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

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~~ system, or residual management ~~disposal/utilization~~ ~~system which~~ system, that does not discharge to surface waters of the State. [~~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.

History Note: *Authority G.S. 130A-335; 143-215.1; 143-215.3(a)(1);*
Eff. September 1, ~~2006.~~2006;
Readopted Eff. September 1, 2018.

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

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~~ means 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 http://www.gpoaccess.gov/cfr/. Copies are also available for review at 512 North Salisbury Street, Raleigh, North Carolina 27604.~~

(6) "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 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.

(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.ncwaterquality.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:

(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; and

(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~~ 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~~ facility, or air pollution control facility permitted under the authority of the Commission.

(31) "Residues from agricultural products and processing" means solids, ~~semi-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~~ 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~~ soil or 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~~ that is not 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.~~ 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.

(43) "Toxicity test" means a test for toxicity conducted using the procedures contained in ~~40 CFR 261,~~ 40 CFR 261.24, ~~Appendix II [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~~ that is designed to:

(a) operate as closed system with no discharge to waters of the ~~state,~~ [~~state;~~] State; or

(b) ~~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

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

(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~~ deemed to be waste oil.

(46) "Wetlands" are ~~"waters"~~ 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.

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

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

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

History Note: *Authority G.S. 130A-335; 143-215.1; 143-215.3(a)(1);*
Eff. September 1, ~~2006.~~2006;
Repealed Eff. September 1, 2018.

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

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 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 shall accept certification that the design meets or exceeds minimum design criteria applicable to the project if the certification is provided by a licensed or certified professional, such as a professional engineer, licensed soil scientist, licensed geologist, or technical specialist. ~~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~~] 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~~ 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; ~~projects.~~

(2) ~~Reports,~~ 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; ~~profession.~~

(3) ~~Operational~~ operational agreements as required by Rule .0115 of this Section; ~~Section.~~

(4) ~~For~~ 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); ~~Decision).~~

(5) ~~A~~ a general scaled location map, showing orientation of the facility with reference to at least two geographic references ~~(e.g. numbered roads, named streams/rivers).~~ (e.g. numbered roads, named streams or rivers); [~~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~~] 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, such as [~~obtained (e.g.~~] 401 certifications, erosion and sedimentation control plans, and stormwater management plans; ~~[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;] Subchapter.~~

(7) ~~A~~ 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; ~~included.~~

(8) ~~Documentation~~ documentation of compliance with Article 21 Part 6 (Floodway Regulations) of Chapter 143 of the General Statutes; ~~Statutes.~~

(9) ~~Documentation~~ documentation as required by other applicable ~~rule(s)~~ rules in this Subchapter; and ~~Subchapter.~~

(10) ~~Documentation~~ documentation of the presence or absence of threatened or endangered aquatic species ~~utilizing~~ using information provided by the Natural Heritage Program of the Department. This shall only apply to the area whose boundary is encompassed ~~by~~ by, and is 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~~ pursuant to 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~~ governed by 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~~ that 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~~ the 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~~ species, as provided in plans developed pursuant in 15A NCAC 02B ~~.0110~~ .0110, if the construction and operation of the facility directly impacts such species.

(j) ~~The~~Except as otherwise required by Rule .1306 in this Subchapter, 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~~ by 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~~ if 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]~~ Division-approved plans and specifications for the life of the facility.

History Note: *Authority G.S. 143-215.1; 143-215.3(a);*
Eff. September 1, ~~2006.~~2006;
Readopted Eff. September 1, 2018.

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

15A NCAC 02T .0106 SUBMISSION OF PERMIT APPLICATIONS

(a) Permit applications, supporting information, and processing ~~fee~~ fees 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.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.1;*
Eff. September 1, ~~2006.~~2006;
Readopted Eff. September 1, 2018.

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

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

(a) The staff of the Division shall conduct a review of plans, specifications, ~~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: ~~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~~] applicant shall ~~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: ~~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.

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

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

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 if ~~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 of groundwater, surface water or wetlands, waste, wastewater, ~~sludge,~~ residuals, soil, treatment processes, ~~process,~~ lagoon or storage ~~lagoon/storage~~ ponds, ~~pond,~~ and plant tissue, if necessary to determine the source, quantity, ~~quantity~~ and quality of the waste and its effect upon the surface water, ground waters, ~~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~~ that 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.~~years, except for those permits subject to Sections .1300 and .1400 of this Subchapter, which shall not exceed five years.

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

15A NCAC 02T .0110 is readopted as published in 32:06 NCR 530 as follows:

15A NCAC 02T .0110 MODIFICATION AND REVOCATION OF PERMITS

~~Any~~ A permit issued by the Division pursuant to this Subchapter shall be ~~is~~ subject to revocation ~~revocation,~~ or modification upon 60 days notice by the Director in whole or part ~~for:~~ 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~~ where ~~which~~ a system is located or [~~and~~] ~~in~~ ~~which~~ where 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 the North Carolina Administrative Code or General Statutes. [~~Statute.~~]

History Note: *Authority G.S. 143.215.1(b)(4)(c); ~~143-215.1(b)(2.);~~ 143-215.3(a)(1);*
Eff. September 1, ~~2006.~~2006;
Readopted Eff. September 1, 2018.

15A NCAC 02T .0111 is readopted with changes as published in 32:06 NCR 530-531 as follows:

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), [~~(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, ~~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 pursuant to ~~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 pursuant to ~~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 [~~it.~~] it pursuant to G.S. 143-215.1. ~~them.~~ 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 [~~rules,~~] but not permitted in accordance with this Subchapter, ~~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 shall include:

(1) the operation is a significant contributor of pollutants to the waters of the State; ~~state;~~

(2) conditions at the permitted site change, altering the constituents or characteristics of the wastewater such that the operation no longer qualifies for coverage under a general permit;

(3) noncompliance with the general permit;

(4) noncompliance with the ~~Commission~~ rules in this Chapter;

(5) a change has occurred in the availability of demonstrated technology or practices for the control or abatement of pollutants applicable to the operation;

(6) 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; ~~state;~~ or

(7) 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.~~

History Note: *Authority G.S. 143-215.1; 143-215.3(a)(1); 143-215.10C;*
Eff. September 1, ~~2006.~~2006;
Readopted Eff. September 1, 2018.

15A NCAC 02T .0112 is readopted as published in 32:06 NCR 531 as follows:

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.~~]

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.3(a)(4);*
Eff. September 1, ~~2006.~~2006;
Readopted Eff. September 1, 2018.

15A NCAC 02T .0113 is readopted with changes as published in 32:06 531-533 as follows:

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 ~~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 ~~Backwash~~ from raw water intake screening devices that is discharged to the land surface;

(3) condensate ~~Condensate~~ from residential or commercial air conditioning units that is discharged to the land surface;

(4) discharges ~~Discharges~~ to the land surface from individual non-commercial car washing operations;

(5) discharges ~~Discharges~~ to the land surface from flushing and hydrostatic testing water associated with utility distribution systems, new sewer extensions, ~~extensions~~ or new reclaimed water distribution lines;

(6) street ~~Street~~ wash water that is discharged to the land surface;

(7) discharges ~~Discharges~~ to the land surface from firefighting ~~fire fighting~~ activities;

(8) discharges ~~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 ~~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, ~~Management and~~ that are conducted by or under the direct supervision of the federal or state on-scene coordinator, ~~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 ~~Drilling~~ muds, cuttings, ~~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 ~~Purge~~ water from groundwater monitoring wells;

(12) composting ~~Composting~~ facilities for ~~dead animals,~~ ~~[animals]~~ animal 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, and are operated under a roof; and the facilities are approved by the State Veterinarian pursuant to G.S. ~~106-403;~~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);

(13) overflow ~~Overflow~~ from elevated potable water storage facilities;

(14) mobile ~~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, ~~or~~ if not in a municipality, ~~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 ~~Mine~~ tailings ~~where~~ if no chemicals are used in the mining process;

(16) mine ~~Mine~~ dewatering ~~where~~ if no chemicals are used in the mining process; ~~and~~

(17) wastewater ~~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 [~~Discharges~~] to the land surface of less than 5,000 gallons per week of backwash water from greensand filters at potable water wells, [~~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

(19) discharges [~~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.

(b) Nothing in this Rule shall be deemed to allow the violation of any ~~assigned~~ surface water, groundwater, or air quality standards ~~standards, and~~ and, in addition, ~~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.

History Note: *Authority G.S. 130A-300; 143-215.1(a)(1); 143-215.1(b)(4)(e); 143-215.3(a);*
Eff. September 1, 2006;
Amended Eff. March 19, 2015; June 18, ~~2011.~~2011;
Readopted Eff. September 1, 2018.

15A NCAC 02T .0114 is readopted with changes as published in 32:06 NCR 533-535 as follows:

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 shall ~~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
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)~~ Design daily flow rates for residential ~~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 be ~~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 ~~Dates~~ of flow meter calibrations during the time frame evaluated and indication if any adjustments were necessary; ~~necessary.~~

(B) a ~~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); ~~bathhouse).~~

(C) ~~Owner of the collection system.~~ a [~~A~~] letter of agreement from the owner or an official, meeting the criteria of Rule .0106 of this [~~Subchapter,~~] [~~Section~~] Section, of the receiving collection system or treatment works accepting the wastewater and agreeing with the adjusted design rate; [~~rate.~~]

(D) age ~~Age~~ of the collection system; ~~system.~~

(E) analysis ~~Analysis~~ of inflow and infiltration within the collection system or receiving treatment plant, as applicable; ~~applicable.~~

(F) ~~Where~~ if [~~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; ~~Division.~~

(G) ~~Where~~ if [~~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; and ~~provided.~~

(H) an ~~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, such as whether the facility is in a resort area. ~~usage (i.e., resort area).~~

(3) Flow increases shall be required if the calculations required by ~~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 [~~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~~ a future permittee. [~~Permittee.~~] ~~new system owner.~~

History Note: *Authority G.S. 143-215.1; 143-215.3(a)(1);*
Eff. September 1, ~~2006.~~2006;
Readopted Eff. September 1, 2018.

15A NCAC 02T .0115 is readopted as published in 32:06 NCR 535-536 as follows:

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 [~~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 ~~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, ~~Declarations~~ and By-laws, with the engineer's certification, ~~By-laws~~ shall be submitted prior to operation of the permitted facilities to the ~~Division~~ Division, as required by 15A NCAC 02T .0116. [~~.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, ~~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.~~

History Note: *Authority G.S. 143-215.1(d1);*
Eff. September 1, ~~2006.~~2006;
Readopted Eff. September 1, 2018.

15A NCAC 02T .0116 is readopted as published in 32:06 NCR 536 as follows:

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~~ all minimum design criteria except as noted, and approved plans and specifications. The professional certification ~~must~~ shall be on Division-approved ~~official~~ forms completely filled out, where applicable, and submitted to the Division. For facilities with phased construction or if ~~where~~ there is a need to operate certain equipment under actual operating conditions prior to certification, additional certification shall ~~may~~ be required ~~needed~~ as follow-ups to the initial, pre-operation certification. The Division may not acknowledge receipt of engineering certifications. The permittee ~~Permittee~~ and the professional shall track the submittal of certifications.

(b) To transfer ownership of a sewer extension, a change of ownership request shall be submitted on Division-approved forms after certifying completion of the project. ~~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, ~~easements~~ and encroachment agreements necessary for installation, ~~installation and~~ operation, ~~operation~~ and maintenance of the system shall be obtained prior to operation of the system.

(d) The permittee [~~Permittee~~] shall maintain a copy of the individual permit and a set of final record drawings for the life of the facility.

History Note: *Authority G.S. 143-215.1;*
Eff. September 1, ~~2006.~~2006;
Readopted Eff. September 1, 2018.

15A NCAC 02T .0117 is readopted as published in 32:06 NCR 536 as follows:

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~~ 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.~~

History Note: *Authority G.S. 143-215.3;*
Eff. September 1, ~~2006.~~2006;
Readopted Eff. September 1, 2018.

15A NCAC 02T .0118 is readopted as published in 32:06 NCR 536-537 as follows:

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, ~~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~~ system's 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 required ~~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.

15A NCAC 02T .0120 is readopted with changes as published in 32:06 NCR 537 as follows:

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 pursuant to ~~under~~ Article 21. [~~In addition to the criteria set forth in Paragraph (b) of this Rule, the Director may also consider other compliance information in determining compliance history.~~] ~~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,~~ 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 [~~Applicant~~] ~~affiliation~~ has previously abandoned a wastewater treatment facility without properly closing the facility in accordance with ~~the~~ its permit or this Subchapter.

(3) The [~~Applicant~~] applicant or any parent, subsidiary, or other affiliate of the applicant [~~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 [~~Applicant~~] ~~affiliation~~ is currently not compliant with any compliance schedule in a permit, settlement agreement, ~~agreement~~ or order.

(5) The [~~Applicant~~] applicant or any parent, subsidiary, or other affiliate of the applicant [~~Applicant~~] ~~affiliation~~ has not paid an annual fee in accordance with Rule ~~.0105(e)(2).~~ .0105(e)(2) of this Section.

(c) Permits for renewing facilities shall not be granted if the applicant [~~Applicant~~] or any affiliation has not paid an annual fee in accordance with Rule [~~.0105(e)(2).~~].0105(e)(2) of this Section.

