

*STATE OF
NORTH CAROLINA
DEPARTMENT OF
ENVIRONMENT, HEALTH &
NATURAL RESOURCES*

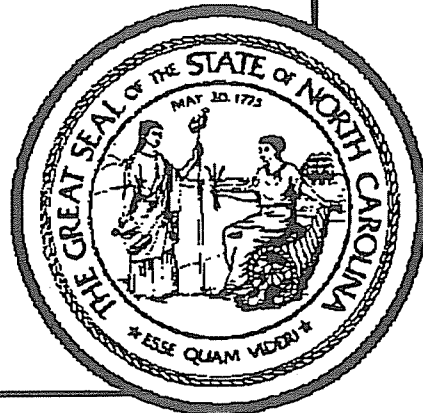


*DIVISION OF
WATER QUALITY*

Administrative Code Section:
15A NCAC 2H .0200 Waste Not
Discharged to Surface Waters

Amended Effective: May 8, 199⁷0

Environmental
Management Commission
Raleigh, North Carolina



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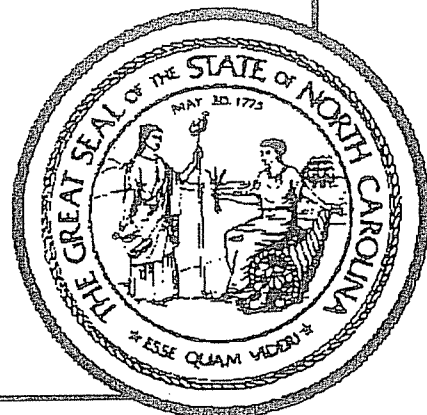


TABLE OF CONTENTS

SUBCHAPTER 2H .0200 - WASTE NOT DISCHARGED TO SURFACE WATERS

.0201	PURPOSE	1
.0202	SCOPE	1
.0203	DEFINITIONS	1
.0204	ACTIVITIES WHICH REQUIRE A PERMIT	4
.0205	APPLICATION: FEES: SUPPORTING INFORMATION: REQUIREMENTS	4
.0206	SUBMISSION OF PERMIT APPLICATIONS	14
.0207	SUBMISSION OF PERMIT APPLICATION (REPEALED)	14
.0208	STAFF REVIEW AND PERMIT PREPARATION	14
.0209	FINAL ACTION ON PERMIT APPLICATIONS TO THE DIVISION	15
.0210	NOTIFICATION OF APPLICANTS (REPEALED)	15
.0211	PERMITS RENEWALS	15
.0212	ADMINISTRATIVE HEARINGS (REPEALED)	16
.0213	MODIFICATION AND REVOCATION OF PERMITS	16
.0214	INVESTIGATIONS: MONITORING AND REPORTING (REPEALED)	16
.0215	DELEGATION OF AUTHORITY	16
.0216	LIMITATION ON DELEGATION (REPEALED)	17
.0217	PERMITTING BY REGULATION	17
.0218	LOCAL PROGRAMS FOR SEWER SYSTEMS	20
.0219	MINIMUM DESIGN REQUIREMENTS	21
.0220	CERTIFICATION OF COMPLETION	32
.0221	OPERATIONAL AGREEMENTS	32
.0222	THE WASTEWATER TREATMENT WORKS EMERGENCY FUND	32
.0223	DEMONSTRATION OF FUTURE WASTEWATER TREATMENT CAPACITIES	33
.0224	TREATMENT FACILITY OPERATION AND MAINTENANCE	33
.0225	CONDITIONS FOR ISSUING GENERAL PERMITS	34

SECTION .0200 - WASTE NOT DISCHARGED TO SURFACE WATERS

.0201 PURPOSE

The rules in this Section set forth the requirements and procedures for application and issuance of permits for the following systems which do not discharge to surface waters of the state:

- (1) sewer systems;
- (2) disposal systems;
- (3) treatment works; and
- (4) residual and residue disposal/utilization systems;
- (5) animal waste management systems;
- (6) treatment of petroleum contaminated soils; and
- (7) stormwater management systems pursuant to 15A NCAC 2H .1000.

*History Note: Authority G.S. 143-215.3(a)(1); 143-215.1;
Eff. February 1, 1976;
Amended Eff. September 1, 1995; February 1, 1993; November 1, 1987.*

.0202 SCOPE

The rules in this Section apply to all persons proposing to construct, alter, extend, or operate any sewer system, treatment works, disposal system, petroleum contaminates soil treatment system, animal waste management system, stormwater management system or residual disposal/utilization system which does not discharge to surface waters of the state, including systems which discharge waste onto or below land surface. However, these Rules do not apply to sanitary sewage systems or solid waste management facilities which are permitted under the authority of the Commission for Health Services. The provisions for stormwater management systems can be found in 15A NCAC 2H .1000.

*History Note: Authority G.S. 130A-335; 143-215.1; 143-215.3(a)(1);
Eff. February 1, 1976;
Amended Eff. September 1, 1995; February 1, 1993; November 1, 1987.*

.0203 DEFINITION OF TERMS

The terms used in this Section shall be as defined in G.S. 143-213 except for G.S. 143-213(15) and (18)a. and as follows:

