determine which rules are still necessary and propose to re-adopt, with or without modifications, or to repeal each rule as appropriate.

The Division categorized all but one of the subject rules as 'Necessary with substantive public interest'. The Rules Review Commission reviewed and approved these determinations, as did the General Assembly's Joint Legislative of Administrative Procedure Oversight Committee (JLAPO), and the Review Process was completed in December 2014.

The Division prepared draft rules and solicited input on the proposed actions from stakeholders in an outreach meeting on April 7, 2015. The meeting gave the stakeholders the opportunity to review the Division's draft rules and an opportunity to submit comments on the proposed rules. The draft rules were posted on the Division's webpage at least 30 days prior to this meeting. Stakeholders voiced and submitted comments to the Division on/before the meeting.

3. Economic Impact Analysis

The following tables briefly describe the proposed rule changes and summarize the anticipated impact of each.

3.1: Subchapter 02T – Wastes Not Discharged to Surface Waters

a. Section .1300 – Animal Waste Management Systems

Rule	Proposed Change	Source of Change	Economic Impact	Environment Impact
15A NCAC 02T .1301 Scope	NONE	Staff Review	None	None
15A NCAN 02T .1302 Definitions	Updated and clarified definitions.	Staff Review	None	None
15A NCAC 02T .1303 Permitting by Regulation	Added new requirements for to prevent discharge of waste, third party applicator, and setbacks to match all 02T rules.	Staff review	None	None
15A NCAC 02T .1304 State Permitting Requirements	Corrected references, clarified setbacks, and codified a few conditions that have been in the permit for over 10 years.	Staff review & Public comment	None	None
15A NCAC 02T .1305 NPDES Permitting Requirements	Technical Correction. Incorporated federal rule by reference, corrected references, clarified setbacks, and codified a few conditions that have been in the permit for over 10 years.	Staff review & Public comment	None	None
15A NCAC 02T .1306 Closure Requirements	Technical Corrections. Included changes made as required by 2013 HB 74 (SL 2013-423)	Staff review & Public comment	None	None
15A NCAC 02T .1307 State Waste Management System Performance Standards	Clarification to include Statute Requirements and Reference Correction	Staff review & Public comment	None	None
15A NCAC 02T .1308 Evaluation and Approval of Swine Waste Management Systems	NONE	Staff Review	None	None
15A NCAC 02T .1309 Lagoon Conversion Requirements	NONE	Staff Review	None	None
15A Animal Waste Residuals Management	Technical Correction. Rule was added to correct omission – when rules changed from old 02H .0200 rules to the current 02T rules, regulation for animal waste residuals was omitted. Not more restrictive.	Staff review & Public comment	None	None

b. Section .1400 - Manure Hauler Operations

Rule	Proposed Change	Source of Change	Economic Impact	Environment Impact
15A NCAC 02T .1401 Scope	NONE	Staff Review	None	None
15A NCAC 02T .1402 Definitions	NONE	Staff Review	None	None
15A NCAC 02T .1403 Permitting by Regulation	Clarifications. Some modification for consistency and relocation list of records required from 02T .1404.	Staff Review	None	None
15A NCAC 02T .1404 Annual Reports	Technical Correction. Eliminating annual reporting requirement. Required records must still be kept by the hauler.	Staff Review	None	None

3.2 Costs and Benefits Analysis

State Government, Local Government, Private Entities, Federal Government, and the Environment

The proposed revision of Rule 15A NCAC 02T, Sections .1300 and .1400 will not require members of the State Government, Local Government, Private Entities, and Federal Government to deviate from current practices; as such, there will be neither a direct or indirect cost as a result of this proposed rules revision to them. Some of the language removed or added have the intend to reduce burden to the applicants; some of the language review has the intend to be in accordance with current General Statutes and Rules. No new adverse environmental impacts or new environmental benefits are anticipated to result from the revised rule.

4. Total Economic Impact

The economic impacts of the proposed amendments, both in terms of cost and benefit, are not monetarily quantifiable as measured from the baseline conditions. Consequently, there were no specific cost or benefit estimations to report in this fiscal analysis.

Regulatory Impact Analysis

Rule Citation Number: 15A NCAC 02T, Section .1600

Rule Topic: Revision of Rules 15A NCAC 02T .1600 – Groundwater Remediation Systems

DEQ Division: Division of Water Resources

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Impact Summary: State government: No
Local government: No
Private entities: No
Substantial Impact: No
Federal government: No

Necessity: N.C. Gen. Stat. §150B-21.3A requires state agencies to review existing rules every 10 years, determine which rules are still necessary, and either re-adopt or repeal each rule as appropriate. The proposed rulemaking satisfies these requirements for a portion of the Department's rules.

1. Summary

The Division of Water Resources reviewed the Groundwater Remediation rules in accordance with G.S. §150B-21.3A and proposes to re-adopt all the rules.

The Division identified necessary technical changes in some rules, including:

- Correction of regulatory citations.

The Division proposes to make these technical changes but no substantive changes. No new economic & environmental impacts or benefits are anticipated to result from these proposed rule changes.

2. Background

G.S. §150B-21.3A requires the Department to evaluate each of its existing rules and make an initial determination as to whether the rules are:

1. Necessary with substantive public interest – the agency has received public comment on the rule within the past two years or the rule affects the property interest of the regulated public, and the agency knows or suspects that any person may object to the rule.
2. Necessary without substantive public interest – the agency determines that the rule is needed, and the rule has not had public comment in the last two years. This category

includes rules that identify information that is readily available to the public, such as an address or telephone number.

3. Unnecessary – the agency determines that the rule is obsolete, redundant or otherwise not needed.

The Department must then determine which rules are still necessary and propose to re-adopt, with or without modifications, or to repeal each rule as appropriate.

The Division categorized all the subject rules as 'Necessary with substantive public interest'. The Rules Review Commission reviewed and approved these determinations, as did the General Assembly's Joint Legislative of Administrative Procedure Oversight Committee (JLAPO), and the Review Process was completed in December 2014.