(d)~~(c)~~ Any variance to this Rule shall be subject to approval ~~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.

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

15A NCAC 02T .0201 is readopted as published in 32:06 NCR 537 as follows:

SECTION .0200 – WASTEWATER PUMP AND HAUL SYSTEMS

15A NCAC 02T .0201 SCOPE

This Section ~~applies~~ shall apply to all pump and haul activities of wastewater under the authority of the Division. This Section ~~does~~ shall not apply to the transport of animal waste from animal waste management systems permitted under Section .1300 of this Subchapter and Section .1400 of this Subchapter. In addition, this Section ~~does~~ shall not apply to the transport of wastewater residuals or biosolids permitted under Section .1100 of this Subchapter or Section .1200 of this Subchapter.

History Note: *Authority G.S. 143-215.1; 143-215.3(a);*
Eff. September 1, ~~2006.~~2006;
Readopted Eff. September 1, 2018.

15A NCAC 02T .0203 is readopted with changes as published in 32:06 NCR 537 as follows:

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) ~~Washwater~~ washwater 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~~ 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~~ the wastewater does not contain any human ~~waste.~~ ~~[Waste; and]~~waste; and

(C) ~~The~~ 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~~ industrial wastewater if the following criteria are met:

(A) ~~The~~ the facility notifies the appropriate Division regional office in writing advising of the type of operation, ~~type~~ type, and quantity of wastewater generated, ~~location,~~ the 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~~ the wastewater does not contain any human ~~waste.~~ waste;

(C) ~~The~~ 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~~ the pump and haul activity is not to alleviate a failing wastewater ~~system.~~ system; and

(E) ~~The~~ the Division regional office concurs in writing that the activity meets the criteria in this Rule.

(3) ~~Pump~~ ~~[Pumping]~~ 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.

History Note: *Authority G.S. 143-215.1; 143-215.3(a);*
Eff. September 1, ~~2006.~~2006;
Readopted Eff. September 1, 2018.

15A NCAC 02T .0204 is readopted as published in 32:06 NCR 538 as follows:

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),~~ such as odors and 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~~] shall 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~~] shall subject the [~~Permittee~~] 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~~ wastewater, ~~specifically~~ agreeing to accept ~~wastewater (type and quantity)~~ both the type and quantity of wastewater 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.

History Note: *Authority G.S. 143-215.1; 143-215.3(a.);*
Eff. September 1, ~~2006.~~2006;
Readopted Eff. September 1, 2018.

15A NCAC 02T .0301 is readopted as published in 32:06 NCR 538 as follows:

SECTION .0300 - SEWER EXTENSIONS

15A NCAC 02T .0301 SCOPE

~~[The rules in this Section set forth the requirements and procedures for application and issuance of permits for sewers as required by G.S. 143-215.1(a) and permitting delegation of local sewer programs allowable by G.S. 143-215.1(f).]~~ The rules in this Section shall apply to all sewer [~~extensions~~] extensions, including gravity sewers, pump stations, force mains, vacuum sewers, pressure sewers [~~(including Septic Tank Effluent Pump (STEP) systems)~~] including septic tank effluent pump (STEP) systems, or alternative sewer systems that discharge to another sewer [~~system~~] system, and to requirements for local delegated sewer extension permitting programs.

History Note: *Authority G.S. 143-215.1; 143-215.3(a);*
Eff. September 1, ~~2006.~~ 2006;
Readopted Eff. September 1, 2018.

15A NCAC 02T .0302 is readopted with changes as published in 32:06 NCR 538-539 as follows:

15A NCAC 02T .0302 DEFINITIONS

(a) The following definitions ~~are used~~ shall apply in this Section:

(1) "Alternative sewer system" means any sewer system ~~(collection system)~~ or 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~~ 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~~ 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).~~ with a diameter of 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.

(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~~] 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~~ using 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)~~ inflected 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~~ and 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)~~ 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.

History Note: *Authority G.S. 143-215.1; 143-215.3(a);*
Eff. September 1, ~~2006.~~2006;
Readopted Eff. September 1, 2018.

15A NCAC 02T .0303 is readopted with changes as published in 32:06 NCR 539-540 as follows:

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~~ 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]~~ contributes 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 a letter of agreement, meeting the requirements of 15A NCAC 02T .0304 (g), has been submitted to and approved by ~~after it receives approval form~~] the regional ~~[office.]~~ office;

(2) ~~A~~ 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~~ 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.~~ Division;

(3) ~~New pump stations or sewage ejectors and force mains if all of the following criteria are met:~~ ~~[A]~~ 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~~ 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;

~~(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,~~ sewer; and

~~(E)~~(D) no other connections are made to the sewer without prior approval from the ~~Division.~~ Division;

(4) ~~The~~ 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.

History Note: *Authority G.S. 143-215.1; 143-215.3(a);*
Eff. September 1, ~~2006.~~2006;
Readopted Eff. September 1, 2018.

15A NCAC 02T .0304 is readopted as published in 32:06 NCR 540-541 as follows:

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]~~] Division which may be found at 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~~ permittee has assured downstream sewer capacity.

(c) For pressure sewers, vacuum sewers, STEP ~~systems~~ 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~~ 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~~] for which the design criteria has not been developed or [~~if the system does~~] that do 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]~~] systems which may be found at 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.~~ [~~works~~] 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.

History Note: *Authority G.S. 143-215.1; 143-215.3(a); 143-215.67;*
Eff. September 1, ~~2006.~~2006;
Readopted Eff. September 1, 2018.

15A NCAC 02T .0305 is readopted with changes as published in 32:06 NCR 541-543 as follows;

15A NCAC 02T .0305 DESIGN CRITERIA

(a) ~~Construction of sewers~~ Sewer and sewer extensions ~~are prohibited in the following areas unless the specified determinations are made:~~ [~~area:~~] shall not be constructed in the following areas:

(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~~ 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),~~ represented by the Governor and Council of State, unless ~~the Commission recommends and~~ the Governor and Council of State agree that no prudent, ~~feasible~~ 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~~ a plan and profile of sewers, showing their proximity to other utilities and natural ~~features,~~ features such as water supply lines, water lines, wells, storm drains, surface waters, wetlands, roads and other trafficked ~~areas.~~ areas;

(2) ~~Design~~ design ~~calculations~~ 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.~~ analysis; and

(3) ~~Specifications relative to the sewer system~~ [~~Sewer~~] sewer system specifications describing all materials to be used, methods of ~~construction~~ construction, and means for assuring the quality and integrity of the finished project.

(c) All deeds, ~~easements~~ 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~~ 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,~~ source ~~including any~~ consisting of wells, WS-I ~~waters~~ waters, ~~Class I~~ 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),]~~ or tide elevation, wetlands that are directly abutting these ~~waters~~ 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~~ from water mains or public or private wells:

(1) ~~For~~ for storm sewers, engineering solutions such as ductile iron pipe or structural bridging to prevent crushing the underlying ~~pipe.~~ pipe;

(2) ~~For~~ for public or private wells, piping materials, testing ~~methods~~ 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 ~~ft~~ feet from a public ~~well.~~ well;

(3) ~~For~~ for public water main horizontal or vertical separations, alternatives as described in 15A NCAC 18C .0906(b) and ~~(c).~~ (c);

(4) ~~For~~ 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~~ for all other separations, materials, testing ~~methods~~ 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)]~~ stations, which are 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.

(B) A standby power source or pump ~~is~~ shall be required at all pump stations except for ~~those~~ 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~~] 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~~ 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~~ 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.~~ Wet wells shall be equipped with screened vents.

(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;

(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~~ 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.

History Note: *Authority G.S. 143-215.1; 143-215.3(a);*
Eff. September 1, ~~2006.~~2006,
Readopted Eff. September 1, 2018.

15A NCAC 02T .0306 is readopted with changes as published in 32:06 NCR 543-544 as follows:

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~~] certified local program has not been certified ~~(e.g. alternative sewer systems),~~ such as alternative sewer systems, which shall continue to be permitted by the Division. The Division may ~~chose~~ 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 ~~musts~~ shall provide adequate information to assure compliance with the requirements of G.S. 143-215.1 (f) and the following requirements:

(1) Applications for certified 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; and

(I) downstream capacity assurance methods.

The applicant shall specify in a cover letter [~~what~~] which permits the [~~local authority~~] certified local program 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~~] these permits will be

issued to ~~public (to be self-owned) or private (not donated to the certified authority).~~ sewer systems that are publicly or privately owned.

(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.~~ Local ordinances and rules governing processing permit applications, setting permit requirements, enforcement, and penalties shall be compatible with rules and statutes governing permits issued by the Division.

(4) If the treatment and disposal system receiving the ~~waste~~ wastewater from the sewer line extension permitted under the certified local program is under the jurisdiction of another local unit of government, ~~then~~ the program application ~~must~~ shall 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~~ that assures continued compliance.

(5) ~~Any~~ All future amendments to the requirements of this Section shall be incorporated into ~~the local sewer system program~~ certified local 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~~ certified local 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~~ certified local program shall be inspected for compliance with the requirements of the ~~local program~~ certified local program at least once during construction.

(c) Approval of Certified Local Programs. The staff of the Division shall acknowledge receipt of an application for a certified 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 certified local program.

(d) Conditions of Local Program ~~Approval (Delegation).~~ Approval. Once approved by the Commission, the ~~delegated authority~~ certified local program shall adhere to the following:

(1) Adequacy of Receiving Facilities. ~~Local sewer system~~ Certified local 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 certified 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~~ that are issued within a specified period of time. ~~In no case shall the~~ The certified local ~~sewer system~~ program shall not 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~~ The ~~delegated authority~~ certified local program shall not 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 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

(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~~ all 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 Certified Local Program. Modifications to certified local programs, including the expansion of permitting ~~authority~~ authority, shall not be required to be approved by the Commission, but shall be subject to approval 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~~ 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 local program for compliance with this Rule and with G.S. 143-215.1(f) at any time with a scheduled appointment with the ~~delegated~~ certified ~~authority.~~ local program.

(g) The Division shall maintain a list of all local units of government with ~~approved~~ certified 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.

History Note: *Authority G.S. 143-215.1; 143-215.3(a);*
Eff. September 1, ~~2006.~~2006;
Readopted Eff. September 1, 2018.

15A NCAC 02T .0401 is readopted as published in 32:06 NCR 544 as follows:

SECTION .0400 – SYSTEM-WIDE COLLECTION SYSTEM PERMITTING

15A NCAC 02T .0401 SCOPE

The rules of this Section shall 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~~ mains, and all appurtenances.

History Note: *Authority G.S. 143-215.1(a); 143-215.3(a); 143-215.9B;*
Eff. September 1, ~~2006.~~2006;
Readopted Eff. September 1, 2018.

15A NCAC 02T .0402 is readopted as published in 32:06 NCR 544-545 as follows:

15A NCAC 02T .0402 DEFINITIONS

The following definitions ~~are used~~ shall apply 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~~] include 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.

History Note: *Authority G.S. 143-215.1(a); 143-215.3(a); 143-215.9B;*
Eff. September 1, ~~2006.~~2006;
Readopted Eff. September 1, 2018.

15A NCAC 02T .0403 is readopted with changes as published in 32:06 NCR 545 as follows:

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~~ 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~~ 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~~ day, ~~(i.e.,~~ 365 days per ~~[year).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~~] justify 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.

(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~~ shall be 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,~~ retrofit and 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 of compliance ~~shall be kept for~~ with Subparagraphs (a)(1) through (a)(9) of this Rule ~~for~~ ~~a minimum of~~ shall be maintained by the collection system owner for 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.

History Note: *Authority G.S. 143-215.1(a); 143-215.3(a); 143-215.9B;*
Eff. September 1, ~~2006.~~2006;
Readopted Eff. September 1, 2018.

15A NCAC 02T .0404 is readopted as published in 32:06 NCR 545 as follows:

15A NCAC 02T .0404 MULTIPLE COLLECTION SYSTEMS UNDER COMMON OWNERSHIP

If a public entity owns multiple but separate collection ~~systems~~ systems, ~~(i.e.,~~ such as those that are tributary to separate ~~plants)~~ plants, and any one is subject to an individual permit, all of the 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.

History Note: *Authority G.S. 143-215.1(a); 143-215.3(a); 143-215.9B;*
Eff. September 1, ~~2006.~~2006;
Readopted Eff. September 1, 2018.

15A NCAC 02T .0405 is readopted as published in 32:06 NCR 545-546 as follows:

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.~~] deadline after a request from the permittee and based on factors such as the degree of delay in submission of the application or conditions out of the control of the permittee. All applications ~~must~~ shall be submitted in duplicate, completed on official forms, and fully executed. Application forms are 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~~] with conditions contained in an individual [~~permit to effectuate the purpose of Article 21, Chapter 143 of the General Statues.~~] permit.

History Note: *Authority G.S. 143-215.1(a); 143-215.3(a); 143-215.9B;*
Eff. September 1, ~~2006.~~2006;
Readopted Eff. September 1, 2018.

15A NCAC 02T .0504 is readopted with changes as published in 32:06 NCR 546-548 as follows.