- (1) "Agronomist" means an individual who is a Certified Professional Agronomist by ARCPACS (American Registry of Certified Professionals in Agronomy, Crops and Soil) or an individual with a demonstrated knowledge in agronomy.
- (2) "Animal waste" means livestock or poultry excreta or a mixture of excreta with feed, bedding, litter or other materials.
- (3) "Animal waste management system" means a combination of structural and non-structural practices which will properly collect, treat, store or apply animal waste to the land such that no discharge of pollutants occurs to surface waters of the state by any means except as a result of a storm event more severe than the 25-year, 24-hour storm.
- (4) "Approved animal waste management plan" means a plan to properly collect, store, treat or apply animal waste to the land in an environmentally safe manner and approved according to the procedures established in 15A NCAC 2H .0217(a)(1)(H).
- (5) "Bedrock" means any consolidated or coherent and relatively hard, naturally-formed mass of mineral matter which cannot be readily excavated without the use of explosives or power equipment.
- (6) "Building" means any structure or part of a structure built for the separate shelter or enclosure of persons, animals, chattels, or property of any kind and which has enclosing walls for at least 50 percent of its perimeter. Each unit separated from other units by a four hour fire wall shall be considered as a separate building.
- (7) "Building drain" means that part of the lowest piping of a drainage system which receives waste from inside the building and conveys it to the building sewer which begins 10 feet outside the building wall.
- (8) "Building sewer" means that part of the horizontal piping of a drainage system which receives the discharge from a single building drain and conveys it directly to a public sewer, private sewer, or on-site sewage

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. Copies are also available for review at the Division of Environmental Management, Archdale Building, 512 N. Salisbury Street, P. O. Box 29535, Raleigh, North Carolina 27626-0535.

- (23) "Process to Significantly Reduce Pathogens" or "PSRP" means a residuals stabilization process that provides the minimal acceptable level of pathogen and vector attraction reduction prior to land application. The procedures that may be utilized to meet this requirement are contained in 40 CFR 257, Appendix II which is hereby incorporated by reference including any subsequent amendments and editions. Copies of this publication are available from the 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. Copies are also available for review at the Division of Environmental Management, Archdale Building, 512 N. Salisbury Street, P.O. Box 29535, Raleigh, North Carolina 27626-0535.
- (24) "Petroleum contaminated soil" or "Soil containing petroleum products" shall mean any soil that has been exposed to petroleum products because of any emission, spillage, leakage, pumping, pouring, emptying, or dumping of petroleum products onto or beneath the land surface and that exhibits characteristics or concentrations of typical petroleum product constituents in sufficient quantities as to be detectable by compatible laboratory analytical procedures.
- (25) "Petroleum product" means all petroleum products as defined by G.S. 143-215.94A(7) and includes motor gasoline, aviation gasoline, gasohol, jet fuels, kerosene, diesel fuel, fuel oils (#1-#6), and motor oils (new and used).
- (26) "Pollutant" means waste as defined in G.S. 143-213(18).
- (27) "Private sewer" means any part of a sewer system which collects wastewater from more than one building, is privately owned and is not directly controlled by a public authority.
- (28) "Professional engineer" means a person who is presently registered and licensed as a professional engineer by the North Carolina State Board of Registration For Professional Engineers and Land Surveyors.
- (29) "Public or community sewage system" means a single system of sewage collection, treatment, or disposal owned and operated by a sanitary district, a metropolitan sewage district, a water and sewer authority, a county, a municipality, or a public utility.
- (30) "Public sewer" means a sewer located in a dedicated public street, roadway, or dedicated public right-of-way or easement which 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.
- (31) "Rapid infiltration system" means rotary distributor systems or other similar systems that dispose of tertiary treated waste at high surface area loading rates of greater than 1.5 gpd/ft².
- (32) "Residuals" means any solid or semisolid waste, other than residues from agricultural products and processing generated from a wastewater treatment facility, water supply treatment facility or air pollution control facility permitted under the authority of the Environmental Management Commission.
- (33) "Residues from agricultural products and processing" means solids, semi-solids or liquid residues from food and beverage processing and handling; silviculture; agriculture; and aquaculture operations permitted under the authority of the Environmental Management Commission that are non-toxic, non-hazardous and contain no domestic wastewater.
- (34) "Sewage" means the liquid and solid human waste, and liquid waste generated by domestic water-using fixtures and appliances, from any residence, place of business, or place of public assembly. Sewage does not include wastewater that is totally or partially industrial wastewater, or any other wastewater not considered to be domestic waste.
- (35) "Sewer system" means pipelines or conduits, pumping stations, specialized mode of conveyance and appliances appurtenant thereto, used for conducting wastes to a point of ultimate disposal.
- (36) "Soil remediation at conventional rates" means the utilization of soils containing petroleum products by land application methods, at an evenly distributed thickness not to exceed six inches.
- (37) "Soil remediation at minimum rates" means the treatment of soils containing petroleum products by land application methods, at an evenly distributed application thickness not to exceed an average of one inch.
- (38) "Soil scientist" means an individual who is a Certified Professional in Soils through the NCRCP (N.C. Registry of Certified Professionals in Soils) or a Certified Professional Soil Scientist or Soil Specialist by ARCPACS (American Registry of Certified Professionals in Agronomy, Crops and Soils) or a Registered Professional Soil Scientist by NSCSS (the National Society of Consulting Soil Scientist) or can provide documentation that he/she meets the minimum education and experience requirements for certification or registration by one or more of the organizations named in this Subparagraph or upon approval by the Director, an individual with a demonstrated knowledge of Soil Science.