The Division prepared draft rules and solicited input on the proposed actions from stakeholders in an outreach meeting on April 19, 2015. The meeting gave the stakeholders the opportunity to review the Division's draft rules and an opportunity to submit comments on the proposed rules. The draft rules were posted on the Division's webpage at least 30 days prior to this meeting. Stakeholders voiced and submitted comments to the Division on/before the meeting.

3. Economic Impact Analysis

The following table briefly describes the proposed rule changes and summarizes the anticipated impact of each.

3.1: Subchapter 02T – Wastes Not Discharged to Surface Waters Section .1600 –Groundwater Remediation Systems

Rule	Proposed Change	Source of Change	Economic Impact	Environment Impact
15A NCAC 02T .1601 Scope	Corrected reference to Underground Injection Control rules 15A NCAC 2C .0200	Staff Review	None	None
15A NCAN 02T .1602 Definitions	NONE	Staff Review	None	None
15A NCAC 02T .1603 Reserved for Future Codification	NONE	Staff review	None	None
15A NCAC 02T .1604 Application Submittal	NONE	Staff review	None	None
15A NCAC 02T .1605 Design Criteria	NONE	Staff review	None	None
15A NCAC 02T .1606 Setbacks	NONE	Staff review	None	None
15A NCAC 02T .1607 Monitoring and Reporting Requirements	NONE	Staff review	None	None
15A NCAC 02T .1608 Requirements for Closure	Corrected reference to Underground Injection Control rules 15A NCAC 2C .0200	Staff review	None	None

3.2 Costs and Benefits Analysis

a. State Government, Local Government, Private Entities, Federal Government, and the Environment

The proposed revision of Rule 15A NCAC 02T .1600 will not require members of the State Government, Local Government, Private Entities, and Federal Government to deviate from current practices; as such, there will be neither a direct or indirect cost as a result of this proposed rules revision to them. As a benefit, the correction of the reference to underground injection will save interested parties time for looking for the right reference. No new adverse environmental impacts or new environmental benefits are anticipated to result from the revised rule.

4. Total Economic Impact

The economic impacts of the proposed amendments, both in terms of cost and benefit, are not monetarily quantifiable as measured from the baseline conditions. Consequently, there were no specific cost or benefit estimations to report in this fiscal analysis.

Regulatory Impact Analysis

Rule Citation Number: 15A NCAC 02U, Sections .0100, 0200, 0300, 0400, 0500, 0600, 0700, 0800, 0900, 1100 and 1400

Rule Topic: Revision of Rules 02U – Reclaimed Water

DEQ Division: Division of Water Resources (DWR)

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Impact Summary: State government: No
Local government: No
Private entities: No
Substantial Impact: No
Federal government: No

Necessity: N.C. Gen. Stat. §150B-21.3A requires state agencies to review existing rules every 10 years, determine which rules are still necessary, and either re-adopt or repeal each rule as appropriate. The proposed rulemaking satisfies these requirements for a portion of the Department's rules.

1. Summary

The Division of Water Resources reviewed its General Requirements for Reclaimed Water rules in accordance with G.S. §150B-21.3A and proposes to re-adopt all the rules.

The Division identified necessary technical changes in some rules, including:

- Correction of agency names and addresses;
- Correction of cross-references and other regulatory citations;
- Correction of spelling and typographical errors;
- Topographical correction;
- Minor clarifications; and
- Removal or modification of provisions superseded by statutes.

The Branch anticipates that those technical changes are not going to have major impact on those rules. Some of the language removed or added have the intend to reduce burden to the applicants; some of the language review has the intend to be in accordance with current General Statutes and Rules. While some of those revisions could have a positive economic impact to some of the applicants, those impacts are not monetarily quantifiable here. Then, no new

economic & environmental impacts or environmental & economic benefits are anticipated to result from these proposed rule changes.

2. Background

G.S. §150B-21.3A requires the Department to evaluate each of its existing rules and make an initial determination as to whether the rules are:

1. Necessary with substantive public interest – the agency has received public comment on the rule within the past two years or the rule affects the property interest of the regulated public, and the agency knows or suspects that any person may object to the rule.
2. Necessary without substantive public interest – the agency determines that the rule is needed, and the rule has not had public comment in the last two years. This category includes rules that identify information that is readily available to the public, such as an address or telephone number.
3. Unnecessary – the agency determines that the rule is obsolete, redundant or otherwise not needed.

The Department must then determine which rules are still necessary and propose to re-adopt, with or without modifications, or to repeal each rule as appropriate.

The Division categorized all but one of the subject rules as ‘Necessary with substantive public interest’. The Rules Review Commission reviewed and approved these determinations, as did the General Assembly’s Joint Legislative of Administrative Procedure Oversight Committee (JLAPO), and the Review Process was completed in December 2014.

The Division prepared draft rules and solicited input on the proposed actions from stakeholders in an outreach meeting on April 2015 and April 2017. The meeting gave the stakeholders the opportunity to review the Division’s draft rules and an opportunity to submit comments on the proposed rules. The draft rules were posted on the Division’s webpage at least 30 days prior to this meeting. Stakeholders voiced and submitted comments to the Division on/before the meeting.

3. Economic Impact Analysis

The following tables briefly describe the proposed rule changes and summarize the anticipated impact of each.