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.~~ 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 [~~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 ~~Recommendations~~ concerning loading rates of liquids, solids, other wastewater constituents, ~~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 ~~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 ~~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;~~] ~~acidity,~~

(B) base saturation [~~Base Saturation~~] (by calculation); ~~base saturation (by calculation),~~

(C) calcium; [~~Calcium;~~] ~~calcium,~~

(D) cation exchange capacity; [~~Cation Exchange Capacity;~~] ~~cation exchange capacity,~~

(E) copper; [~~Copper;~~] ~~copper,~~

(F) exchangeable sodium percentage [~~Exchangeable Sodium Percentage~~] (by calculation); ~~exchangeable sodium percentage (by calculation),~~

(G) magnesium; [~~Magnesium;~~] ~~magnesium,~~

(H) manganese; [~~Manganese;~~] ~~manganese,~~

(I) percent humic matter; [~~Percent Humic Matter;~~] ~~percent humic matter,~~

(J) pH; ~~pH,~~

(K) phosphorus; [~~Phosphorus;~~] ~~phosphorus,~~

(L) potassium; [~~Potassium;~~] ~~potassium,~~

(M) sodium; [~~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~~ 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, ~~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, ~~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 each of the following that are located within 500 feet of a waste treatment, storage, or disposal site, including a delineation of their review and compliance boundaries:

(A) wells, including usage and construction details if available;

(B) ephemeral, intermittent, and perennial streams;

(C) springs;

(D) lakes;

(E) ponds; and

(F) other surface drainage features;

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 shall be 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. 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, such as a contract, deed, or article of incorporation; ~~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;~~] ~~Total Organic Carbon,~~

(2) 5-day biochemical oxygen demand [~~Biochemical Oxygen Demand~~] (BOD_5); ~~5-day Biochemical Oxygen Demand (BOD_5),~~

(3) chemical oxygen demand [~~Chemical Oxygen Demand~~] (COD); ~~Chemical Oxygen Demand (COD),~~

(4) nitrate nitrogen [~~Nitrate Nitrogen~~] (NO_3-N); ~~Nitrate Nitrogen (NO_3-N),~~

(5) ammonia nitrogen [~~Ammonia Nitrogen~~] (NH_3-N); ~~Ammonia Nitrogen (NH_3-N),~~

(6) total kjeldahl nitrogen [~~Total Kjeldahl Nitrogen~~] (TKN); ~~Total Kjeldahl Nitrogen (TKN),~~

(7) pH; ~~pH,~~

(8) chloride; [~~Chloride;~~] ~~Chloride,~~

(9) total phosphorus; [~~Total Phosphorus;~~] ~~Total Phosphorus,~~

(10) phenol; [~~Phenol;~~] ~~Phenol,~~

(11) total volatile organic compounds; [~~Total Volatile Organic Compounds;~~] ~~Total Volatile Organic Compounds,~~

(12) fecal coliform: [~~Fecal Coliform;~~] ~~Fecal Coliform,~~

(13) calcium; [~~Calcium;~~] ~~Calcium,~~

(14) sodium; [~~Sodium;~~] ~~Sodium,~~

(15) magnesium; [~~Magnesium;~~] ~~Magnesium,~~

(16) sodium adsorption ratio [~~Sodium Adsorption Ratio~~] (SAR); ~~Sodium Adsorption Ratio (SAR),~~

(17) total trihalomethanes; [~~Total Trihalomethanes;~~] ~~Total Trihalomethanes,~~ and ~~Toxicity Test Parameters and~~

(18) total dissolved solids. ~~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, ~~minerals~~ and other constituents of the wastewater shall be provided to the Division by the [~~Applicant.~~] applicant.

(j) A Residuals Management Plan ~~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~~] applicant shall provide to the Division a water balance that determines the required effluent storage based on the [~~following~~] most limiting factor from the following: [~~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.

History Note: *Authority G.S. 143-215.1; 143-215.3(a);*
Eff. September 1, ~~2006.~~2006;
Readopted Eff. September 1, 2018.

15A NCAC 02T .0505 is readopted with changes as published in 32:06 NCR 548-550 as follows:

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~~ New and expanding systems: ~~systems are as follows:~~

(1) ~~For new~~ that are municipal, ~~domestic and~~ domestic, or 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 ~~Biochemical Oxygen Demand~~ (BOD_5) ≤ 30 mg/L;

(B) total suspended solids ~~Total Suspended Solids~~ (TSS) ≤ 30 mg/L;

(C) ammonia ~~Ammonia~~ (NH_3-N) ~~(NH_3)~~ ≤ 15 mg/L; and

(D) fecal coliforms ~~Fecal Coliforms~~ ≤ 200 colonies/100 mL; [~~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 (BOD_5) ≤ 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 ~~Biochemical Oxygen Demand~~ (BOD_5) ≤ 30 mg/L;

(B) total suspended solids ~~Total Suspended Solids~~ (TSS) ≤ 90 mg/L; and

(C) fecal coliforms ~~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 [~~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, ~~ponds~~ or trenches, excluding holding ponds containing non-industrial treated effluent prior to ~~spray~~ irrigation, for treatment, storage, ~~storage~~ or disposal, ~~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 x 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, ~~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 x 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 [~~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, ~~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 established 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, [~~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.]~~ storage ~~[storage,]~~ unless additional storage is determined to be necessary pursuant to the water balance requirements in Rule .0504(k) of this Section.

(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.

History Note: *Authority G.S. 143-215.1; 143-215.3(a);*
Eff. September 1, ~~2006.~~2006;
Readopted Eff. September 1, 2018.

15A NCAC 02T .0506 is readopted with changes as published in 32:06 NCR 550 as follows:

15A NCAC 02T .0506 SETBACKS

(a) The setbacks for irrigation sites shall be as follows:

	Spray (feet)	Drip (feet)
Each ~~Any~~ habitable residence or place of ~~public~~ assembly under separate ownership or not to be maintained as part of the project site	400	100
Each ~~Any~~ habitable residence or place of ~~public~~ assembly owned by the [~~Permittee~~] permittee to be maintained as part of the project site	200	15
Each ~~Any~~ private or public water supply source	100	100
Surface waters such as intermittent and perennial streams, perennial waterbodies, and wetlands ~~(streams - intermittent and perennial, perennial waterbodies, and wetlands)~~	100	100
Groundwater lowering ditches where ~~(where~~ the bottom of the ditch intersects the ~~SHWT)~~ SHWT	100	100
Surface water diversions such as ephemeral streams, waterways, and ditches ~~(ephemeral streams, waterways, ditches)~~	25	25
Each ~~Any~~ well with exception of monitoring wells	100	100
Each ~~Any~~ property line	150	50
Top of slope of embankments or cuts of two feet or more in vertical height	15	15
Each ~~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
Each ~~Any~~ building foundation or basement	15	15

(b) The setbacks for treatment and storage units shall be as follows:

	(feet)
Each ~~Any~~ habitable residence or place of ~~public~~ assembly under separate ownership or not to be maintained as part of the project site	100
Each ~~Any~~ private or public water supply source	100
Surface waters such as intermittent and perennial streams, perennial waterbodies, and wetlands ~~(streams - intermittent and perennial, perennial waterbodies, and wetlands)~~	50
Each ~~Any~~ well with exception of monitoring wells	100
Each ~~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 set forth ~~located~~ in 15A NCAC 02U .0701(d) for property lines. ~~lines~~ and the compliance boundary shall be at the irrigation area boundary.

(d) Setback waivers shall be written, notarized, signed by all parties involved, ~~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 if [~~when~~] the permittee. [~~Permittee,~~] or the entity from which the permittee [~~Permittee~~] is leasing, owns both parcels separated by the [~~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 [~~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;
Amended Eff. June 18, ~~2011.~~2011;
Readopted Eff. September 1, 2018.

15A NCAC 02T .0507 is readopted with changes as published in 32:06 NCR 550-551 as follows:

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 the 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 [~~annually,~~] or as established by permit.

(e) ~~[Automobiles]~~Vehicles and heavy machinery shall not be allowed on the irrigation area [~~area,~~] except during installation or maintenance activities.

(f) Water level gauges shall be provided for all open-atmosphere treatment lagoons and ponds [~~ponds,~~] and open-atmosphere storage units.

(g) Vegetative cover shall be maintained on all earthen embankments.

(h) The permittee [~~Permittee~~] shall keep a log of maintenance activities that occur at the facility.

(i) The permittee [~~Permittee~~] shall perform inspections and maintenance to ensure proper operation of the facility.

History Note: *Authority G.S. 143-215.1; 143-215.3(a);*
Eff. September 1, ~~2006.~~2006;
Readoption Eff. September 1, 2018.

15A NCAC 02T .0508 is readopted as published in 32:06 NCR 551 as follows:

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, ~~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 management [~~disposal or utilization~~] ~~utilization,~~ or a written commitment to the permittee ~~Permittee~~ of a Department-approved ~~Department-approved~~ residuals management ~~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, ~~stored~~ and disposed.

(b) The permittee [~~Permittee~~] shall maintain a record of all residuals removed from the facility.

History Note: *Authority G.S. 143-215.1; 143-215.3(a);*
Eff. September 1, ~~2006.~~2006;
Readopted Eff. September 1, 2018.

15A NCAC 02T .0601 is readopted as published in 32:06 NCR 551 as follows:

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 deemed ~~considered~~ to be ground absorption systems in accordance with 15A NCAC 02L .0107.

History Note: *Authority G.S. 143-215.1; 143-215.3(a);*
Eff. September 1, ~~2006.~~2006;
Readopted Eff. September 1, 2018.

15A NCAC 02T .0604 is readopted with changes as published in 32:06 NCR 551-553 as follows:

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.~~ 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 [~~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 ~~Recommendations~~ concerning loading rates of liquids, solids, other wastewater constituents, ~~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 ~~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 ~~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;~~] ~~acidity,~~
   (B) base saturation [~~Base Saturation~~] (by calculation); ~~base saturation (by calculation),~~
   (C) calcium; [~~Calcium;~~] ~~calcium,~~
   (D) cation exchange capacity; [~~Cation Exchange Capacity;~~] ~~cation exchange capacity,~~
   (E) copper; [~~Copper;~~] ~~copper,~~
   (F) exchangeable sodium percentage [~~Exchangeable Sodium Percentage~~] (by calculation); ~~exchangeable sodium percentage (by calculation),~~

(G) magnesium; [~~Magnesium;~~] ~~magnesium,~~

(H) manganese; [~~Manganese;~~] ~~manganese,~~

(I) percent humic matter; [~~Percent Humic Matter;~~] ~~percent humic matter,~~

(J) pH; ~~pH,~~

(K) phosphorus; [~~Phosphorus;~~] ~~phosphorus,~~

(L) potassium; [~~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, ~~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, ~~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 each of the following that are located within 500 feet of a waste treatment, storage, or disposal site, including a delineation of their review and compliance boundaries:

(A) wells, including usage and construction details if available;

(B) ephemeral, intermittent, and perennial streams;

(C) springs;

(D) lakes;

(E) ponds; and

(F) other surface drainage features;

~~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;~~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) Property Ownership Documentation shall be provided to the Division consisting of:

(1) legal documentation of ownership, such as a contract, deed, or article of incorporation; ~~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.

(f) An Operation and Maintenance Plan addressing routine inspections, maintenance schedules, troubleshooting, ~~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 ~~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.

History Note: *Authority G.S. 143-215.1; 143-215.3(a);*
Eff. September 1, ~~2006.~~2006;
Readopted Eff. September 1, 2018.

15A NCAC 02T .0605 is readopted as published in 32:06 NCR 553 as follows:

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 ~~Biochemical Oxygen Demand~~ (BOD_5) ≤ 30 mg/L;

(2) total suspended solids ~~Total Suspended Solids~~ (TSS) ≤ 30 mg/L;

(3) ammonia ~~Ammonia~~ (NH_3-N) ~~(NH_3)~~ ≤ 15 mg/L; and

(4) fecal coliforms ~~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.

(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.

History Note: *Authority G.S. 143-215.1; 143-215.3(a);*
Eff. September 1, ~~2006.~~2006;
Readopted Eff. September 1, 2018.

15A NCAC 02T .0606 is readopted with changes as published in 32:06 NCR 553-554 as follows:

15A NCAC 02T .0606 SETBACKS

(a) The setbacks for ~~Irrigation~~ irrigation sites shall be as follows:

	Spray (feet)	Drip (feet)
Each ~~Any~~ habitable residence or place of ~~public~~ assembly under separate ownership or not to be maintained as part of the project site	400	100
Each ~~Any~~ habitable residence or place of ~~public~~ assembly owned by the [~~Permittee~~] permittee to be maintained as part of the project site	200	15
Each ~~Any~~ private or public water supply source	100	100
Surface waters such as intermittent and perennial streams, perennial waterbodies, and wetlands ~~(streams - intermittent and perennial, perennial waterbodies, and wetlands)~~	100	100
Groundwater lowering ditches where ~~(where~~ the bottom of the ditch intersects the ~~SHWT)~~ SHWT	100	100
Surface water diversions such as ephemeral streams, waterways, and ditches ~~(ephemeral streams, waterways, ditches)~~	25	25
Each ~~Any~~ well with exception of monitoring wells	100	100
Each ~~Any~~ property line	150	50
Top of slope of embankments or cuts of two feet or more in vertical height	15	15
Each ~~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
Each ~~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 all ~~both~~ parties involved, and recorded with the county ~~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 if [~~when~~] the permittee, [~~Permittee,~~] or the entity from which the permittee [~~Permittee~~] is leasing, owns both parcels separated by the [~~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 [~~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.