- requested at the time of permit renewal, with no other changes, will be charged the renewal without modification fee;
- (E) A full application processing fee will be charged for all modifications except for name changes; this fee will be in the same amount as shown in Subparagraph (5) of Paragraph (c) of this Rule for new applications/modifications.
 - (F) Permittees requesting new or modified special orders by consent, judicial orders or flow increases under G.S. 143-215.67(b), will pay a fee of four hundred dollars (\$400.00)
- (2) Annual Administering and Compliance Monitoring 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 Subparagraph (5) of this Paragraph. Annual fees will not be charged for permits which do not require renewal.
- (A) Collection of annual fees shall begin on the effective date of this Rule.
 - (B) Annual administering and compliance monitoring fees must be paid for any facility operating on an expired permit after the effective date of this Rule. The Director shall establish an anniversary date for such a facility and notify the responsible party of the requirement to pay annual fees.
 - (C) For a facility with multiple treatment units under a single permit, the annual administering and compliance monitoring fee shall be set by the single treatment system with the highest fee in the fee schedule.
 - (D) A person with only one permit will be billed annually on an anniversary date to be determined by the Division. This will normally be the first day of the month of permit issuance.
 - (E) A person with multiple permits may have annual administering and compliance monitoring fees consolidated into one annual bill.
 - (F) Any permittee which has maintained full compliance with all permit conditions during the previous calendar year will have its administering and compliance monitoring annual fee reduced by 25 percent. Permittees operating under interim limits, judicial orders, or special orders by consent will not be eligible for any discount. Full compliance will be established if it can be certified by the Director that no Notice of Noncompliance, Notice of Violation or penalty assessment was sent to the permittee during the compliance period being considered. If a Notice of Noncompliance or Notice of Violation was based on erroneous information, the Director can send a letter of correction to the permittee clearing the record for compliance purposes.
 - (G) A change in the facility which changes the annual fee set by Subparagraph (5) of Paragraph (c) of this Rule will result in the revised annual fee being billed in all remaining whole permit years.
 - (H) Closed-loop recycle or evaporative systems, which store or recycle industrial waste and do not discharge to the surface water, groundwater or land surface, shall be charged a constant annual administering and compliance monitoring fee for all sizes of facilities at the fee amount shown by Subparagraph (5) of Paragraph (c) of this Rule.
- (3) No fees are required to be paid under this Rule by a farmer who submits an application or receives a permit that pertains to farming operations.
 - (4) Failure to pay an annual administering and compliance monitoring fee within 30 days after being billed may cause the Division to initiate action to revoke the permit.
 - (5) Schedule of Nondischarge Fees:

CATEGORY	PERMIT APPLICATION PROCESSING FEE		ANNUAL ADMINISTERING AND COMPLIANCE MONITORING FEE	
	NEW APPLICATIONS/ MODIFICATIONS/ LATE RENEWALS	TIMELY RENEWALS WITHOUT MODIFICATIONS	STANDARD	IN COMPLIANCE
> 1,000,000 GPD				
Industrial	\$400.	\$300.	\$1500.	\$1125.
Sewage/Cooling Water	400.	300.	1200.	900.
10,0001 - 1,000,000 GPD				
Industrial	400.	250.	800.	600.
Sewage/Cooling Water	400.	250.	600.	450.

which must be submitted for sewers, sewer extensions, and disposal systems and wastewater treatment works which do not discharge to the surface waters of the state.

- (1) General requirements for all facilities required to obtain individual permits:
 - (A) Required sets of plans and specifications:
 - (i) regular projects -- two sets of detailed plans and specifications for sewer projects and four sets of detailed plans and specifications for all other projects;
 - (ii) federal and state grants/loan projects -- four sets of detailed plans and specifications plus federal assurances required by appropriate federal agency;
 - (iii) plans and specifications must be signed and sealed by a Professional Engineer. The only exceptions from the Professional Engineer requirement are as follows:
 - (I) projects proposing the land application of residues, residuals or compost at agronomic rates, when no storage units are being proposed and no treatment of the material is being proposed other than that provided by the soil and exposure to the atmosphere,
 - (II) projects proposing the land application of contaminated soils, when no storage units are being proposed and no treatment of the material is being proposed other than that provided by the soil and exposure to the atmosphere, with or without the addition of nutrients or the mechanical tilling of the soil,
 - (III) projects for the settling of solids from sand dredging projects or tourist gem mining operations, when the only treatment provided is settling ponds or basins,
 - (IV) projects utilizing only incinerating toilets,
 - (V) projects for the disposal/utilization of animal waste deemed to be permitted in accordance with 15A NCAC 2H .0217,
 - (VI) projects for ground water remediation that do not consist of any treatment or storage units,
 - (VII) the Director may on a case by case basis remove this exception based on documented or projected environmental impacts.
 - (B) Specifications describing all materials to be used, methods of construction and means for assuring the quality and integrity of the finished project;
 - (C) A general location map, showing orientation of the facility with reference to at least two geographic references (numbered roads, named streams/rivers, etc.);
 - (D) A description of the origin, type and flow of waste to be treated. Waste analysis must be extensive enough to allow a complete evaluation of the system to treat the waste and any potential impacts on the waters of the state;
 - (E) When required, a statement submitted that the wastewater treatment facility involved will be properly disconnected and the wastewater discharged into an adequate district or municipal system when it becomes available;
 - (F) Permits which result in construction of facilities which will be funded by public monies may require environmental documentation pursuant to the North Carolina Environmental Policy Act. Permit applications for which such documentation is required will not be considered complete until supported by the required documentation;
 - (G) If more than one acre of land is to be uncovered by a project, documentation should be supplied verifying that the applicant has completed or is working with the appropriate regional engineer of the Land Quality Section on the completion of an erosion control plan.
 - (H) A Residuals Management Plan must be submitted for all treatment systems that generate residuals and must include the following:
 - (i) A detailed explanation as to how the residuals will be stabilized. In addition if the residuals are generated from a system treating sewage, the explanation must show that the stabilization process meets EPA's criteria for a Class B residual as defined in 40 CFR 503 or the Process to Significantly Reduce Pathogens (PSRP) as defined in 40 CFR Part 257 Appendix II which is hereby incorporated by reference including any subsequent amendments and editions.
 - (ii) An evaluation of the residual storage requirements for the treatment facility. A minimum of 30 days storage will be required on all facilities, unless the applicant can demonstrate to the satisfaction of the Director that this requirement is unwarranted for a particular case. Storage shall be calculated based upon average residuals production rate and shall be units separate from the treatment system, i.e., not the clarifiers, aeration basins. Additional storage may be required based on the method of final disposal/utilization,
 - (iii) A written commitment from the permittee of a Division approved residual disposal/utilization