3.1: Subchapter 02U – Reclaimed Water

a. Section .0100 – General Requirements

Rule	Proposed Change	Source of Change	Economic Impact	Environment Impact
15A NCAC 02U .0101 Purpose	Removed redundant language; removed exemption for closed loop recycle requirements; added exemption for animal waste and ground water remediation closed loop.	Staff Review	None	None
15A NCAN 02U .0102 Scope	NONE	Staff Review	None	None
15A NCAC 02U .0103	Revised and added definition.	Staff review	None	None

Definitions				
15A NCAC 02U .0104 Activities Which Require a Permit	Remove unnecessary language which is already covered under G.S. 143-215.	Staff review	None	None
15A NCAC 02U .0105 General Requirements	NONE	Staff review	None	None
15A NCAC 02U .0106 Submission of Permit Applications	NONE	Staff review	None	None
15A NCAC 02U .0107 Staff Review and Permit Preparation	NONE	Staff review	None	None
15A NCAC 02U .0108 Final Action on Permit Applications to the Division	NONE	Staff review	None	None
15A NCAC 02U .0109 Permit Renewals	NONE	Staff review	None	None
15A NCAC 02U .0110 Modification and Revocation of Permits	NONE	Staff review	None	None
15A NCAC 02U .0111 Conditions for Issuing General Permits	NONE	Staff review	None	None
15A NCAC 02U .0112 Delegation of Authority	NONE	Staff review	None	None
15A NCAC 02U .0113 Permitting by Regulation	Add and clarify language: added closed -loop recycle activities; increased coverage for low risk users; included toilet flushing as an activity permitted.	Staff review	None	None
15A NCAC 02U .0114 Wastewater Design Flow Rates	NONE	Staff review	None	None
15A NCAC 02U .0115 Operational Agreements	NONE	Staff review	None	None
15A NCAC 02U .0116 Certification of Completion	NONE	Staff review	None	None
15A NCAC 02U .0117 Treatment Facility Operation and Maintenance	NONE	Staff review	None	None
15A NCAC 02U .0118 Demonstration of Future Wastewater Treatment Capacities	NONE	Staff review	None	None
15A NCAC 02U .0119 Reserved for Future Codification	NONE	Staff review	None	None
15A NCAC 02U .0120 Historical Consideration in Permit Approval	NONE	Staff review	None	None

b. Section .0200 - Application Requirements

Rule	Proposed Change	Source of Change	Economic Impact	Environment Impact
15A NCAC 02U .0201 Application Submittal	Technical corrections, add and clarify requirement for industrial facilities to submit a specific toxic pollutant list.	Staff review	None	None
15A NCAC 02U .0202 Application Submittal for Dedicated Reclaimed Water Systems	Clarify language and simplify rules by removing engineer design documentation already required. Removing permitting burden for applicants by providing exemption for some industrial facilities.	Staff review	None	None

c. Section .0300 - Effluent Standards

Rule	Proposed Change	Source of Change	Economic Impact	Environment Impact
15A NCAC 02U .0301 Reclaimed Water Effluent Standards	Technical correctios: Clarifying and simplify language; Correct terminology.	Staff review	None	None

d. Section .0400 -Design Standards

Rule	Proposed Change	Source of Change	Economic Impact	Environment Impact
15A NCAC 02U .0401 Design Criteria for Reclaimed Water Treatment Facilities	Technical correctios; rules simplification; correct reference; add requirement for automated irrigation systems to use precipitation/moisture sensor to avoid automatic irrigation during rain events;	Staff review	None	None
15A NCAC 02U .0402 Design Criteria for Dedicated Reclaimed Water Treatment Facilities	Technical correctios; rules simplification; add exemption to flow equalization requirements for facilities utilizing septic tank or lagoon treatment; add exemption to certain parts of the rule for facilities with flow less than 1,000 gpd and this way reduce the unnecessary permitting burden.	Staff review	None	None
15A NCAC 02U .0403 Design Criteria for Distribution Lines	Technical correctios and reduced setback requirements.	Staff review	None	None
15A NCAC 02U .0404 Design Criteria for Closed-Loop Recycle Systems	Included new Section for the design criteria of closed - loop recycle systems previously permitted in 02T .1000, but those activities were previously already covered.	Staff review	None	None

e. Section .0500 -General Utilization Requirements

Rule	Proposed Change	Source of Change	Economic Impact	Environment Impact
15A NCAC 02U .0501 Reclaimed Water Utilization	Technical corrections; Remove restriction for use as toilet flush water and for direct reuse as a raw potable water supply; and removal of potable water supply prohibition.	Staff review	None	None

f. Section .600 – Bulk Distribution of Reclaimed Water

Rule	Proposed Change	Source of Change	Economic Impact	Environment Impact
15A NCAC 02U .601 Scope	NONE	Staff review	None	None

g. Section .700 – Setbacks

Rule	Proposed Change	Source of Change	Economic Impact	Environment Impact
15A NCAC 02U .701 Setbacks	Added language that: provides additional flexibility for allowing storage of reclaimed water in ponds currently used for water storage; provides additional flexibility for reclaimed water use as irrigation water; exempt the Permittee from complying with setbacks to property lines when the Permittee or the entity leasing the property to the Permittee owns both parcels creating the property line.	Staff review	Positive	None

h. Section .800 – Operation Plans

Rule	Proposed Change	Source of Change	Economic Impact	Environment Impact
15A NCAC 02U .801 Operation and Maintenance	Technical corrections and added language that are already current permit requirement.	Staff review	None	None
15A NCAC 02U .802 Residual Management	Technical corrections, included cover age for closed loop recycle system and added language that are already current permit requirement.	Staff review	None	None

i. Section .900 – Local Program Approval

Rule	Proposed Change	Source of Change	Economic Impact	Environment Impact
15A NCAC 02U .901 Local Program Approval	Technical corrections; removed distribution line bypasses from annual report, that would reduce permitting burden for reclaimed Local Programs. Reduce reporting requirements for Municipalities with reclaimed water local program authority.	Staff review	Positive	None

j. Section .1100 – Wetlands Augmentation

Rule	Proposed Change	Source of Change	Economic Impact	Environment Impact
15A NCAC 02U .1101 Wetlands Augmentation	Technical corrections; reduced renewal application requirements for conjunctive reclaimed water systems irrigating to food chain crops and this way reducing permitting burden.	Staff review	None	None

k. Section .1400 – Irrigation to Food Chain Crops

Rule	Proposed Change	Source of Change	Economic Impact	Environment Impact
15A NCAC 02U .1401 Irrigation to Food Chain Crops	Technical corrections.	Staff review	None	None

3.2 Costs and Benefits Analysis

State Government, Local Government, Private Entities, Federal Government, and the Environment

The proposed revision of Rule 15A NCAC 02U, Sections .0100, 0200, 0300, 0400, 0500, 0600, 0700, 0800, 0900, 1100 and 1400 will not require members of the State Government, Local Government, Private Entities, and Federal Government to deviate from current practices; as such, there will be neither a direct or indirect cost as a result of this proposed rules revision to them. Some of the language removed or added have the intend to reduce burden to the applicants; some of the language review has the intend to be in accordance with current General Statutes and Rules. While some of those revisions could have a positive economic impact to some of the applicants, those impacts are not monetarily quantifiable here. No new adverse environmental impacts or new environmental benefits are anticipated to result from the revised rule.