15A NCAC 02T .0608 is adopted with changes as published in 32:06 NCR 554 as follows:

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 [~~annually,~~] or as established by ~~permit~~ permit.

(d) ~~Automobiles~~ Vehicles and heavy machinery shall not be allowed on the irrigation area [~~area,~~] except during installation or maintenance activities.

(e) The permittee [~~Permittee~~] shall keep a log of maintenance activities that occur at the facility.

(f) The permittee [~~Permittee~~] shall perform inspections and maintenance to ensure proper operation of the facility.

History Note: *Authority G.S. 143-215.1; 143-215.3(a);*
Eff. September 1, 2018.

15A NCAC 02T .0701 is readopted as published in 32:06 NCR 554 as follows:

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 shall 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.

History Note: *Authority G.S. 143-215.1; 143-215.3(a);*
Eff. September 1, ~~2006.~~2006;
Readopted Eff. September 1, 2018.

15A NCAC 02T .0702 is readopted with changes as published in 32:06 NCR 554 as follows:

15A NCAC 02T .0702 DEFINITIONS

~~A~~ As ~~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).~~

History Note: *Authority G.S. 143-215.1; 143-215.3(a);*
Eff. September 1, ~~2006.~~2006;
Readopted Eff. September 1, 2018.

15A NCAC 02T .0704 is readopted with changes as published in 32:06 NCR 554-557 as follows:

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.~~ 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 [~~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 ~~Recommendations~~ concerning loading rates of liquids, solids, other wastewater constituents, ~~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 ~~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 ~~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;~~] ~~acidity,~~

(B) base saturation [~~Base Saturation~~] (by calculation); ~~base saturation (by calculation),~~

(C) calcium; [~~Calcium;~~] ~~calcium,~~

(D) cation exchange capacity; [~~Cation Exchange Capacity;~~] ~~cation exchange capacity,~~

(E) copper; [~~Copper;~~] ~~copper,~~

(F) exchangeable sodium percentage [~~Exchangeable Sodium Percentage~~] (by calculation); ~~exchangeable sodium percentage (by calculation),~~

(G) magnesium; [~~Magnesium;~~] ~~magnesium,~~

(H) manganese; [~~Manganese;~~] ~~manganese,~~

(I) percent humic matter; [~~Percent Humic Matter;~~] ~~percent humic matter,~~

(J) pH; ~~pH,~~

(K) phosphorus; [~~Phosphorus;~~] ~~phosphorus,~~

(L) potassium; [~~Potassium;~~] ~~potassium,~~

(M) sodium; [~~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, ~~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, ~~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 each of the following that are located within 500 feet of a waste treatment, storage, or disposal site, including a delineation of their review and compliance boundaries:

(A) wells, including usage and construction details if available;

(B) ephemeral, intermittent, and perennial streams;

(C) springs;

(D) lakes;

(E) ponds; and

(F) other surface drainage features;

~~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 .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~~ 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 [~~day, and can~~] demonstrate that the effluent will be of quality similar to domestic wastewater, [~~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 shall be ~~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~~ 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, such as a contract, deed, or article of incorporation; ~~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)](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;] Total Organic Carbon,

(2) 5-day biochemical oxygen demand [Biochemical Oxygen Demand] (BOD_5); 5-day Biochemical Oxygen Demand (BOD_5),

(3) chemical oxygen demand [Chemical Oxygen Demand] (COD); Chemical Oxygen Demand (COD),

(4) nitrate nitrogen [Nitrate Nitrogen] (NO_3-N); Nitrate Nitrogen (NO_3-N),

(5) ammonia nitrogen [Ammonia Nitrogen] (NH_3-N); Ammonia Nitrogen (NH_3-N),

(6) total kjeldahl nitrogen [Total Kjeldahl Nitrogen] (TKN); Total Kjeldahl Nitrogen (TKN),

(7) pH; pH,

(8) chloride; [Chloride;] Chloride,

(9) total phosphorus; [Total Phosphorus;] Total Phosphorus,

(10) phenol; [Phenol;] Phenol,

(11) total volatile organic compounds; [Total Volatile Organic Compounds;] Total Volatile Organic Compounds,

(12) fecal coliform; [Fecal Coliform;] Fecal Coliform,

(13) calcium; [Calcium;] Calcium,

(14) sodium; [Sodium;] Sodium,

(15) magnesium; [Magnesium;] Magnesium,

(16) sodium adsorption ratio [Sodium Adsorption Ratio] (SAR); Sodium Adsorption Ratio (SAR),

(17) total trihalomethanes; [Total Trihalomethanes;] Total Trihalomethanes, and Toxicity Test Parameters and

(18) total dissolved solids. 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, minerals and other constituents of the wastewater shall be provided to the Division.

(j) A Residuals Management Plan 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] applicant shall provide to the Division a water balance that determines the required effluent storage based on the [following] most limiting factor from the following: [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.

History Note: *Authority G.S. 143-215.1; 143-215.3(a);*
Eff. September 1, ~~2006.~~2006;
Readopted Eff. September 1, 2018.

15A NCAC 02T .0705 is readopted with changes as published in 32:06 NCR 557-558 as follows:

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 (NH^3-N) ≤ 4 mg/L; Fecal Coliforms ≤ 14 per 100 mL; and Nitrate Nitrogen (NO^3-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~~] New and expanding systems:

(1) that are municipal, [~~domestic and~~] domestic, or 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 [~~Biochemical Oxygen Demand~~] (BOD_5) ≤ 10 mg/L;

(B) total suspended solids [~~Total Suspended Solids~~] (TSS) ≤ 15 mg/L;

(C) ammonia [~~Ammonia~~] (NH_3-N) ≤ 4 mg/L;

(D) fecal coliforms [~~Fecal Coliforms~~] ≤ 14 colonies/100 mL; and

(E) nitrate nitrogen [~~Nitrate Nitrogen~~] (NO_3-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 [~~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, ~~ponds~~ or trenches, excluding holding ponds containing non-industrial treated effluent prior to ~~spray irrigation~~ infiltration, for treatment, storage, ~~storage~~ or disposal, ~~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 x 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, ~~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 x 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 [~~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, ~~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 established 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) Influent 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/ft^2).

(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 [~~storage,~~] unless the applicant [~~Applicant~~] demonstrates that the infiltrated effluent will not pond, runoff, [~~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.

History Note: *Authority G.S. 143-215.1; 143-215.3(a);*
Eff. September 1, ~~2006.~~2006;
Readopted Eff. September 1,2018.

15A NCAC 02T .0706 is readopted with changes as published in 32:06 NCR 558-559 as follows:

15A NCAC 02T .0706 SETBACKS

(a) The setbacks for ~~Infiltration Units~~ infiltration sites shall be as follows:

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

	~~(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 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 effluent limits of ~~a Total Nitrogen of~~ 7 ~~mg/l~~ mg/L of total nitrogen and ~~Total Phosphorus of~~ 3 ~~mg/l~~ mg/L of total phosphorus. ~~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 effluent limits of ~~a Total Nitrogen of~~ 4 ~~mg/l~~ mg/L of total nitrogen and ~~Total Phosphorus of~~ 2 ~~mg/l~~ mg/L of total phosphorus. ~~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. ~~Subchapter~~ except as provided in this Rule.

(e) Setback waivers shall be written, notarized, signed by all parties involved, ~~involved~~ and recorded with the county ~~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 if [~~when~~] the permittee, [~~Permittee,~~] or the entity from which the permittee [~~Permittee~~] is leasing, owns both parcels separated by the [~~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 [~~modified,~~] are exempt from the setback requirements in Paragraphs (a) and (d) 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.

15A NCAC 02T .0707 is readopted with changes as published in 32:06 NCR 559 as follows:

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 the 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 [~~annually,~~] or as established by permit.

(e) [~~Automobiles~~]Vehicles and heavy machinery shall not be allowed on the infiltration area [~~area,~~] except during installation or maintenance activities.

(f) Water level gauges shall be provided for all open-atmosphere treatment lagoons and ponds [~~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 [~~cycle,~~] or as established by permit.

(i) The permittee [~~Permittee~~] shall keep a log of all maintenance activities that occur at the facility.

(j) The permittee [~~Permittee~~] shall perform inspections and maintenance to ensure proper operation of the facility.

History Note: *Authority G.S. 143-215.1; 143-215.3(a);*
Eff. September 1, ~~2006.~~2006;
Readopted Eff. September 1, 2018.

15A NCAC 02T .0708 is readopted as published in 32:06 NCR 559-560 as follows:

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, ~~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 management [~~disposal or~~] ~~utilization,~~ [~~utilization~~] or a written commitment to the permittee ~~Permittee~~ of a ~~Department-approved~~ Department-approved residuals management ~~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, ~~stored~~ and disposed.

(b) The permittee [~~Permittee~~] shall maintain a record of all residuals removed from the facility.

History Note: *Authority G.S. 143-215.1; 143-215.3(a);*
Eff. September 1, ~~2006.~~2006;
Readopted Eff. September 1, 2018.

15A NCAC 02T .0804 is readopted as published in 32:06 NCR 560 as follows:

15A NCAC 02T .0804 APPLICATION SUBMITTAL

Submittal requirements shall be the same as systems permitted pursuant to ~~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.

History Note: *Authority G.S. 143-215.1; 143-215.3(a.);*
Eff. September 1, ~~2006.~~2006;
Readopted Eff. September 1, 2018.

15A NCAC 02T .0805 is readopted as published in 32:06 NCR 560 as follows:

15A NCAC 02T .0805 DESIGN CRITERIA

Design requirements shall be the same as systems permitted pursuant to ~~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.

History Note: *Authority G.S. 143-215.1; 143-215.3(a);*
Eff. September 1, ~~2006.~~2006;
Readopted Eff. September 1, 2018.

15A NCAC 02T .0806 is readopted with changes as published in 32:06 NCR 560 as follows:

15A NCAC 02T .0806 SETBACKS

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 for infiltration units.~~ .0706.

History Note: *Authority G.S. 143-215.1; 143-215.3(a);*
Eff. September 1, ~~2006.~~2006;
Readopted Eff. September 1, 2018.

15A NCAC 02T .0807 is adopted as published in 32:06 NCR 590 as follows:

15A NCAC 02T .0807 OPERATION AND MAINTENANCE

Operation and maintenance requirements shall be the same as systems permitted pursuant to [~~under~~] 15A NCAC 02T .0707.

History Note: Authority G.S. 143-215.1; 143-215.3(a);
Eff. September 1, 2018.

15A NCAC 02T .0808 is adopted as published in 32:06 NCR 560 as follows:

15A NCAC 02T .0808 RESIDUALS MANAGEMENT

Residuals management requirements shall be the same as systems permitted pursuant to [~~under~~] 15A NCAC 02T .0708.

History Note: Authority G.S. 143-215.1; 143-215.3(a);
Eff. September 1, 2018.

15A NCAC 02T .1101 is readopted with changes as published in 32:06 NCR 560 as follows:

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~~ shall be the treatment, storage, transportation, use, or disposal of:

(1) oil, grease, grit, ~~grit~~ and screenings from wastewater treatment facilities;

(2) septage from wastewater treatment facilities;

(3) ash that is regulated in accordance with ~~Section .1200;~~Section .1200 of this Subchapter;

(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.,~~] but not from a wastewater treatment, water supply treatment, or air pollution control facility permitted under the authority of the Commission. [~~Commission).~~]

History Note: *Authority G.S. 143-215.1; 143-215.3(a);*
Eff. September 1, ~~2006.~~2006;
Readopted Eff. September 1, 2018.

15A NCAC 02T .1102 is readopted with changes as published in 32:06 NCR 560-562 as follows:

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, ~~ton~~ or less.

(5) "Base flood" shall mean a flood that has a one percent chance ~~change~~ of occurring in any given 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 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.

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

(a) the pollutant limits [~~Pollutant Limits~~] in Rule .1105(a) [~~of this Section and Rule~~] and .1105(c) of this Section;

(b) the pathogen reduction requirements [~~Pathogen Reduction Requirements~~] in Rule .1106(a) of this Section; and

(c) the vector attraction reduction requirements [~~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 [~~Pollutant Limits~~] in Rule .1105(a) [~~of this Section and Rule~~] and .1105(b) of this Section;

(b) the pathogen reduction requirements [~~Pathogen Reduction Requirements~~] in Rule .1106(b) of this Section; and

(c) the vector attraction reduction requirements [~~Vector Attraction Reduction Requirements~~] in Rule .1107 of this Section.

(11)[~~(8)~~](9) "Cover" shall mean soil or ~~other~~ Division-approved material used to cover residuals placed in a surface disposal unit.

(12)[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.

(13)[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.

(14)[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~~ that is primarily used for the disposal of ~~bulk residuals,~~ residuals and agricultural crop production is of secondary importance.

(15) ~~[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.

(16) ~~[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.

(17)[14](15) "Feed crop" shall mean a crop produced for consumption by animals.

(18)[15](16) "Fiber crop" shall mean a crop grown for fiber ~~production. This shall include~~ production, including flax and cotton.

(19)[16](17) "Food crop" shall mean a crop produced for consumption by ~~humans. This shall include~~ humans, including fruits, vegetables, and tobacco.