- (I) For industrial waste a complete chemical analysis of the typical wastewater to be discharged, may include but not limited to Total Organic Carbon, BOD, COD, Chlorides, Phosphorus, Ammonia, Nitrates, Total Nitrogen, Calcium, Sodium, Magnesium, Sodium Adsorption Ratio (SAR) Calculations, Phenol, Total Trihalomethanes, Toxicity test parameters, Total Volatile Organics, Total Coliforms and Total Dissolved Solids;
 - (J) proposed location and construction details of a monitoring well network;
 - (K) Any additional information required by the Director in order to adequately evaluate the disposal facility.
- (6) For land application of residuals on other than dedicated sites:
- (A) a map of the site with topographic contour intervals not exceeding ten feet or 25 percent of total site relief, whichever is less, and showing all facility related structures within the treatment, storage and land application areas and the location of all wells, pits and quarries, springs, lakes, ponds, or other surface drainage features within 500 feet of the utilization/disposal site;
 - (B) a soil scientist's recommendations, or the recommendations of an individual with at least three years experience in the comprehensive evaluation of soils for application of residuals, concerning application rates of liquids, solids, minerals and other wastewater constituents;
 - (C) a project evaluation conducted by an agronomist including recommendations concerning cover crops and their ability to accept the proposed application rates of liquids, solids, minerals, and other wastewater constituents;
 - (D) project description for the land application system, including treatment, storage, land application method, equipment, and a receiver management plan;
 - (E) for industrial wastes, a complete chemical analysis of the typical wastewater or residuals to be applied may include, but is not limited to percent Total Solids, pH, Ammonia, Nitrates, TKN, Total Phosphorus, Potassium, Toxicity test parameters, Cadmium, Chromium, Copper, Lead, Nickel, Zinc, Mercury, Arsenic, Selenium, Calcium, Sodium, Magnesium and Sodium Adsorption Ratio (SAR) Calculations;
 - (F) information on the location, construction details, and primary usage (drinking water, process water, monitoring, etc.) of all wells within 500 feet of the disposal site;
 - (G) For sites previously permitted: Soil evaluation of the application sites by a soil scientist, or an individual with at least three years experience in the comprehensive evaluation of soils for application of residuals, to confirm or establish the soil map through field evaluation of soil texture; color; structure; the depth, thickness, and type of restrictive horizons; the presence or absence of seasonal high water table within three vertical feet of the surface or subsurface application depth; pH; and cation exchange capacity;
 - (H) For sites not previously permitted:
 - (i) A USDA-SCS soils map of the application site. In addition, a soil evaluation of the application site by a Soil Scientist, or an individual with at least three years experience in the comprehensive evaluation of soils for application of residuals, which includes the soil evaluation and verification of the presence or absence of a seasonally high water table or bedrock within three vertical feet of the deepest point of residual application; and cation exchange capacity;
 - (ii) If a USDA-SCS soils map of the application site is not available, soil evaluation of the disposal site by a soil scientist, or an individual with at least three years experience in the comprehensive evaluation of soils for application of residuals, down to a depth of seven feet or the "C" horizon, whichever is less, to develop a soil map through field evaluation of soil texture; color; the depth, thickness, and type of restrictive horizons; the presence or absence of a seasonal high water table, or bedrock within three vertical feet of the deepest point of residual application; pH; and cation exchange capacity.
 - (I) For sites which are to receive residuals from one or more source, specific areas shall be designated and utilized to receive residuals from each municipal, regional or industrial source. Residuals from more than one facility under common ownership may be considered as a single source.
 - (J) Sites will only be permitted in water supply watersheds when allowed by 15A NCAC 2B .0200.
- (7) For spray irrigation, land application of residuals on dedicated sites, or residual disposal/utilization systems and treatment works, except for rapid infiltration disposal systems and systems for composting residual for land application:
- (A) a map of the site, with topographic contour intervals not exceeding ten feet or 25 percent of total site relief, whichever is less, and showing all facility-related structures and fences within the treatment,

generated in North Carolina or shipped into North Carolina in bulk form and then distributed in bulk form will be required to obtain nondischarge permits from the Division of Environmental Management. Land application site permitting will not be required unless the applicant fails to demonstrate to the satisfaction of the Director that the proposed method of distribution and marketing and other controls are adequate to control the use of the material in a manner that will not result in the contravention of water or groundwater standards.