4. Total Economic Impact

The economic impacts of the proposed amendments, both in terms of cost and benefit, are not monetarily quantifiable as measured from the baseline conditions. Consequently, there were no specific cost or benefit estimations to report in this fiscal analysis.

**PROPOSED ACTIONS TO
15A NCAC 02T WASTE NOT DISCHARGED TO SURFACE WATERS RULES
AND 15A NCAC 02U RECLAIMED WATER RULES:
PUBLIC HEARINGS SET FOR OCT. 10, 17 AND 24, 2017**

The North Carolina Environmental Management Commission's 15A NCAC 02T Waste Not Discharged to Surface Waters rules and 15A NCAC 02U Reclaimed Water rules have undergone the Session Law 2013-413 (HB74) rule review. The majority of these rules are proposed to be readopted and the remaining rules are proposed to be adopted or repealed. Public hearings will be conducted to receive public comments on the proposed actions to the rules and associated regulatory impact analyses.

PUBLIC HEARINGS

Oct. 10, 2017 6:00 PM* Auditorium Battleship North Carolina 1 Battleship Road Wilmington, NC 28402	Oct. 17, 2017 6:00 PM* Auditorium Northview Middle School 302 28 th Avenue NE Hickory, NC 28601	Oct. 24, 2017 6:00 PM* Ground Floor Hearing Room Archdale Building 512 N. Salisbury Street Raleigh, NC 27604
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*Doors open at 5:30 PM, hearings begin at 6:00 PM

REGULATORY IMPACT ANALYSES ASSOCIATED WITH THE PROPOSED ACTIONS TO THE RULES

Regulatory impact analyses and fiscal notes are to be conducted in accordance with General Statutes 150B-21.4. A regulatory impact analysis is conducted to determine an economic impact. The fiscal note is required when a rule will have an impact to the expenditure or distribution of state funds, Department of Transportation (DOT) permitting costs, local governments' expenditures or revenues, or if the aggregated costs or benefits equal more than \$1,000,000, which is deemed a substantial economic impact. A copy of the regulatory impact analysis for each rule is located at <http://deq.nc.gov/about/divisions/water-resources/water-resources-regulations-guidance/dwr-classifications-standards/rule-readoption-process> The regulatory impact analyses determined no fiscal notes were required for the subject rules.

HOW TO SUBMIT COMMENTS

You may attend any of the public hearings and provide verbal comments that specifically address the proposed actions to the rules and associated regulatory impact analyses. The Hearing Officers may limit the length of time that you may speak at the public hearing, if necessary, so that all those who wish to speak may have an opportunity to do so.

Written comments on the proposed actions to the rules and associated regulatory impact analyses are encouraged to be submitted electronically to:

15ANCAC2T2URule_Comments@ncdenr.gov

OR can be mailed to:

Attn: 2T 2U Rule Comments
Department of Environmental Quality, Division of Water Resource, Water Planning Section
1611 Mail Service Center
Raleigh, NC 27699-1611

Written comments addressing the proposed actions to the rules and associated regulatory impact analyses will be accepted through Wednesday, Nov. 22, 2017.

All persons interested and/or potentially affected by the proposals are encouraged to make comments on the proposals. The EMC may not adopt a rule that differs substantially from the text of the proposed rule published in the North Carolina Register unless the EMC publishes the text of the proposed different rule and accepts comments on the new text. The proposed effective date for the rule proposals is May 1, 2018

Rules included in this proposal are:

15A NCAC 02T Waste Not Discharged to Surface Waters	15A NCAC 02U Reclaimed Water
<p>Sections:</p> <ul style="list-style-type: none"> .0100 - General Requirements .0200 - Wastewater Pump and Haul Systems .0300 - Sewer Extensions .0400 - System-Wide Collection System Permitting .0500 - Wastewater Irrigation Systems .0600 - Single-Family Residence Wastewater Irrigation Systems .0700 - High Rate Infiltration Systems .0800 - Other Non-Discharge Wastewater Systems .1000 - Closed-Loop Recycle Systems .1100 - Residuals Management .1200 - Coal Combustion Products Management .1300 - Animal Waste Management Systems .1400 - Manure Hauler Operations .1600 - Groundwater Remediation Systems 	<p>Sections:</p> <ul style="list-style-type: none"> .0100 - General Requirements .0200 - Application Requirements .0300 - Effluent Standards .0400 - Design Standards .0500 - General Utilization Requirements .0600 - Bulk Distribution of Reclaimed Water .0700 - Setbacks .0800 - Operational Plans .0900 - Local Program Approval .1100 - Wetlands Augmentation .1400 - Irrigation to Food Chain Crops

FOR ADDITIONAL INFORMATION

This announcement and hearing information are available online at: <https://deq.nc.gov/news/events/public-notices-hearings>. This link will take you to DWR's Public Notices calendar where you can search for information using either a public hearing date or key word. In the case of inclement weather on the day of the scheduled public hearing, please call 919-807-6415 for a recorded message regarding any changes to the location, date or time of the hearing.