(20)[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.

(21)[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.

(22)[19](20) "Injection" shall mean the subsurface application of liquid residuals to a depth of four to 12 inches.

(23)[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.

(24)[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.

(25)[22](23) "Monthly average" shall mean the arithmetic mean of all measurements taken during ~~the~~ a month.

(26)[23](24) "Pathogens" shall mean disease-causing ~~organisms~~ organisms, including disease-causing bacteria, protozoa, viruses, and viable helminth ova.

(27)[24](25) "Place residuals" shall mean to dispose of residuals in a surface disposal unit.

(28)[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.

(29)[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.

(30)[27](28) "Public contact site" shall mean land with a high potential for contact by the public as defined in 40 CFR 503.11(l). This shall include 503.11(1), including public parks, ball fields, cemeteries, plant nurseries, turf farms, and golf courses.

(31) [28](29) "Runoff" shall mean rainwater, leachate, or other liquid that drains over overland and runs off of the land surface.

(32)[29](30) "Screenings" shall mean rags or other relatively large materials generated during preliminary treatment of wastewater in a wastewater treatment facility.

(33)[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.

(34)[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.

(35)[32](33) "Surface disposal unit" shall mean the land on which only residuals are placed for final disposal, including monofills, lagoons, and trenches, [trenches] and not including land on which residuals are [is] either treated or stored. not including land on which residuals is either treated or stored. This shall include monofills, lagoons, and trenches.

(36)[33](34) "Surface disposal unit boundary" shall mean the outermost perimeter of a surface disposal unit.

(37)[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.

(38)[35](36) "Water treatment residuals" shall mean residuals that have been generated during the treatment of potable or process water.

(39)[36](37) "Unstabilized residuals" shall mean residuals that have not been treated in either an aerobic or an anaerobic treatment process.

(40)[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.

(41)[38](39) "Vector attraction" shall mean the characteristic of residuals that attracts rodents, flies, mosquitoes, or other organisms capable of transporting infectious agents.

(42)[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.

History Note: *Authority G.S. 143-215.1; 143-215.3(a);*
Eff. September 1, ~~2006~~.2006;
Readopted Eff. September 1, 2018.

15A NCAC 02T .1103 is readopted with changes as published in 32:06 NCR 562 as follows:

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 ~~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; ~~residuals.~~

(2) land ~~Land~~ application of residuals that have been prepared for land application in a solid waste facility permitted by the Division of Waste Management and approved to receive the residuals ~~as long as~~ if the requirements of this Section are met; ~~met.~~

(3) land ~~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; ~~Section,~~

(B) the residuals meet the pathogen requirements in Rule ~~.1106(a)(1).~~1106(a) of this Section; ~~Section,~~

(C) the residuals meet the vector attraction reduction requirements in Rule .1107(a) of this Section; ~~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; ~~Section,~~

(4) land ~~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; ~~Section,~~

(B) the residuals meet the pathogen requirements in Rule ~~.1106(b).~~1106(a) of this Section; ~~Section,~~

(C) the residuals meet the vector attraction reduction requirements in Rule .1107(a) of this Section; ~~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; ~~Section,~~

(5) land ~~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; ~~Section,~~

(B) the residuals meet the pathogen requirements in Rule .1106(b) of this Section; ~~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; and ~~Section.~~

(6) transportation ~~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.

History Note: *Authority G.S. 143-215.1; 143-215.3(a);*
Eff. September 1, ~~2006.~~2006.
Readopted Eff. September 1, 2018.

15A NCAC 02T .1104 is readopted with changes as published in 32:06 NCR 563-569 as follows:

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, ~~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 each of the following that are located within 500 feet of a waste treatment, or storage site, including a delineation of their review and compliance boundaries:

(i) wells, including usage and construction details if available;

(ii) ephemeral, intermittent, and perennial streams;

(iii) springs;

(iv) lakes;

(v) ponds; and

(vi) other surface drainage features;

~~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~~ 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, ~~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 each of the following that are located within 500 feet of the land application site, including a delineation of its review and compliance boundaries:

(i) wells, including usage and construction details if available;

(ii) ephemeral, intermittent, and perennial streams;

(iii) springs;

(iv) lakes;

(v) ponds; and

(vi) other surface drainage features;

~~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.~~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 ~~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; and [~~table.~~] ~~table (SHWT).~~

(B) a ~~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, ~~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, ~~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, ~~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 each of the following that are located within 500 feet of the land application site, including a delineation of its review and compliance boundaries:

(i) wells, including usage and construction details if available;

(ii) ephemeral, intermittent, and perennial streams;

(iii) springs;

(iv) lakes;

(v) ponds; and

(vi) other surface drainage features;

~~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 ~~(for~~ land applications sites onto which ~~bulk~~ residuals are applied only through fixed irrigation facilities or irrigation facilities fed through a fixed supply system. ~~system only).~~ 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~~ 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.~~ 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 ~~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; ~~site.~~

(B) recommendations ~~Recommendations~~ concerning loading rates of liquids, solids, other residuals constituents, ~~constituents~~ and amendments ~~(i.e.,~~ for land application sites onto which ~~bulk~~ residuals are applied only through fixed irrigation facilities or irrigation facilities fed through a fixed supply system. ~~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; ~~unit.~~

(C) a ~~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; and [~~unit.~~]

(D) a ~~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 shall be ~~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 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 [~~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, such as a contract, deed, or article of incorporation; ~~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 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, ~~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 each of the following that are located within 500 feet of a waste treatment, storage, or disposal site, including a delineation of their review and compliance boundaries:

(i) wells, including usage and construction details if available;

(ii) ephemeral, intermittent, and perennial streams;

(iii) springs;

(iv) lakes;

(v) ponds; and

(vi) other surface drainage features;

~~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.~~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 ~~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; and ~~site.~~

(B) a ~~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 shall be ~~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, such as a contract, deed, or article of incorporation; ~~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 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.

History Note: *Authority G.S. 143-215.1; 143-215.3(a);*
Eff. September 1, ~~2006.~~2006;
Readopted Eff. September 1, 2018.

15A NCAC 02T .1105 is readopted with changes as published in 32:06 NCR 569-570 as follows:

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):~~

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

(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 (i.e., on a dry weight basis):~~

Pollutant	Cumulative Pollutant Loading Rate (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:

(1)~~(A)~~ [~~By~~] 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

(2)~~(B)~~ [~~For~~] 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.

~~(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.~~

(c) ~~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):~~

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

(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)		
	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

75 to less than 100	46	300	320
100 to less than 125	53	360	390
125 ~~and greater~~ to less than 150	62	450	420
greater than 150	73	600	420

History Note: *Authority G.S. 143-215.1; 143-215.3(a);*
Eff. September 1, ~~2006.~~2006;
Readopted Eff. September 1, 2018.

15A NCAC 02T .1106 is readopted with changes as published in 32:06 NCR 570-572 as follows:

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.~~

(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, ~~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 and Temperature. ~~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] ~~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~~ Viruses or 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~~ Viruses or 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 shall exceed ~~exceeds~~ 80 degrees ~~Celcius,~~ 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, ~~temperature~~ ~~(i.e., approximately 20 degrees Celsius),~~ [~~(i.e.,~~] approximately 20 degrees Celsius; [~~Celcius);~~]

(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, ~~temperature (i.e., approximately 20 degrees Celsius),~~ [~~(i.e.,~~] approximately 20 degrees Celsius; [~~Celcius);~~] 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)~~(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 and 60 days at 15 degrees ~~Celcius,~~ 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 ~~Celcius,~~ 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 ~~Celcius,~~ 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 method in Rule .1107(b)(2) of this Section is met.

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

History Note: *Authority G.S. 143-215.1; 143-215.3(a);*
Eff. September 1, ~~2006.~~2006;
Readopted Eff. September 1, 2018.

15A NCAC 02T .1107 is readopted as published in 32:06 NCR 572-573 as follows:

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 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;

(4) 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 ~~Celcius,~~ 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 ~~Celcius,~~ 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 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,~~

(9) Injection.

(A) Class B biological ~~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 [~~Permittee~~] demonstrates that the residuals are pathogen free or meet the pathogen requirements in Rule .1106(b)(2) of this Section.

History Note: *Authority G.S. 143-215.1; 143-215.3(a);*
Eff. September 1, ~~2006.~~2006;
Readopted Eff. September 1, 2018.

15A NCAC 02T .1108 is readopted with changes in 32:06 NCR 573-575 as follows:

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:~~

Each [~~Any~~] habitable residence ~~Habitable residences~~ or place ~~places~~ of ~~public~~ assembly under separate ownership or not to be maintained as part of the project site	100
Each [~~Any~~] private ~~Private~~ or public water supply source ~~sources~~	100
Surface waters such as intermittent and perennial streams, perennial waterbodies, and wetlands ~~(streams – intermittent and perennial, lakes, perennial waterbodies, and wetlands)~~	50
Each [~~Any~~] well ~~Wells~~ with exception of ~~to~~ monitoring wells	100
Each [~~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:~~

	Liquid Residuals	Cake Residuals
Each [~~Any~~] private ~~Private~~ or public water supply source ~~sources~~	100	100
Surface waters such as intermittent and perennial streams, perennial waterbodies, and wetlands ~~(streams – intermittent and perennial, lakes, perennial waterbodies, and wetlands)~~	100	25
Surface water diversions such as ephemeral streams, waterways, and ditches ~~(ephemeral streams, waterways, ditches)~~	25	0
Groundwater lowering ditches where ~~(where~~ the bottom of the ditch intersects the SHWT ~~SHWT)~~	25	0
Each [~~Any~~] well ~~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
Each [~~Any~~] habitable residence ~~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
Each [~~Any~~] habitable residence ~~Habitable residences~~ or place ~~places~~ of ~~public~~ assembly owned by the [~~Permittee,~~] permittee, the owner of the land, or the lessee or operator ~~lessee/operator~~ of the land to be maintained as part of the project site	0	200	0
Each [~~Any~~] property line ~~Property lines~~	50	150	50
Public right ~~rights~~ of way	50	50	50
Each [~~Any~~] private ~~Private~~ or public water supply source ~~sources~~	100	100	100
Surface waters such as intermittent and perennial streams, perennial waterbodies, and wetlands ~~(streams - intermittent and perennial, lakes, perennial waterbodies, and wetlands)~~	~~100~~ 32.8	~~100~~ 32.8	~~50~~ 32.8
Surface water diversions such as ephemeral streams, waterways, and ditches ~~(ephemeral streams, waterways, ditches)~~	25	~~100~~ 25	25
Groundwater lowering ditches where ~~(where~~ the bottom of the ditch intersects the SHWT ~~SHWT)~~	25	100	25
Subsurface groundwater lowering drainage systems	0	100	0
Each [~~Any~~] well ~~Wells~~ 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
Each [~~Any~~] building foundation ~~Building foundations~~ or basement ~~basements~~	0	15	0
Each [~~Any~~] water line ~~Water lines~~	0	10	0
~~Swimming pools~~	~~100~~	~~100~~	~~100~~
Nitrification field ~~fields~~	0	20	0

(d)~~(c)~~ 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:~~

Each [~~Any~~] habitable residence ~~Habitable residences~~ or place ~~places~~ of ~~public~~ assembly under separate ownership or not to be maintained as part of the project site	400
Each [~~Any~~] property line ~~Property lines~~	50
Public right ~~rights~~ of way	50
Each [~~Any~~] private ~~Private~~ or public water supply source ~~sources~~	100
Surface waters such as intermittent and perennial streams, perennial waterbodies, and	

wetlands ~~(streams – intermittent and perennial, lakes, perennial waterbodies, and wetlands)~~	100
Surface water diversions such as ephemeral streams, waterways, and ditches ~~(ephemeral streams, waterways, ditches)~~	25
Groundwater lowering ditches (where the bottom of the ditch intersects the SHWT)	100
Subsurface groundwater lowering drainage systems	100
Each [~~Any~~] well ~~Wells~~ with exception of ~~to~~ monitoring wells	100
Each [~~Any~~] water line ~~Water lines~~	10
~~Swimming pools~~	~~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.]~~ Setback waivers shall be written, notarized, signed by all parties involved, [~~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), (c), and (d) of this Rule shall not be applicable if [~~when~~] the permittee, [~~Permittee;~~] the entity from which the permittee [~~Permittee~~] is leasing, [~~leasing;~~] or the entity that executed the notarized landowner agreement in 15A NCAC 02T .1104(c)(4) owns both parcels separated by the [~~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 [~~modified,~~] are exempt from the setback requirements in Paragraphs (a) and (d) 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.

15A NCAC 02T .1109 is readopted with changes as published in 32:06 NCR 575-577 as follows:

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, ~~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 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;~~

(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 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 shall be [~~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 is [~~shall be~~] prohibited except with the instructions on the label or information sheet; and

(3) that residuals must [~~shall~~] be applied at agronomic rates and recommended rates for intended uses.