- (9) For closed system or recycle disposal systems and treatment works:
- (A) for industrial waste, a complete chemical analysis of the typical wastewater or residual to be treated, may include but not limited to Total Organic Carbon, BOD, COD, Chlorides, Phosphorus, Nitrates, Phenol, Total Trihalomethanes, Toxicity test parameters, Total Volatile Organic Compounds, Total Coliforms, Metals and Total Dissolved Solids;
 - (B) plans and specifications of the entire system. When necessary for an understanding of a treatment process, the applicant should also submit process flow diagrams, manufacturers specifications and historical operational data from comparable facilities;
 - (C) For industrial waste, a hydrogeologic description of the subsurface to a depth of 20 feet or bedrock, whichever is less. The number of borings shall be sufficient to define the following for the area underlying each major soil type at the disposal site:
 - (i) significant changes in lithology underlying the site;
 - (ii) the vertical permeability of the unsaturated zone and the hydraulic conductivity of the saturated zone; and
 - (iii) depth to the mean seasonal high water table (if definable from soil morphology or from evaluation of other applicable available data).
- (10) For rapid infiltration systems:
- (A) a map of the site, with a horizontal scale of one inch equal 1,000 feet or less and topographic contour intervals not exceeding two feet or 25 percent of the total site relief, whichever is less, and showing all facility-related structures and fences within the property boundary, all test auger borings or inspection pits and the location of all wells, springs, lakes, ponds or other surface drainage features within 500 feet of the principal waste treatment/disposal site(s);
 - (B) hydrogeological information describing the vertical and horizontal extent and lithologic character of the unconfined aquifer and its hydraulic relationship to the first confined aquifer beneath the site and the vertical permeability and thickness of the confining bed. The information must also include a determination of the transmissivity and specific yield of the unconfined aquifer, determined by either a withdrawal or recharge test;
 - (C) a determination of the quality and movement of groundwater and surface water in the area and an evaluation of the impact that the proposed system will have on water levels, movement and quality of waters;
 - (D) complete plans and specifications for the entire system, including treatment storage and rotary distributor facilities and equipment;
 - (E) the information specified in Rule .0205 (d) (5) (H) of this Section;
 - (F) proposed location and construction details of monitoring well network;
 - (G) proposed monitoring plan including the method of determining groundwater levels and quality of water parameters and frequency of sampling.
- (11) For land application of agricultural products and processing residues on other than dedicated sites or animal waste management systems not deemed permitted under Rule .0217 of this Section:
- (A) a map of the site with topographic contour intervals not exceeding 10 feet or 25 percent of total site relief, whichever is less, and showing all facility related structures and fences within the property boundary, all test auger borings or inspection pits and the location of all wells, pits and quarries, springs, lakes, ponds, or other surface drainage features within 500 feet of the application site;
 - (B) a soil scientist's recommendations, or the recommendations of an individual with at least three years experience in the comprehensive evaluation of soils for application of residuals, concerning application rates of liquids, solids, minerals and other wastewater constituents;
 - (C) a project evaluation conducted by an agronomist including recommendations concerning cover crops and their ability to accept the proposed application rates of liquids, solids, minerals, and other residual constituents;
 - (D) project description for the land application system, including treatment, storage, land application method, equipment and a receiver management plan;
 - (E) a complete chemical analysis of the typical residue to be applied may include, but is not limited to

- D004-D011),
- (IV) for soils contaminated by waste oil, a TCLP analysis for all constituents in Table II.2 of the Federal Register, Volume 55, No. 61, with the exception of pesticides and herbicides, shall be required,
 - (V) for soils contaminated with petroleum products not regulated under Subtitle I of RCRA (excluding used motor and waste oils), the soils will be considered hazardous until proven otherwise by procedures specified by the Department.
- (iii) a scaled map of the site, with a horizontal scale of one inch equals 100 feet or less and topographic contour intervals not exceeding 10 feet or 25 percent of total site relief, whichever is less and showing:
- (I) all property boundaries and all structures within the treatment, storage and land application areas,
 - (II) the location of all wells, springs, lakes, ponds, or other surface drainage features within 500 feet of the waste disposal site; and
 - (III) any residences or place of public assembly under separate ownership within 400 feet of the waste disposal site.
- (iv) confirmation that an erosion control plan has been submitted to the Division of Land Quality or its designee, for disposal sites encompassing more than one (new law) acre,
- (v) an indication of cover crop(s),
- (vi) the volume of petroleum contaminated soil to be remediated,
- (vii) landowners agreement to allow the use of the property for the purpose of remediating petroleum contaminated soil. The agreement is not required when the permit applicant is the sole landowner,
- (B) for Soil Remediation at Minimum Rates:
- (i) a calculation of the area required for landfarming using the maximum application thickness of one inch,
 - (ii) an indication of cover crop(s),
- (C) for Soil Remediation at Conventional Rates (dedicated or non-dedicated sites):
- (i) a soils evaluation report of the disposal area, conducted by a Soil Scientist, to adequately evaluate the soil to a depth of five feet. The Report shall include, but is not limited to:
 - (I) field descriptions of texture, color, and structure,
 - (II) depth and thickness of soil horizons,
 - (III) presence of any restrictive horizons,
 - (IV) depth to seasonal high water table,
 - (V) soil pH and cation exchange capacity, and
 - (VI) estimates of liming and fertilization requirements,
 - (ii) the calculation of the size of the disposal area, thickness of application, and proposed cover crop,
 - (iii) a site maintenance plan,
 - (iv) proposed groundwater quality monitor well network (dedicated sites only),
- (D) Bioremediation and volatilization on impermeable surfaces:
- (i) a soil evaluation of the disposal area conducted by a Soil Scientist to adequately evaluate the soil down to a depth of five feet to include but is not limited to, field descriptions of texture, color, structure, depth and thickness of soil horizons, presence of any restrictive horizons; and depth to seasonal high water table,
 - (ii) the plans and specifications of the soil contaminant vessel and any associated leachate collection system, including the operating thickness of the soil to be contained and treated,
 - (iii) a description of the chemical or biological additives used in treating the contaminated soil,
- (E) containment and utilization at brick, asphalt, or other production facilities, a site management plan, consisting of a complete description of all operational procedures related to the handling of soils containing petroleum product at the proposed facility, including the following items:
- (i) a description of the staging area(s) designated for initial receipts of the petroleum contaminated soils,
 - (ii) the method of emplacement of the soils in the containment area(s),
 - (iii) the average residence time of the soils in the containment area,
 - (iv) the method of incorporation of the soils into the production facilities product materials,
 - (v) the method of containment and disposal of any leachate or runoff resulting from the

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 all required information, the application will be returned to the applicant. The staff shall advise the applicant by mail:

- (1) how the application or accompanying supporting information may be modified to make them acceptable or complete;
- (2) that the 90 day processing period required in G.S. 143-215.1 and Rule .0209 of this Section begins upon receipt of 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.