For copies of the draft rules, regulatory impact analyses, and information about rules, please visit <http://deq.nc.gov/about/divisions/water-resources/water-resources-regulations-guidance/dwr-classifications-standards/rule-readoption-process>.

To learn more about N.C. Division of Water Resources programs, Please visit <http://deq.nc.gov/about/divisions/water-resources>.



Release: IMMEDIATE
Date: Oct. 3, 2017

Contact: Sarah M. Young
Phone: 919-707-8604

Public invited to comment on changes to water resources rules

RALEIGH – State officials are seeking public input on proposed changes to two sets of rules that protect water quality.

The first set of rules regulate waste that is not discharged to surface waters, such as sewer line extensions, wastewater irrigation and infiltration systems, animal waste management systems, and pump and haul systems. The second set of rules apply to the use and distribution of reclaimed water.

The proposed changes are part of the ongoing review of all state environmental regulations as mandated by legislation passed by the General Assembly in 2013.

Written comments must be postmarked by Nov. 22, and can be mailed to: Attention: 2T 2U Rule Comments, DEQ/DWR Water Planning Section, 1611 Mail Service Center, Raleigh, N.C. 27699-1611. Comments may also be submitted electronically to: 15ANCAC2T2URule_Comments@ncdenr.gov. When sending comments by email, please be sure to include "2T.2U Comments" in the subject line.

As part of the public comment period, state officials will host three public hearings on the following schedule:

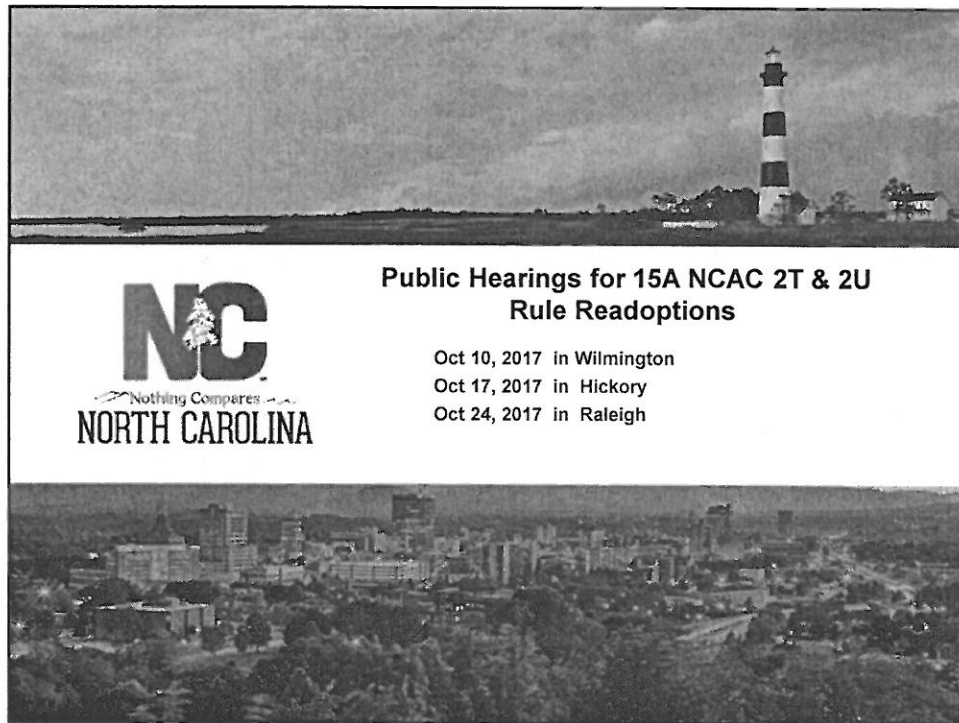
- Oct. 10 at Battleship North Carolina Auditorium, 1 Battleship Road, Wilmington
- Oct. 17 at Northview Middle School Auditorium, 302 28th Avenue NE, Hickory
- Oct. 24 at the Ground Floor Hearing Room, Archdale Building, 512 North Salisbury St., Raleigh

The hearings will start at 6 p.m. Registration for attendees and speakers begins at 5:30 p.m. Audio of the hearings will be recorded.

For copies of the draft rules, regulatory impact analyses, and information about rules, please visit: <http://deq.nc.gov/about/divisions/water-resources/water-resources-regulations-guidance/dwr-classifications-standards/rule-readoption-process>.

For information on the rules review process, please visit: <https://deq.nc.gov/permits-regulations/rules-regulations/rules-review>.

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Subchapter 02T - Waste Not Discharged To Surface Waters

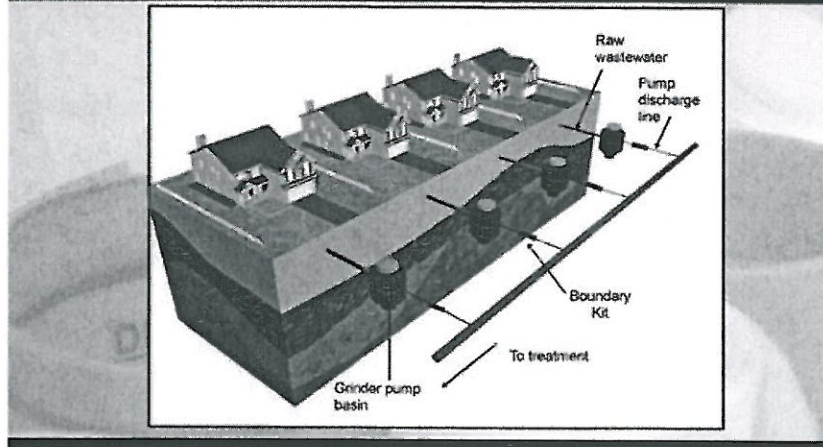
- Section .0100 General Requirements
- Section .0200 Wastewater Pump and Haul Systems
- Section .0300 Sewer Extensions
- Section .0400 System-Wide Collection System Permitting
- Section .0500 Wastewater Irrigation Systems
- Section .0600 Single-Family Residence Wastewater Irrigation Systems
- Section .0700 High Rate Infiltration Systems
- Section .0800 Other Non-Discharge Wastewater Systems
- Section .1000 Closed-Loop Recycle Systems
- Section .1100 Residuals Management
- Section .1200 Coal Combustion Products Management
- Section .1300 Animal Waste Management Systems
- Section .1400 Manure Hauler Operations
- Section .1600 Groundwater Remediation Systems