(d)~~(c)~~ Surface disposal units shall meet the following requirements: ~~For surface disposal units, the following conditions shall be met:~~

(1) New ~~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,~~ [~~acceleration;~~]

(B) Surface disposal units shall not be located less than 60 meters from a fault that has displacement in Holocene time. ~~time,~~ [~~time;~~]

(C) Surface disposal units shall not be located within ~~an~~ a geologically unstable area. ~~area,~~ [~~area;~~]

(D) Surface disposal units shall not be located within the 100-year floodplain. ~~floodplain,~~ [~~floodplain;~~]

(E) Surface disposal units shall not restrict base flood flow. ~~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,~~ [~~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,~~ [~~met;~~]

(B) Surface disposal units shall not cause ~~prolonged~~ nuisance conditions. ~~conditions,~~ [~~conditions;~~]

(C) Surface disposal units shall not cause the contravention of surface water or groundwater standards. ~~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,~~ [~~units;~~]

(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,~~ [~~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,~~ [~~unit;~~]

(G) Public access to surface disposal units shall be restricted continuously. ~~continuously,~~ [~~continuously;~~]

(H) Animals shall not be allowed to graze on surface disposal units. ~~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.

History Note: *Authority G.S. 143-215.1; 143-215.3(a);*
Eff. September 1, ~~2006.~~2006;
Readopted Eff. September 1, 2018.

15A NCAC 02T .1110 is readopted as published in 32:06 NCR 577 as follows:

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 [~~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 [~~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.

History Note: *Authority G.S. 143-215.1; 143-215.3(a);*
Eff. September 1, ~~2006.~~2006;
Readopted Eff. September 1, 2018.

15A NCAC 02T .1111 is readopted as published in 32:06 NCR 577-578 as follows:

15A NCAC 02T .1111 MONITORING AND REPORTING

(a) Representative samples of residuals that are prepared for land application ~~to the land~~ 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),~~] [~~shall be~~] are incorporated by reference with subsequent amendments and editions. This regulation may be found at no cost at: https://www.epa.gov/laws-regulations/regulations. ~~as stated on January 1, 1996 shall be incorporated into this Section by reference.~~

(c) Residuals land applied ~~to the land~~ or placed in a surface disposal unit shall be monitored for pollutants as ~~listed in~~ required by Rules .1105(a), .1105(d), .1106, and .1107 [~~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 (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)

(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.

History Note: *Authority G.S. 143-215.1; 143-215.3(a);*
Eff. September 1, ~~2006.~~2006;
Readopted Eff. September 1, 2018.

15A NCAC 02T .1202 is readopted as published in 32:06 NCR 578-579 as follows:

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, ~~surface;~~ the injection of CCPs below the land surface, ~~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, 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.

History Note: *Authority G.S. 143-215.1; 143-215.3(a);*
Eff. September 1, ~~2006.~~2006;
Readopted Eff. September 1, 2018.

15A NCAC 02T .1203 is readopted with changes as published in 32:06 NCR 579 as follows:

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,~~Paragraph (a) of this Rule, 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.

History Note: *Authority G.S. 143-215.1; 143-215.3(a);*
Eff. September 1, ~~2006.~~2006;
Readopted Eff. September 1, 2018.

15A NCAC 02T .1204 is readopted as published in 32:06 NCR 579-580 as follows:

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,~~] ~~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~~] 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, [~~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 boundry 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 to the source of CCPs that addresses the use of CCPs at sites where the CCPs are used for bedding. 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.

History Note: *Authority G.S. 143-215.1; 143-215.3(a);*
Eff. September 1, 2006.2006;
Readopted Eff. September 1, 2018.

15A NCAC 02T .1206 is readopted as published in 32:06 NCR 581 as follows:

15A NCAC 02T .1206 SETBACKS

For areas in which CCPs are stored, ~~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, ~~setbacks (i.e., in feet)~~ in [~~feet~~] feet, shall be adhered to:

Each private ~~Private~~ or public water supply source ~~sources~~	100
Surface waters such as intermittent and perennial streams, perennial waterbodies, and wetlands ~~(streams – intermittent and perennial, lakes, perennial waterbodies, and wetlands)~~	50
Each well ~~Wells~~ with exception ~~to~~ of 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.

History Note: *Authority G.S. 143-215.1; 143-215.3(a);*
Eff. September 1, ~~2006.~~2006;
Readopted Eff. September 1, 2018.

15A NCAC 02T .1207 is readopted as published in 32:06 NCR 581 as follows:

15A NCAC 02T .1207 ~~OPERATION AND~~ MANAGEMENT PRACTICES

(a) For CCPs that are ~~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.

History Note: *Authority G.S. 143-215.1; 143-215.3(a);*
Eff. September 1, ~~2006.~~2006;
Readopted Eff. September 1, 2018.

15A NCAC 02T .1208 is readopted with changes as published in 32:06 NCR581 as follows:

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.

History Note: *Authority G.S. 143-215.1; 143-215.3(a);*
Eff. September 1, ~~2006.~~2006;
Readopted Eff. September 1, 2018.

15A NCAC 02T .1209 is readopted as published in 32:06 NCR 581 as follows:

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, ~~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.

History Note: *Authority G.S. 143-215.1; 143-215.3(a);*
Eff. September 1, ~~2006.~~2006;
Readopted Eff. September 1, 2018.

15A NCAC 02T .1301 is readopted with changes as published in 32:06 NCR 582 as follows:

SECTION .1300 – ANIMAL WASTE MANAGEMENT SYSTEMS

15A NCAC 02T .1301 SCOPE

The rules in this Section shall apply to all persons proposing to construct, modify, expand, or operate an animal waste management system. These Rules ~~do~~ shall not apply to manure haulers regulated pursuant to Section .1400 of this Subchapter.

History Note: *Authority G.S. 143-215.1; 143-215.3(a); 143-215.10A;*
Eff. September 1, ~~2006.~~2006;
Readopted Eff. September 1, 2018.

15A NCAC 02T .1302 is readopted with changes as published 32:06 NCR 582 as follows:

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 and .1102 of this Subchapter, ~~[of Rule .1102 in this Subchapter,]~~ and as follows shall apply to this Section. ~~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.]~~

(4)~~(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.~~associated with the animal waste management system.

(5)~~(3)[(6)]~~ "New animal waste management system" means animal waste management systems ~~which~~ that 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~~] new animal waste management [~~system'~~] system shall not [~~apply to~~] include a facility where a system serving a feedlot [~~which~~] that 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:~~] the facility:

~~[(A)]~~(a) [~~Has~~] has had no animals on site for five continuous years or more;

~~[(B)]~~(b) [~~Notifies~~] notifies the Division in writing at least 60 days prior to bringing any animals back on to the site;

~~[(C)]~~(c) [~~The system~~] was depopulated after January 1, 2005, and the system ceased operation no longer than 10 years prior to the current date;

~~[(D)]~~(d) [~~At~~] 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)]~~(e) [~~The Division issues~~] was issued 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)](f) [The permit for the animal waste management system] was issued a permit that 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)](g) has [No] 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)](h) has an [The] inactive animal waste management system that 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.

(6)(4)[(7)] "NRCS" means the U.S. Department of Agriculture - Natural Resources Conservation Service.

History Note: *Authority G.S. 143-215.1; 143-215.3(a); 143-215.10A; S.L. 2013-413; S.L. 2015-263;*
Eff. September 1, 2006.2006;
Readopted Eff. September 1, 2018.

15A NCAC 02T .1303 is readopted with changes as published in 32:06 NCR 582-583 as follows:

15A NCAC 02T .1303 PERMITTING BY REGULATION

(a) The following systems ~~are~~ shall be 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~~ by 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 animal 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 animal waste is ~~[not]~~ no closer than 100 feet ~~[of]~~ from a ~~[well;]~~ 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~~ that 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~~ that include the dates the litter was removed, the estimated amount of litter ~~removed~~ 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;]~~ 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;]~~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~~ are maintained of the dates the litter was removed, the estimated amount of litter removed, and the name, ~~address~~ address, and phone number of the manure hauler.

(3) Land application sites under separate ownership from the waste generator, ~~receiving~~ that receive animal waste from animal waste management systems ~~which~~ that 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;]~~ 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.

History Note: *Authority G.S. 143-215.1; 143-215.3(a); 143-215.10A;*
Eff. September 1, ~~2006.~~2006;
Readopted Eff. September 1, 2018.

15A NCAC 02T .1304 is readopted with changes as published in 32:06 NCR 583-584 as follows:

15A NCAC 02T .1304 STATE PERMITTING REQUIREMENTS

(a) This rule ~~applies~~ shall apply 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.~~ pursuant to Rule .1305 of this Section.

(b) An animal waste management plan shall be submitted as follows:

(1) The animal waste management practices or combination of practices ~~which~~ that are selected to comprise a plan for a specific facility ~~must~~ shall 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~~ that provide water quality protection and are approved by one of these two agencies; and all applicable ~~state~~ State statutes and rules at the time of development or design. NRCS standards relating to phosphorus application rates for animal waste ~~are~~ shall not be 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~~.

(2) Permittee shall submit plans that have been approved by a technical specialist. The technical specialist shall certify that the best management practices that comprise the approved plan meet applicable standards and specifications, pursuant to G.S. 143-215.10C. The certification shall 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.

~~(5)~~(3) The waste shall not be applied at greater than agronomic rates.

~~(3)~~(4) The land application and siting setbacks ~~must~~ shall meet the applicable conditions established in G.S. 106-803 and NRCS standards at the time of ~~construction.~~ site construction or at the time waste is first applied at the land application ~~[site is first put into use.]~~ site.

(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,]~~ well other than a monitoring well and no closer than 200 feet from a dwelling not owned by the waste generator at the time waste is first applied at the land application ~~[site is first put into use.]~~ site. 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 of 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~~] shall be prohibited during precipitation events.

(9) All waste application equipment [~~must~~] shall be tested and calibrated at least once every two calendar years, and the results [~~must~~] shall 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~~] 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~~ systems, such as lagoons and waste storage ~~structures~~ 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~~ shall be issued before the additional animals are stocked.

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

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

History Note: *Authority G.S. 106-803; 143-215.1; 143-215.3(a); 143-215.10A; 143-215.10C; 143-215.10I;*
Eff. September 1, ~~2006.~~2006;
Readopted Eff. September 1, 2018.

15A NCAC 02T .1305 is readopted with changes as published in 32:06 NCR 584-585 as follows:

15A NCAC 02T .1305 NPDES PERMITTING REQUIREMENTS

(a) This Rule ~~applies~~ shall apply to animal waste management systems subject to regulation ~~under~~ pursuant to 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~~ that are selected to comprise a plan for a specific facility ~~must~~ shall 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~~ that provide water quality protection and are approved by one of these two agencies; and all applicable ~~state~~ 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.~~

(2) Permittee shall submit plans that have been approved by a technical specialist. The technical specialist shall certify that the best management practices that comprise the approved plan meet applicable standards and specifications, pursuant to G.S. 143-215.10C. The certification shall 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.

~~(5)~~(3) The waste shall not be applied at greater than agronomic rates.

~~(3)~~(4) The land application and siting setbacks ~~must~~ shall 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 waste is first applied at the land application ~~[site is first put into use.]~~ site..

(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]~~ well other than a monitoring well and no closer than 200 feet from a dwelling not owned by the waste generator at the time waste is first applied at the land application ~~[site is first put into use.]~~ site. 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 of 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~~] shall be prohibited during precipitation events.

(9) All waste application equipment [~~must~~] shall be tested and calibrated at least once every calendar year, and the results [~~must~~] shall 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~~] 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~~ systems, such as lagoons and waste storage ~~structures~~ 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~~ that are selected to comprise a plan for a specific facility ~~must~~ shall meet NRCS standards, ~~or~~ the standard of practices adopted by the Soil and Water Conservation Commission, or standards for any combination of practices ~~which~~ that provide water quality protection and are approved by one of these two agencies; and all applicable ~~state~~ State statutes and rules and all applicable federal requirements at the time of development or design.

(2) The land application and siting setbacks ~~must~~ shall meet the conditions established in NRCS standards and 40 CFR Part 412 at the time of construction.

(3) New and expanded animal waste ~~structures~~ structures, such as houses and dry ~~stacks~~ 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,~~] of this Rule, land application of [~~waste~~] litter shall be no closer than 100 feet from a [~~well~~] well other than a monitoring well and no closer than 200 feet from a dwelling not owned by the waste [~~generator.~~]generator at the time waste is first applied at the land application site. 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 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]~~ shall be prohibited during precipitation events.

(8) All waste application equipment ~~must~~ shall be tested and calibrated at least once every calendar year, and the results ~~must~~ shall 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~~] 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~~ shall be issued before the additional animals are stocked.

(d) For each change of ownership of the system, the new owner ~~must~~ shall 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~~ shall demonstrate compliance with Rule .1307 of this Section prior to receiving a permit from the Division.

History Note: *Authority G.S. 106-803; 143-215.1; 143-215.3(a); 143-215.10A; 143-215.10C; 143-215.10I;*
Eff. September 1, ~~2006.~~2006;
Readopted Eff. September 1, 2018.

15A NCAC 02T .1306 is readopted as published in 32:06 NCR 585 as follows:

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~~ pursuant to this Section shall continue to be subject to the conditions and requirements of the facility's permit until it is closed in compliance with ~~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.~~ within 15 days of completion of closure to the Division on a closure form supplied by the Division or a form approved by the Division as providing the same information as required by the Division's forms.