(d) For 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.

(e) If an application is accepted and later found to be incomplete, the applicant will be advised how the application or accompanying supporting information may be modified to make them acceptable or complete, and that if all required information is not submitted within 30 days that the project will be returned as incomplete.

*History Note: Authority G.S. 143-215.3(a)(1); 143-215.1(b); 143-215.1(d); 143-215.3(a)(4);
Eff. February 1, 1976;
Amended Eff. February 1, 1993; August 1, 1988; October 1, 1987; February 1, 1986.*

.0209 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 required information. All permits or renewals of permits and decisions denying permits or renewals shall be in writing.

(b) The Director is authorized to:

- (1) issue a permit containing such conditions as are necessary to effectuate the purposes of Article 21, Chapter 143, N.C. General Statutes;
- (2) issue permit containing time schedules for achieving compliance with applicable effluent standards and limitations, water quality standards and other legally applicable requirements;
- (3) deny a permit application where necessary to effectuate:
 - (A) the purposes of Article 21, Chapter 143;
 - (B) the purposes of G.S. 143-215.67(a);
 - (C) rules on coastal waste treatment, disposal, found in Section .0400 of this Subchapter;
 - (D) rules on "subsurface disposal systems," found in 15A NCAC 18A .1900. Copies of these rules are available from the Division of Environmental Health, P. O. Box 29535, Raleigh, North Carolina 27626-0535.
 - (E) rules on groundwater quality standards found in Subchapter 2L of this Chapter.

(4) hold public meetings when necessary to obtain additional information needed to complete the review of the application. The application will be considered as incomplete until the close of the meeting record.

(c) If a permit is denied, the letter of denial shall state the reason(s) for denial and any reasonable measures which the applicant may take to make the application approvable.

(d) Permits shall be issued or renewed for a period of time deemed reasonable by the Director.

*History Note: Authority G.S. 143-215.3(a)(1); 143-215.1(a); 143-215.1(b); 143-215.1(d);
Eff. February 1, 1976;
Amended Eff. February 1, 1993; October 1, 1987.*

.0210 NOTIFICATION OF APPLICANTS

*History Note: Authority G.S. 143-215.1(a); 143-215.3(a)(4);
Eff. February 1, 1976;
Repealed Eff. October 1, 1987.*

.0211 PERMIT RENEWALS

Requests for permit renewals are to be submitted to the Director at least 180 days prior to expiration unless revoked in accordance with Rule .0213 of this Section. Such requests must be submitted with a processing fee as shown in Rule .0205(c)(5) of this Section, in the form of a check or money order made payable to the N. C. Department of

Repealed Eff. February 1, 1986.

.0217 PERMITTING BY REGULATION

(a) The following nondischarge facilities are deemed to be permitted pursuant to G.S. 143-215.1(d) and it shall not be necessary for the Division to issue individual permits for construction or operation of the following facilities:

(1) Animal waste management systems for which waste does not reach the surface waters by runoff, drift, direct application or direct discharge during operation or land application and which meet the following criteria:

(A) Systems which are designed for, and actually serve, less than the following number of animals and all other systems not specifically mentioned in this Rule:

100 head of cattle
75 horses
250 swine
1,000 sheep
30,000 birds with a liquid waste system

Although these systems are not required to obtain an approved animal waste management plan, animal waste treatment and storage facilities such as, but not limited to, lagoons, ponds, and drystacks which are designed and constructed to serve new, upgraded or expanded facilities under these size criteria are encouraged to meet the same minimum standards and specifications as required for an approved animal waste management plan. Systems that are determined to have an adverse impact on water quality may be required to obtain an approved animal waste management plan or to apply for and receive an individual nondischarge permit from DEM.

(B) Poultry operations which use a dry litter system if records are maintained for one year which include the dates the litter was removed, the estimated amount of litter removed and the location of the sites where the litter was land applied by the poultry operation, the waste is applied at no greater than agronomic rates and if litter is stockpiled not closer than 100 feet from perennial waters as indicated on the most recent published version of U.S.G.S. 1:24,000 (7.5 minute) scale topographic maps and other waters as determined by the local soil and water conservation district. If a third party applicator is used, records must be maintained of the name, address and phone number of the third party applicator.

(C) Land application sites under separate ownership from the waste generator, receiving animal waste from feedlots which is applied by either the generator or a third party applicator, when all the following conditions are met:

- (i) the waste is applied at no greater than agronomic rates;
- (ii) a vegetative buffer (separation) of at least 25 feet is maintained from perennial waters as indicated on the most recent published version of U.S.G.S. 1:24,000 (7.5 minute) scale topographic maps and other waters as determined by the local soil and water conservation district, if a wet waste application system is used.

(D) Existing animal waste management systems serving equal to or greater than the number of animals as listed in Part (a)(1)(A) of this Rule until December 31, 1997. In addition, a registration form for the system must be submitted to DEM on forms supplied or approved by DEM pursuant to Paragraph (c) of this Rule. Systems that are determined to have an adverse impact on water quality may be required to obtain an approved animal waste management plan or to apply for and receive an individual nondischarge permit from DEM.

(E) Existing animal waste management systems serving equal to or greater than the number of animal as listed in Part (a)(1)(A) of this Rule, which have an approved animal waste management plan by December 31, 1997. Systems that do not have an approved animal waste management plan or are determined to have an adverse impact on water quality may be required to apply for and receive an individual nondischarge permit from DEM.