For example...
High Priority Sewer Line with a well-maintained right-of-way



...Low Pressure Sewer

"Typical" Low Pressure Sewer



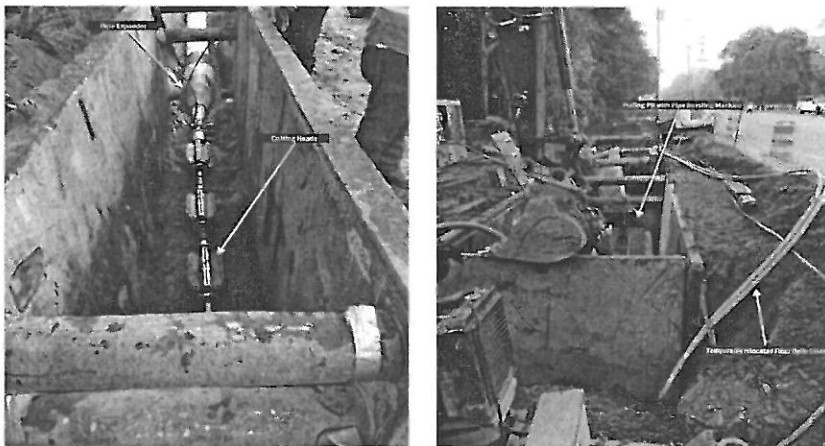
...

Collection System Permits - fats, oils, grease play a big part



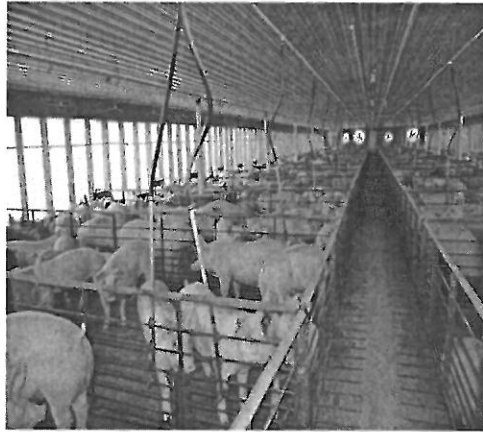
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Sewer Line installation permitting



- Northeast Interceptor Rehabilitation by Wilmington

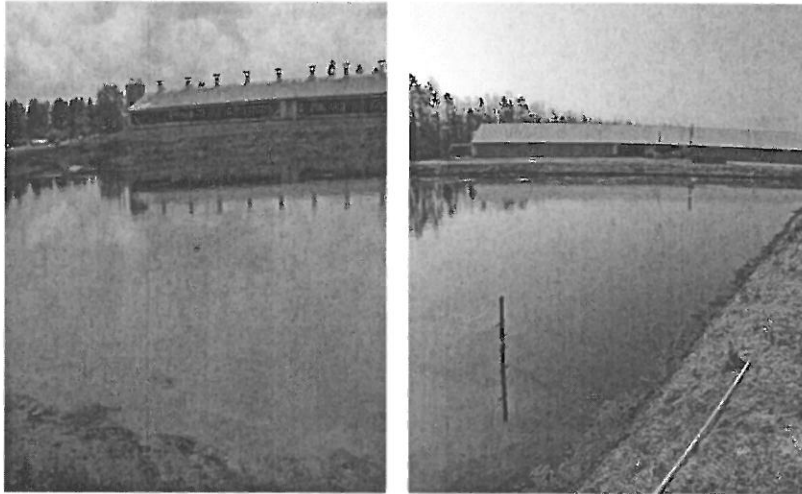
... Animal Operations



...Animal Operation land applications...



... Animal Operation Lagoon
specs...



...Manure Hauler rules...



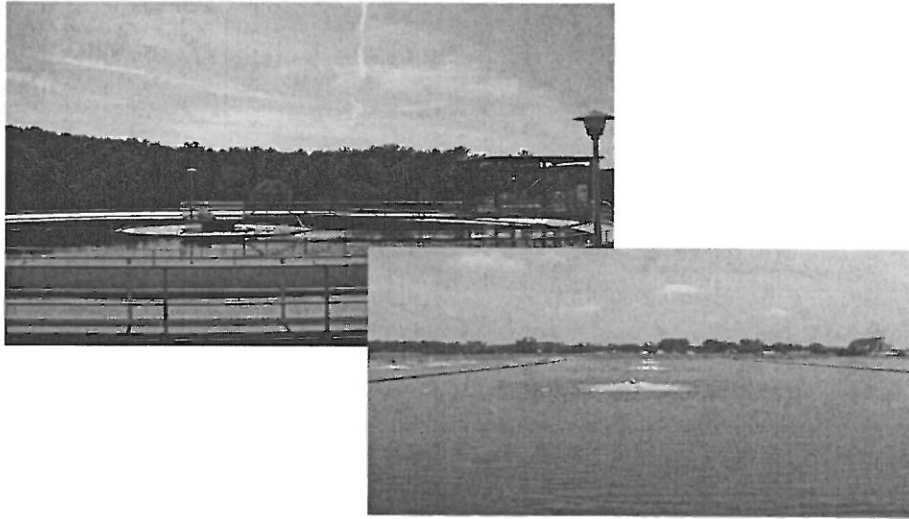
...Manure Storage...



...Infiltration Basins...