(b) Any Containment basin, such as a lagoon or a waste storage structure, permitted at a cattle facility [~~under~~] pursuant to 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.~~] Division, based on the factors set out in 15A NCAC 02T .0113(e). 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~~] this Subchapter until the containment basin is closed in compliance with ~~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.]~~

(3) Closure shall include pre-notification to the Division and the submittal of a closure form within 15 days of completion of closure to the Division on a closure form supplied by the Division or a form approved by the Division as providing the same information as required by the Division's forms.

(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.

History Note: *Authority G.S. 143-215.1; 143-215.3(a); 143-215.10A; S.L.2013-413;*
Eff. September 1, ~~2006.~~2006;
Readopted Eff. September 1, 2018.

15A NCAC 02T .1307 is readopted with changes as published in 32:06 NCR 586-587 as follows:

15A NCAC 02T .1307 SWINE WASTE MANAGEMENT SYSTEM PERFORMANCE STANDARDS

(a) This Rule applies to animal waste management systems subject to regulation ~~under~~ pursuant to ~~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~~ pursuant to G.S. ~~143-215.10I,~~ 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~~ earthen structures ~~must~~ shall be designed and constructed with synthetic liners to eliminate ~~seepage.~~ seepage;

(B) ~~Solids~~ solids storage structures shall meet applicable engineering practices and NRCS design ~~standards.~~ standards;

(C) ~~The~~ the Certified Animal Waste Management Plan (CAWMP) ~~must~~ shall include all components [~~as~~] listed in [~~G.S. 143-215.10C(e) and~~] ~~G.S.~~ G.S. 143-215.10C(e), 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 ~~Plan~~ Plans (CNMP) as defined ~~by~~ in the ~~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~~ General Manual 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/.]~~ https://www.nrcs.usda.gov/;

(D) ~~Swine~~ swine waste treatment structures that automatically convey swine waste using pumps ~~must~~ shall 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.~~ on-site; and

(E) ~~No~~ 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.~~ 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 NH_3-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 NH_3-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 NH_3-N/wk/1,000 kg of steady-state live ~~weight.~~ 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~~ shall 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.~~ 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~~ of Rule .1107 of this Subchapter for the land application of separated solids and animal waste ~~residuals.~~residuals for operations subject to this Rule;

(B) Swine waste management systems shall meet the pathogen reduction requirements ~~in~~ of Rule ~~.1106~~ .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; sold or given away in a bag or container for land application ~~pursuant to Rule .1106(a)(1)~~ or meet the pathogen reduction requirements of Rule .1106(b) for Class B biosolids that are to be otherwise applied to ~~land.~~ land; and

(C) Fecal coliform concentrations in the final liquid effluent shall not exceed an annual average of 7,000 Most Probable ~~Number/100mL.~~ 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 ~~Plan~~ 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~~ set forth in 15A NCAC 02L.

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; Eff. January 1, ~~2009.~~2009;*

Readopted Eff. September 1, 2018.

15A NCAC 02T .1308 is readopted with changes as published in 32:06 587 as follows:

15A NCAC 02T .1308 EVALUATION AND APPROVAL OF SWINE WASTE MANAGEMENT SYSTEMS

(a) This Rule ~~establishes requirements for~~ shall apply to the evaluation, ~~approval~~ approval, and permitting of swine waste management systems that are required to meet the performance standards in Rule .1307 of this Section.

(b) APPLICATION: The applicant shall submit a permit application in writing to the Division showing that a swine waste management system meets the performance standards. The application shall include the following:

(1) operation and maintenance procedures, the system classification, the proposed management ~~entity~~ entity, and system operator requirements;

(2) a description of the swine waste management system, including materials used in construction, and its proposed use;

(3) a summary of ~~any~~ literature, published research, and previous experience with and performance of a waste management system of similar waste characteristics;

(4) the results of 12 months of testing, ~~research~~ research, or monitoring of pilot- or full-scale operational ~~system(s);~~ systems; and shall identify whether the testing, ~~research~~ research, or monitoring provided was conducted by a third party research or testing organization;

(5) documentation of the protocol used to evaluate the performance of the swine waste management system;

(6) the identity and qualifications, if applicable, of ~~any~~ the proposed research or testing organization and the principal investigators, and an affidavit certifying that the organization and principal investigators have no conflict of interest and do not stand to gain financially from the sale of the technology;

(7) an affidavit certifying that the swine waste management system submitted for approval is the same as the certified or listed ~~product;~~ product, or identify any modifications made to the submitted system;

(8) a procedure to address system malfunction and replacement;

(9) notification of any proprietary or trade secret information, system, component, or device;

(10) 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:

(A) 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 to the understanding of~~ necessary to understand 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 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;

(11) a complete permit application in ~~accordance~~ compliance with Section .0100 of this Subchapter; and

(12) ~~In~~ in lieu of the requirements of Subparagraphs (b)(3) through (b)(6), the applicant may submit data from a full-scale facility previously permitted by the Division.

(c) APPROVAL OF NEW OR EXPANDING SWINE WASTE MANAGEMENT SYSTEMS: The Division shall review all applications submitted in accordance with Rule .0107 of this Subchapter. The Division shall approve the swine waste management system in accordance with Rule .0108 of this ~~Subchapter,~~ Subchapter when the applicant can show that the performance standards of Rule .1307 of this Section will be met.

(d) MONITORING REQUIREMENTS: Once the newly permitted system reaches full capacity or within six ~~months,~~ months of receipt of the engineering certification pursuant to Rule .0116 of this Subchapter, 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,~~ If after two years the treatment system ~~is compliant~~ complies 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~~ sampled during the summer and winter ~~seasons,~~ seasons, or

(B) ~~Liquid~~ 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~~ sampled during the summer and winter seasons.

(3) Effluent ~~monitoring shall be at a minimum of~~ shall be monitored once per ~~quarter.~~ quarter, unless a more frequent schedule is required by the Division pursuant to Rule .0108(c) of this Subchapter.

History Note: *Authority G.S. 143-215.1; 143-215.3(a); 143-215.10A; 143-215.10I;*
Eff. January 1, ~~2009.~~2009.
Readopted Eff. September 1, 2018.

15A NCAC 02T .1309 is readopted with changes as published in 32:06 NCR 587 as follows:

15A NCAC 02T .1309 LAGOON CONVERSION REQUIREMENTS

(a) This Rule ~~applies~~ shall apply 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,~~ Section and have not expanded the steady-state live weight of the swine farm.

(b) Upon approval by the Division, a permittee may abandon and close ~~out~~ an animal waste management system permitted under Rules .1307 and .1308 of this Section and revert to the requirements of Rule .1304 or .1305 of this Section. The Division shall approve the reversion if all of the following criteria are met:

(1) ~~The~~ the animal waste management system is constructed according to the design and specifications approved by the Division ~~according~~ pursuant to the rules in this Section; ~~section;~~

(2) ~~The~~ the animal waste management system is operated and maintained in accordance with the rules in this Section;

(3) ~~The~~ the permit for the anaerobic lagoon animal waste management system issued prior to 1 September 2007 pursuant to S.L. 2007-523(1)(b) remains valid; and

(4) ~~The~~ the anaerobic lagoon animal waste management system has been maintained and can operate in compliance with the requirements of its permit.

History Note: *Authority G.S. 143-215.1; 143-215.3(a); 143-215.10A; 143-215.10I;*
Eff. January 1, ~~2009.~~2009;
Readopted Eff. September 1, 2018.

15A NCAC 02T .1310 is adopted with changes as published in 32:06 NCR 587-589 as follows:

15A NCAC 02T .1310 ANIMAL WASTE RESIDUALS MANAGEMENT

(a) This Rule ~~applies~~ shall apply 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~~ This Rule shall not apply to 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, or Rule .1307 of this ~~Section,~~ 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~~ 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). [basis) and;]~~ on a dry weight basis; and

(11) animal mortality.

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

(1) ~~Site~~ 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,~~ 106-803 and NRCS standards at the time of construction;

(2) ~~A~~ 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 the pathogen and vector requirements in Paragraphs (f) and (g) of this Rule if applicable;

(3) ~~A~~ a ~~sampling/monitoring~~ sampling and monitoring plan that describes how ~~compliance~~ the source will comply with Paragraphs (c), ~~(f),~~ and ~~(g)~~ (d) of this ~~Rule~~ Rule, if ~~applicable shall be provided to the Division by the applicant;~~ applicable;

(4) ~~A~~ a marketability statement detailing destinations and approximate amounts of the final product to be distributed; and

(5) ~~A~~ a copy of the ~~label/information~~ label and information sheet that complies with Paragraph ~~(h)~~(e) 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):~~

~~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~~

~~(d)~~(c) ~~Bulk animal~~ 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 following concentration for that pollutant ~~as stipulated in the following (i.e., on a dry weight basis):~~ 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

~~(e)~~(d) ~~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.~~ 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 shall meet the pathogen requirements of Rule .1106(a)(2) of this Subchapter.

~~(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)~~(e) 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~~ container, or an information sheet shall be provided to the person who receives the animal waste residuals. The ~~label/information~~ label and information sheet shall contain the following information:

(1) ~~The~~ the name and address of the person who prepared the animal waste residuals;

(2) ~~A~~ a statement that land application of the animal waste residuals ~~shall be~~ is prohibited except in accordance with the instructions on the ~~label/information~~ label and information sheet;

(3) ~~A~~ a statement that animal waste residuals ~~shall~~ must be applied at agronomic rates and recommended rates for intended uses;

(4) ~~A~~ a statement that the animal waste residuals ~~shall~~ may not be applied to any site that is flooded, frozen, or snow covered;

(5) ~~A~~ a statement that adequate procedures ~~shall~~ must be provided to prevent surface runoff from carrying any disposed or stored animal waste residuals into any surface waters;

(6) ~~A~~ a statement ~~which~~ that identifies that this material ~~shall~~ must be prevented from entering any public or private water supply ~~source (including wells),~~ source, including wells, stream, lake, or ~~river;~~ rivers;

(7) ~~Pollutant~~ the pollutant concentration for pollutants listed in Paragraph (c) of this Rule; and

(8) ~~Nitrogen~~ the nitrogen and phosphorous concentration.

~~(i)~~(f) Monitoring and Reporting.

(1) Animal waste residuals ~~applied~~ subject to this Rule shall be monitored for pollutants ~~as~~ listed in Paragraph ~~(b)~~(c) of this Rule ~~as well as~~and for pathogens [~~as~~] described in Paragraph ~~(c)~~ (d) of this ~~Rule and Paragraph (f) of this Rule~~ Rule, as ~~applicable~~ applicable, at the frequency ~~as~~ stipulated ~~in the following~~ for each residuals source facility:

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)

(2) A report of all monitoring and reporting requirements ~~as~~ specified in the permit shall be submitted to the Division by the permittee ~~annually~~ annually, on or before March 1st of each calendar year.

(3) All records required by this Paragraph shall be retained for ~~a minimum of~~ five years.

History Note: *Authority G.S. 143-215.1; 143-215.3(a); 143-215.10A;*
Eff. September 1, 2018.

15A NCAC 02T .1401 is readopted with changes as published in 32:06 NCR 589 as follows:

SECTION .1400 – MANURE HAULER OPERATIONS

15A NCAC 02T .1401 SCOPE

The rules in this Section shall apply to all manure hauler operations.

History Note: *Authority G.S. 143-215.1; 143-215.3(a);*
Eff. September 1, ~~2006.~~2006;
Readopted Eff. September 1, 2018.

15A NCAC 02T .1402 is readopted with changes as published in 32:06 NCR 589 as follows:

15A NCAC 02T .1402 DEFINITIONS

As used in this Section:

"Manure Hauler" means ~~any~~ a person who accepts or purchases animal waste and land applies the animal waste on land not ~~covered~~ governed by the generator's permit.

History Note: *Authority G.S. 143-215.1; 143-215.3(a);*
Eff. September 1, ~~2006.~~2006;
Readopted Eff. September 1, 2018.

15A NCAC 02T .1403 is readopted with changes as published in 32:06 NCR 589 as follows:

15A NCAC 02T .1403 PERMITTING BY REGULATION

(a) The following systems ~~are~~ shall be 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~~ by this Rule:

(1) ~~Manure Hauler~~ manure haulers 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~~ manure haulers 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~~ the manure hauler ~~that begin operation following the effective date of this Rule must register~~ registers with the Division prior to accepting or purchasing ~~manure.~~manure;

(F) the ~~Manure Hauler~~ manure hauler ~~submits an annual report, as specified in this Section, to the Division by March 1 of each year; and~~ submits an annual report, as required by this Section, to the Division by March 1 of each year; and ~~[keeps records of land application activitiy 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~~ 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.

History Note: *Authority G.S. 143-215.1; 143-215.3(a);*
Eff. September 1, ~~2006.~~ 2006;
Readopted Eff. September 1, 2018.

15A NCAC 02T .1404 proposed for repeal through readoption in 32:06 NCR 589 is readopted with changes as follows:

15A NCAC 02T .1404 ANNUAL REPORTS

(a) Manure ~~Haulers~~ 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,~~ name, mailing address, and phone number of the ~~Manure Hauler;~~ manure hauler;

(2) ~~Date, d~~dates, location, and amount of all animal waste received; and

(3) ~~Date,~~ dates, location, amount, and acreage of all animal waste land application.

(b) Manure ~~Haulers~~ 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,~~ name, mailing address, and phone number of the ~~Manure Hauler;~~ manure hauler;

(2) ~~Date,~~ dates, locations, and amounts of animal waste received; and

(3) ~~Date,~~ dates, locations, application rate, acreage, waste analysis, and receiving crop of all animal waste that was 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.