(F) New and expanded animal waste management systems serving equal to or greater than the number of animals listed in Part (a)(1)(A) of this Rule which are placed in operation during the period from the effective date of this Rule through December 31, 1993 and which submitted a registration form for the system to DEM on forms supplied or approved by DEM. Systems that are determined to have an adverse impact on water quality may be required to obtain an approved animal waste management plan or to apply for and receive an individual nondischarge permit]from DEM.

- to be incorporated into the plan.
- (xii) For each change in ownership of the feedlot, the new owner must notify DEM in writing within 60 days of transfer of ownership that the approved plan has been read and is understood and that all provisions of the plan will be implemented.
 - (xiii) A copy of the approved plan, the signed certification form and any approved revisions to the plan shall be maintained by the operator.
- (2) Treatment works and disposal systems for solid waste disposal sites and composting facilities for solid waste, residuals or residues approved in accordance with the rules of the Commission for Health Services if the Commission for Health Services has received the written concurrence of the Director. The term solid waste is used as defined in G.S. 130A-290 and includes hazardous waste.
 - (3) Any building sewer documented by the local building inspector to be in compliance with the N.C. State Plumbing Code.
 - (4) Sites permitted under the authority of the Commission for Health Services for the disposal/utilization of residuals/septage.
 - (5) Individual land application sites receiving compost or other stabilized residuals that are demonstrated as being nonhazardous and nontoxic, meet EPA's criteria for PFRP or Class A residuals as defined in 40 CFR 503, are registered by the North Carolina Department of Agriculture as a commercial fertilizer/soil amendment, are utilized at agronomic rates and are sold and used exclusively in bag form. No distinction will be made as to whether the material is bagged in North Carolina or shipped into the state already bagged.
 - (6) Storage sites for petroleum contaminated soils that are utilized for less than 45 days, storage is on 10 mil or thicker plastic, provisions are made for containing potential leachate and runoff and approval of the activity has been receiving from the appropriate DEM Regional Supervisor or his designee.
 - (7) Land application sites for petroleum contaminated soils with volumes of soil from each source of less than or equal to 50 cubic yards and approval of the activity has been received from the appropriate DEM Regional Supervisor or his designee.
 - (8) Swimming Pool filter backwash and pool drainage that is discharged to the land surface.
 - (9) Drilling muds, cuttings and well water from the development of wells.
 - (10) Composting facilities for dead animals, if the facilities are constructed and operated in accordance with guidelines approved by the North Carolina Department of Agriculture, are constructed on an impervious, weight-bearing foundation, operated under a roof and are approved by the State Veterinarian.
 - (11) Operations that involve routine maintenance or the rehabilitation of existing sewer lines. In situations where existing sewer lines are undergoing routine maintenance, the existing sewer lines are being rehabilitated by constructing or installing replacement sewers, or the existing sewer lines are being refurbished by the installation of some type of sealant or sleeve inside the existing sewer line, a specific nondischarge permit is not required. These operations will be deemed to be permitted as long as all construction and installation conforms to the design criteria of the Division pursuant to Rule .0219 of this Section, as long as new sources of wastewater flow are not being connected to the rehabilitated sewers, and as long as all replacements or newly constructed sewers are located in the same proximity (same general horizontal and vertical alignment) as the existing sewers. If any of the criteria in this Paragraph are not being adhered to, a site specific permit must be requested by the applicant. Additionally, once the maintenance or rehabilitation activities are completed, a North Carolina Professional Engineer's certification (form provided by the Division) must be submitted to the appropriate Regional Supervisor for the completed work.

(b) The Director however may on a case by case basis determine that a facility should not be deemed to be permitted in accordance with this Rule and be required to obtain individual nondischarge permits. This determination will be made based on existing or projected environmental impacts.

(c) All existing, new or expanding animal waste management systems serving equal to or greater than the number of animals as listed in Part (a)(1)(A) of this Rule must submit a registration form for the system to DEM. Failure to register on or before December 31, 1993, shall result in an appropriate enforcement action being initiated or the facility being required to apply for and receive an individual nondischarge permit. Penalties assessed may be based on any one or a combination of the factors as established in G.S. 143B-282.1(b) and commensurate with actual or potential environmental damage.

(d) Failure to obtain approval of a management plan as required by the dates specified in Paragraph (a)(1) of this Rule or failure to follow an approved animal waste management plan shall result in appropriate enforcement actions being initiated or the facility being required to apply for and receive an individual nondischarge permit. Penalties assessed may be based on any one or a combination of the factors as established in G.S. 143B-282.1(b) and commensurate with actual or potential environmental damage.

to a particular treatment works less than a specified amount and which are issued within a specified period of time not to exceed 60 days. In no case shall the local sewer system program issue a permit for additional wastewater if the receiving wastewater treatment is in noncompliance with its Division issued permit unless the additional flow is allowed as part of a special order or judicial order.

(e) Modification of a Local Program. After a local sewer system program has been approved by the Commission, any modification of the program procedures or requirements specified in Paragraph (a) of this Rule must be approved by the Commission to assure that the procedures and requirements remain at least as stringent as the state-wide requirements of the Commission.

(f) Appeal of Local Decisions. Appeal of individual permit denials or issuance with conditions the permit applicant finds unacceptable shall be made to the local program authority or to an appropriate judicial level. The Commission will not consider individual permit denials or issuance with conditions to which the permittee objects. This Paragraph does not alter the enforcement authority of the commission as specified in G.S. 143-215.1(f).

(g) The Division shall maintain a list of all local units of government with approved local sewer system programs and make copies of the list available to the public upon request and payment of any reasonable costs for reproduction. The list can be obtained from: Permitting and Engineering Unit Supervisor, Division of Environmental Management, Water Quality Section, P. O. Box 29535, Raleigh, North Carolina, 27626-0535.