...Wastewater Treatment Plant design criteria



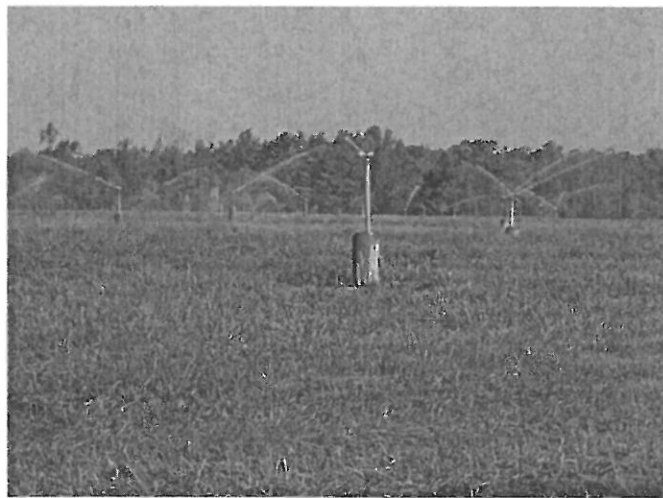
...Residuals Land application...



Single-Family Residence WW Irrigation (no sewer or septic)



...Spray Irrigation



...High-rate spray infiltration...



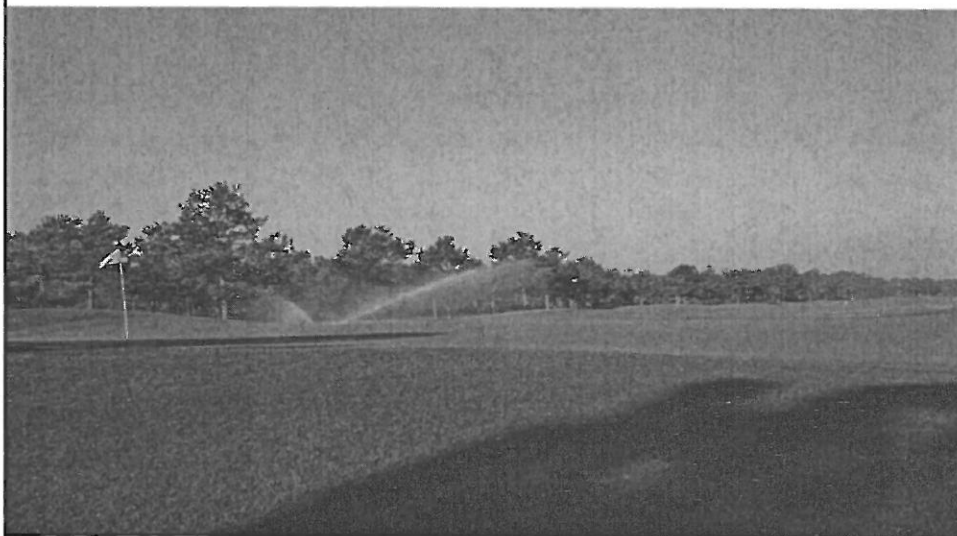
Subchapter 02U - Reclaimed Water

- Section .0100 General Requirements
- Section .0200 Application Requirements
- Section .0300 Effluent Standards
- Section .0400 Design Standards
- Section .0500 General Utilization Requirements
- Section .0600 Bulk Distribution of Reclaimed Water
- Section .0700 Setbacks
- Section .0800 Operational Plans
- Section .0900 Local Program Approval
- Section .1100 Wetlands Augmentation
- Section .1400 Irrigation to Food Chain Crops

For example, Reclaimed Water...



For example, Reclaimed Water
uses...



Where are the Rule Drafts?

- Changes are shown as strikethrough/underline.
- Includes comments boxes with explanation of each change.
- Public review and input sessions
 - held in March 2015 and April 2017.
- Rule drafts located online:

<https://deq.nc.gov/about/divisions/water-resources/water-resources-regulations-guidance/dwr-classifications-standards/rule-readoption-process>

150 Rules in 2T and 2U for Public Comment

Action	Calendar
Hearing in Wilmington	Oct 10, 2017
Hearing in Hickory	Oct 17, 2017
Hearing in Raleigh	Oct 24, 2017
Comment period concludes	Nov 22, 2017
Hearing Officer Report and recommendations	Dec 2017 – Jan 2018
Hearing Officer's Report on recommendation to Environmental Management Commission (EMC) for EMC action	March 2018
If EMC approves, then goes to Rules Review Commission (RRC) agenda for approval. If RRC approves, then becomes effective.	April-May 2018




When/Where to submit written comments?
Comment period closes on Nov 22, 2017

- Postal Mail: (Postmarked on or before Nov 22, 2017)
 2T 2U Rule Comments
 DEQ/DWR Water Planning Section
 1611 Mail Service Center, Raleigh NC 27699-1611

-----or-----


- E-mail: (Submitted on or before Nov. 22, 2017)
 15ANCAC2T2URule_Comments@ncdenr.gov
please include a subject line with a rule reference, such as "2U Comments"

All written comments become part of the hearing record.



**List of Staff / Programmatic Contacts
 in Division of Water Resources (DWR)**

Staff	Program	#	Components
Jeff Manning	Planning Classifications/Standards/Rule Review Branch	919-807-6415	Overall Process/Report
Nathaniel Thornburg	Permitting - Non-Discharge Permitting Unit	919-807-6453	2T .0100, .0500, .0600, .0700, .0800, .1000, .1100, .1200 and all 2U .0100 -.1400.
Deborah Gore	Permitting – Pretreatment Emergency Response Collection Systems Unit	919-807-6383	2T .0200, .0300, .0400
Christine Lawson	Regional - Animal Feeding Operations & Groundwater Protection Branch	919-807-6354	2T .1300, .1400
Debra Watts	Regional - Animal Feeding Operations & Groundwater Protection Branch	919-807-6338	2T .1600



Public Hearing Attendance

Name – Affiliation – (*presented oral comments)