History Note: *Authority G.S. 143-215.1; 143-215.3(a);*
Eff. September 1, ~~2006.~~2006;
Readopted Eff. September 1, 2018.

15A NCAC 02T .1601 is readopted with changes as published in 32:06 NCR 590 as follows:

SECTION .1600 –GROUNDWATER REMEDIATION SYSTEMS

15A NCAC 02T .1601 SCOPE

The rules in this Section shall 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 systems shall 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~~ shall 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.

History Note: *Authority G.S. 143-214.2(b); 143-215.1; 143-215.1A;*
Eff. September 1, ~~2006.~~2006;
Readopted Eff. September 1, 2018.

15A NCAC 02T .1602 is readopted with changes as published in 32:06 NCR 590 as follows:

15A NCAC 02T .1602 DEFINITIONS

The terms used for the purpose of this Section shall be defined as follows:

(1) "Closed-loop groundwater remediation system" is ~~as~~ defined in G.S. 143-215.1A.

(2) "Contaminant" is ~~as~~ defined in 15A NCAC 02L .0102.

(3) "Infiltration gallery" means a subsurface ground absorption system expressly designed for the introduction of wastewater into the subsurface environment.

(4) "Injection well" is ~~as~~ defined in 15A NCAC 02C .0204.

(5) "Oversight agency" means the state or local agency with jurisdiction over the contamination incident.

(6) "Receptor" is ~~as~~ defined in 15A NCAC 02L .0102.

(7) "Water table" is ~~as~~ defined in 15A NCAC 02L .0102.

History Note: *Authority G.S. 143-214.2(b); 143-215.1; 143-215.1A;*
Eff. September 1, ~~2006.~~2006;
Readopted Eff. September 1, 2018.

15A NCAC 02T .1604 is readopted with changes as published in 32:06 NCR 590 as follows:

15A NCAC 02T .1604 APPLICATION SUBMITTAL

(a) Site Description and Incident Information shall be provided by the applicant to the Division including the following:

(1) The applicant shall ~~must~~ identify the site by name, address, permit number, and incident number assigned by the oversight ~~agency (if applicable).~~ agency, if applicable.

(2) The applicant shall ~~must~~ briefly describe the site, noting pertinent site information including:

(A) ~~contaminant(s)~~ contaminants of ~~concern,~~ concern;

(B) ~~source(s)~~ sources and ~~date(s)~~ dates of the contaminant ~~release,~~ release;

(C) remedial actions to ~~date,~~ date;

(D) current land ~~use,~~ use; and

(E) potential receptors.

(b) Soils Evaluation. For systems with proposed discharge within seven feet of land surface and above the seasonal high water table, a soil evaluation of the disposal site shall be provided to the Division by the applicant. If required by G.S. 89F, a soil scientist shall submit this evaluation. This evaluation shall be presented in a report that includes the following components:

~~[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) Field description of soil profile. Based on examinations of excavation pits or auger borings, the following parameters shall be described by individual diagnostic horizons to a depth of seven feet below land surface or to bedrock:

(A) thickness of the horizon;

(B) texture;

(C) color and other diagnostic features;

(D) structure;

(E) internal drainage;

(F) depth, thickness, and type of restrictive ~~horizon(s);~~ horizons;

(G) pH;

(H) cation exchange capacity; and

(I) presence or absence and depth of evidence of any seasonal high water table.

Applicants shall dig pits ~~when~~ if necessary ~~for evaluation~~ to evaluate of the soils at the site.

(2) Recommendations concerning annual and instantaneous loading rates of liquids, solids, other wastewater ~~constituents~~ constituents, and amendments. Annual hydraulic loading rates shall be based on in-situ measurement of saturated hydraulic conductivity in the most restrictive horizon.

[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.]

(c) Hydrogeologic Evaluation. A hydrogeologic evaluation prepared by a Licensed Geologist, License Soil Scientist, or Professional Engineer if required by Chapters 89E, 89F, or 89C respectively of the disposal site shall be provided to the Division by the applicant. This evaluation shall be conducted to a depth that includes the depth of existing contamination and the total depth of the injection ~~well(s)~~ wells or infiltration ~~gallery(ies).~~ galleries. 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 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 lithology underlying the site;

(4) depth to bedrock and occurrence of any rock outcrops;

(5) the hydraulic conductivity, transmissivity, and storativity ~~(specific yield if unconfined aquifer)~~ including specific yield if an aquifer is unconfined of the affected ~~aquifer(s);~~ aquifers;

(6) 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 focusing on the relationship of the plume and remediation system to groundwater receptors, groundwater discharge features, and groundwater flow media.

(d) Demonstration of Hydraulic Control. Computer modeling or predictive calculations based on site-specific conditions shall be provided to the Division by the applicant to demonstrate that operation of the system will not cause or contribute to:

(1) the migration of contaminants into previously uncontaminated areas, and

(2) a violation of the groundwater standards at the compliance boundary.

(e) Maps and Cross-Sections. 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 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 site-specific topographic contour intervals and showing all facility-related structures and fences within the treatment, ~~storage~~ storage, and disposal areas;

(2) locations of all test auger borings or inspection pits;

(3) the location of all ~~wells~~ wells, ~~(including~~ including usage and construction details if ~~available),~~ available; designated wellhead protection ~~areas,~~ areas; ~~streams (ephemeral,~~ ephemeral, intermittent, and ~~perennial),~~ perennial streams; springs; lakes; ponds; ~~springs, lakes, ponds,~~ other surface drainage ~~features,~~ features; and ~~any~~ other site activities or features that may involve possible exposure to contamination within 500 feet of all waste treatment, storage, and disposal ~~site(s);~~ sites;

(4) setbacks as required by Rule .1606 of this Section;

(5) delineation of the property ~~boundary(ies),~~ boundaries, review ~~boundary(ies),~~ boundaries, and compliance ~~boundary(ies);~~ boundaries;

(6) the horizontal and vertical extent of the contaminant plume for each of the contaminants of concern, including isoconcentration lines and plume cross-sections;

(7) ~~cross-section(s)~~ cross-sections depicting soil and rock layers and features to a depth including the depth of existing contamination and the total depth of the injection ~~well(s)~~ wells or infiltration ~~gallery(ies);~~ galleries; and

(8) hydrologic features such as potentiometric surface / water table contours and the direction of groundwater flow.

(f) 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:

[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 they 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; and

(3) plans that include construction details of recovery, injection, and monitoring wells and infiltration galleries.

(g) Operating and Monitoring Plans. An operation and monitoring plan shall be provided to the Division by the applicant. These documents shall be specific to the site and include:

(1) The operating plan shall include:

(A) the operating schedule including any periodic shut-down ~~times,~~ times;

(B) required maintenance activities for all structural and mechanical ~~elements,~~ elements;

(C) all consumable and waste materials with their intended source and disposal ~~locations,~~ locations;

(D) restrictions on access to the site and ~~equipment,~~ equipment; and

(E) compliance with Rule .1605(b) of this Section.

(2) The monitoring plan shall include:

(A) the monitoring ~~well(s)~~ wells that will be sampled,

(B) the ~~constituent(s)~~ constituents for which those samples will be analyzed, and

(C) the schedule for sampling.

History Note: *Authority G.S. 143-214.2(b); 143-215.1; 143-215.1A;*
Eff. September 1, ~~2006.~~2006;
Readopted Eff. September 1, 2018.

15A NCAC 02T .1605 is readopted with changes as published in 32:06 NCR 590 as follows:

15A NCAC 02T .1605 DESIGN CRITERIA

(a) The infiltration ~~gallery(ies)~~ galleries or injection ~~well(s)~~ wells ~~must~~ shall be designed such that the infiltration ~~gallery(ies)~~ galleries or injection ~~well(s)~~ wells ~~shall~~ will not cause or contribute ~~to:~~ to any of the following:

(1) the migration of contaminants into previously uncontaminated areas;

(2) a violation of the groundwater standards at the compliance boundary ~~(if~~ if discharge is within the compliance boundary of the disposal ~~facility);~~ facility; ~~and~~ or

(3) a violation of the groundwater standards at the point of the discharge ~~(if~~ if discharge is not within the compliance boundary of the disposal ~~facility).~~ facility.

(b) There shall be provisions in the operating plan to ensure the quality of the treated effluent and hydraulic control of the system at all times when any portion of the system ceases to ~~function (e.g.~~ function, such as standby power capability, complete system-off status, or duplicity of system ~~components).~~ components.

(c) ~~Design shall~~ The infiltration galleries and injection wells shall be designed to include ~~a minimum~~ elevation protection of two feet above the 100-year flood elevation.

(d) Flow equalization of ~~at least~~ 25 percent of the facility's permitted hydraulic capacity ~~must~~ shall be provided for facilities with fluctuations in influent flow ~~which~~ that may adversely affect the performance of the system.

History Note: *Authority G.S. 143-214.2(b); 143-215.1; 143-215.1A;*
Eff. September 1, ~~2006.~~2006;
Readopted Eff. September 1, 2018.

15A NCAC 02T .1606 is readopted with changes as published in 32:06 NCR 590 as follows:

15A NCAC 02T .1606 SETBACKS

The location of the infiltration ~~gallery~~ galleries or injection ~~well(s)~~ wells ~~must~~ shall meet the setback requirements specified below unless it can be demonstrated that these requirements cannot be ~~met,~~ met and that operation of the infiltration ~~gallery(ies)~~ galleries or injection ~~well(s)~~ wells at the proposed ~~location(s)~~ locations will not result in the migration of contaminants into previously uncontaminated ~~areas,~~ areas and a contravention of groundwater standards beyond the compliance boundary. The following ~~setbacks (in feet)~~ setbacks, in feet, ~~are~~ shall be applicable to these systems:

~~any well~~ wells with the exception of an approved groundwater monitoring well	100
surface waters ~~streams –~~ such as intermittent and perennial, perennial waterbodies, and ~~wetlands)~~ wetlands	100
~~any~~ property under separate ownership	50
structures – ~~above-ground~~ above-ground, such as ~~(e.g.~~ buildings, or retention walls) walls	10
structures – ~~subsurface~~ subsurface, such as ~~(e.g.~~ utilities, basements, or swimming ~~pools)~~ pools	15
~~any~~ water ~~line~~ lines	10
rock outcrops	50
top of slope of embankments or cuts of two feet or more in vertical height	15
groundwater lowering ditches ~~(where~~ where the bottom of the ditch intersects the ~~SHWT)~~ SHWT	100
surface water diversions such as ephemeral ~~(ephemeral~~ streams, waterways, and ditches ~~ditches)~~	25
subsurface groundwater lowering drainage systems	100

History Note: Authority G.S. 143-214 Eff. September 1, ~~2006.~~2006; .2(b); 143-215.1; 143-215.1A;
Readopted Eff. September 1, 2018.

15A NCAC 02T .1607 is readopted with changes as published in 32:06 NCR as follows:

15A NCAC 02T .1607 MONITORING AND REPORTING REQUIREMENTS

(a) A ~~monitoring~~ system monitoring plan shall be established to assess the impact of the discharge on groundwater quality. The monitoring plan shall:

(1) be based on reaction rates, discharge rates, likelihood of secondary impacts, and site-specific hydrogeologic ~~information,~~ information;

(2) track the performance of the permitted remediation system and verify that the intended remediation processes are ~~occurring,~~ occurring; and

(3) include water level and flow meter measurements to ensure the system is operating properly.

(b) All sampling results shall be reported by the permittee to the Division on a frequency determined by the reaction rates, discharge rates, likelihood of secondary impacts, and site-specific hydrogeologic information.

(c) A report of the summarized results of related groundwater, influent, and effluent monitoring shall be submitted by the permittee to the Division annually.

History Note: *Authority G.S. 143-214.2(b); 143-215.1; 143-215.1A;*
Eff. September 1, ~~2006.~~2006;
Readopted Eff. September 1, 2018.

15A NCAC 02T .1608 is readopted with changes as published in 32:06 NCR 590 as follows:

15A NCAC 02T .1608 REQUIREMENTS FOR CLOSURE

(a) 30 days prior to initiation of closure of a groundwater remediation system, the permittee shall submit the following documentation to the Division:

(1) the ~~reason(s)~~ reasons for ~~closure,~~ closure;

(2) a letter from the oversight agency authorizing closure of the ~~system,~~ system; and

(3) a description of the proposed closure procedure.

(b) The following closure procedures shall be followed:

(1) injection well closure procedures as specified in 15A NCAC 02C ~~.0214,~~ .0214; and

(2) infiltration galleries shall be closed such that the infiltration gallery will be rendered permanently unusable for the disposal or infiltration of fluids and will not serve as a source or channel of contamination.

(c) Within 30 days following upon completion of the closure of a groundwater remediation system, the permittee shall submit the following documentation to the Division:

(1) a description of the completed closure procedure;

(2) the dates of all actions taken relative to the procedure; and

(3) a written certification that the closure has been ~~accomplished,~~ accomplished and that the information submitted is complete, ~~factual~~ factual, and accurate.

History Note: *Authority G.S. 143-214.2(b); 143-215.1; 143-215.1A;*
Eff. September 1, ~~2006.~~2006;
Readopted Eff. September 1, 2018.