Wilmington on October 10, 2017

Julie Wilsey, Presiding Hearing Officer, EMC, Raleigh, NC
Jeff Manning, DWR Staff Presentation, DWR, Raleigh, NC
Other DWR Staff included: Linda Culpepper, Jim Gregson, Morella Sanchez King, Nathaniel Thornburg, Ashley Kabat, Tessa Monday
Christine Lawson, Debra Gore, Christopher Ventaloro, and Adriene Weaver

1. Will Hendrick – Attorney, WaterKeeper Alliance, Chapel Hill, NC - *
2. Lana Carter – Community Organizer, North Carolina Environmental Justice Network, Bladen County, NC - *
3. Michael Gallant – President, Michael C. Gallant PE PA, Surf City, NC - *
4. Christine Ellis – Deputy Director/River Advocate, Winyah Rivers, Conway, NC - *
5. Larry Baldwin – Waterkeeper, Crystal Coast, Morehead City, NC - *
6. Taylor Farrand – Cape Fear Solar Systems, Wilmington, NC
7. Barry King – Engineer, SK Environment & Engineering PLLC., Hampstead, NC
8. Tim Webb – Wastewater Supervisor, Brunswick County, Supply, NC
9. Kevin Weston – Senior Technical Specialist, Smithfield Hog Association Division, Warsaw, NC
10. Danny Winstead – Senior Environmental Engineer, Potash Corp, Bath, NC
11. Keith Larick – Natural Resources Director, NC Farm Bureau, Raleigh, NC

Hickory on October 17, 2017

Dr. Albert Rubin, Presiding Hearing Officer, EMC, Raleigh, NC
Jeff Manning, DWR Staff Presentation, DWR, Raleigh, NC
Other DWR Staff included: Jon Risgaard, Ashley Kabat, Tessa Monday
Christine Lawson, Debra Gore, Christopher Ventaloro, Bev Price, Tim Fox, and Adriene Weaver

1. Linda Cozart, Asheville, NC - *
2. Will Hendrick – Attorney, WaterKeeper Alliance, Chapel Hill, NC - *
3. Sam Perkins – Riverkeeper, Catawba Riverkeeper, Charlotte, NC - *
4. W. Pithford – Hickory, NC
5. C. Martin – Lakes Hickory & Rhoddiss Lakekeeper, Catawba Riverkeeper Foundation Hickory, NC
6. Ron Hayes – Engineer, W. Ron Haynes PE, NC
7. Greg Padgett – Water Resources Director, Town of Valdese, Valdese, NC
8. Curt Albright – Charlotte, NC
9. Mitch Peele – Senior Director of Public Policy, NC Farm Bureau, Raleigh, NC
10. Keith Larick – Natural Resources Director, NC Farm Bureau, Raleigh, NC
11. Shawn Pennell – Assistant Public Services Director Utilities, City of Hickory, Hickory, NC

12. Andrew Foy – City of Hickory, Hickory, NC

Raleigh on October 24, 2017

Marion Deerhake, Presiding Hearing Officer, EMC, Raleigh, NC

Jeff Manning, DWR Staff Presentation, DWR, Raleigh, NC

Other DWR Staff included: Jon Risgaard, Ashely Kabat, Tessa Monday

Christine Lawson, Debra Gore, J.R. Joshi, Rebecca Chandler, Christopher Ventaloro, and Adriene Weaver

1. Elijah Williams – Water Reclamation Manager, City of Greensboro, NC - *
2. Bob Branch – Soil Scientist, Branch Residuals & Soils, Greensboro, NC - *
3. Will Hendrick – Attorney, WaterKeeper Alliance, Chapel Hill, NC - *
4. Allen Buansi – Attorney, UNC Center for Civil Rights, Chapel Hill, NC - *
5. Virginia Guidry – Private Citizen, Chapel Hill, NC - *
6. Emily Meza – Duke Environmental Law & Policy Clinic, Durham, NC - *
7. David Schwartz – Fellow, Duke Environmental Law & Policy Clinic, Durham, NC - *
8. Alec McCreadie – Duke Environmental Law & Policy Clinic, Chapel Hill, NC - *
9. Shane Canup, Professor/Grad Student, UNC-Greensboro, Greensboro, NC
10. Ryke Longest, Clinical Professor, Duke School of Law, Durham, NC
11. Lisa Song, Reporter, NC Policy Watch, Raleigh, NC
12. Mike Borchers, Assistant Director, City of Greensboro, Greensboro, NC
13. Kristin Williams, Assistant Director, City of Greensboro, Greensboro, NC
14. Keith Larick, NC Farm Bureau, Raleigh, NC
15. Tricia Stiegel, Senior Associate, Hazen & Sawyer, Raleigh, NC
16. Haywood Phthisic, Executive Director, LNBA/NRCA/TPBA, Clayton, NC
17. Aaron Babson, Senior Associate, Hazen & Sawyer, Raleigh, NC
18. Rob Willcox, Partner, Willcox & Mabe Soil Solutions, Summerfield, NC
19. Martie Groome, Lab & Ind Waste Section Supervisor, City of Greensboro, Greensboro, NC
20. Alicia Goots, Lab Coordinator, City of Greensboro, Greensboro, NC

Written Comments

A large volume of written comments was received as summarized in the following table:

	Emailed	Mailed	Postcards	Submitted at Hearing
Actual	1225	3	64	1
Total	1820*	3	64	1
Link	Link A	Link B	Link C	Link D

*includes miscellaneous, suspicious, petition information and duplicates.

Link A:

<https://files.nc.gov/ncdeq/Water%20Resources/files/rulesreview/2t2u/2T2U%20Emailed%20Comments.pdf>

Link B:

<https://files.nc.gov/ncdeq/Water%20Resources/files/rulesreview/2t2u/2T2U%20Mailed%20Comments.pdf>

Link C:

<https://files.nc.gov/ncdeq/Water%20Resources/files/rulesreview/2t2u/2T2U%20Postcard%20Comments.pdf>

Link D:

<https://files.nc.gov/ncdeq/Water%20Resources/files/rulesreview/2t2u/2T2U%20Written%20Comments.pdf>