*History Note: Authority G.S. 143-215.1; 143-215.3(a)(1);
Eff. February 1, 1986;
Amended Eff. February 1, 1993; October 1, 1987.*

.0219 MINIMUM DESIGN REQUIREMENTS

(a) All facilities requiring a permit pursuant to this Section shall be designed following good engineering practice. The plans and specifications for all projects must be sealed by a Professional Engineer. The only exceptions from the Professional Engineer requirement are those allowed in Rule .0205(d)(1)(A)(iii) of this Section.

(b) 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 methods acceptable to the Director.

(c) Impoundments, trenches or other excavations made for the purpose of storing or treating waste will not be excavated into bedrock unless the placement of waste into such excavations will not result in a contravention of assigned standards, as demonstrated by predictive calculations or modeling methods acceptable to the Director.

(d) The bottoms of earthen impoundments, trenches or other similar excavations with the exception of nitrification fields, infiltration systems, and sewer line excavations shall be at least four feet above the bedrock surface, except that the bottom of excavations which are less than four feet above bedrock shall have a liner with a hydraulic conductivity no greater than 1×10^{-7} centimeters per second. Liner thickness will be that thickness necessary to achieve a leakage rate consistent with the sensitivity of classified groundwaters. Separation distances or liner requirements may be reduced if it can be demonstrated by predictive calculations or modeling methods acceptable to the Director, that construction and use of these treatment and disposal units will not result in contravention of assigned standards.

(e) Waste shall not be applied or discharged onto or below the land surface when the vertical separation between the waste and the seasonal high water table is less than one foot. If the area is to be utilized for industrial waste and has a separation of less than three feet, and in other areas as designated by the Director, a demonstration must be made using predictive calculations or modeling methods, acceptable to the Director, that such placement will not result in contravention of classified groundwater standards.

(f) Treatment works and disposal systems utilizing earthen basins, lagoons, ponds or trenches, excluding nitrification fields, infiltration systems, and holding ponds containing non-industrial treated effluent prior to spray irrigation, for treatment, storage or disposal shall have either a liner of natural material at least one foot in thickness and having a hydraulic conductivity of no greater than 1×10^{-6} centimeters per second when compacted, or a synthetic liner of sufficient thickness to exhibit structural integrity and an effective hydraulic conductivity no greater than that of the natural material liner.

(g) Except as otherwise provided by these requirements or by terms of a permit, all waste treatment, storage and disposal facilities must maintain and operate a groundwater monitoring system as approved by the Division. The monitoring system must be designed to assess the impact of any discharge on the quality of the underlying groundwaters and must be based on the results of the hydrogeologic investigation.

(h) For pumping stations:

- (1) no by-pass or overflow lines;
- (2) multiple pumps shall be provided capable of pumping at a rate of 2.5 times the average daily flow rate with

- submitted with the application that the owner/authority has the capability to perform routine cleaning and maintenance on the sewer at the specified manhole separation;
- (J) drop manholes shall be provided where invert separations exceed 2.5 feet;
 - (K) manholes shall be designed for 100-year flood protection;
 - (L) an air relief valve shall be provided at all high points along force mains;
 - (M) odor and corrosion control must be satisfactorily addressed by the applicant for all sewers and force mains with extended travel times.
- (j) For treatment works and disposal systems:
- (1) no by-pass or overflow lines;
 - (2) multiple pumps if pumps are used;
 - (3) at least one of the following:
 - (A) dual source/dual feed or automatically activated standby power supply on site, capable of powering all essential treatment components under design conditions; or
 - (B) approval by the Director that the facility:
 - (i) serves a private water distribution system which has automatic shut-off at power failure and no elevated water storage tanks, and
 - (ii) has sufficient storage capacity that no potential for overflow exists, and
 - (iii) can tolerate septic wastewater due to prolonged detention; or
 - (C) where the waters that would be impacted by a power failure are classified as C Waters, the applicant may be allowed to show a history of power reliability that would demonstrate that an alternative power source or other reliability measures would not be needed;
 - (4) protection from 100 year flood;
 - (5) buffer zones of at least the following distances, and greater where necessary to comply with Section .0400 of this Subchapter or to address particular site or waste characteristics:
 - (A) Any habitable residence or place of public assembly under separate ownership or which is to be sold:
 - (i) for spray irrigation systems (application area) not covered by Rule .0219(k) 400 feet
 - (ii) for surface residual application 400 feet
 - (iii) for subsurface residual injection 200 feet
 - (iv) for facultative lagoons 400 feet
 - (v) for activated sludge plants or surface sand filters 100 feet
 - (vi) for soil remediation sites 100 feet
 - (B) Any private or public water supply source 100 feet
 - (C) Streams classified as WS or B:
 - (i) for subsurface disposal 50 feet
 - (ii) for non-discharge surface disposal except for high rate infiltration systems 100 feet
 - (iii) high rate infiltration systems 200 feet
 - (D) Waters classified SA or SB:
 - (i) all systems except for high rate infiltration systems 100 feet from mean high water
 - (ii) high rate infiltration systems 200 feet from mean high water
 - (E) Any other stream, canal, marsh, or coastal waters:
 - (i) for subsurface disposal 50 feet
 - (ii) for non-discharge surface disposal except for high rate infiltration systems 100 feet
 - (iii) high rate infiltration systems 200 feet
 - (iv) wastewater treatment facilities 50 feet
 - (F) Any Class I or Class II impounded reservoir used as a source of drinking water:
 - (i) all systems except for high rate infiltration systems 100 feet from normal high water
 - (ii) high rate infiltration systems 200 feet from normal high water

- (1) The following are requirements for use of reclaimed domestic or municipal water:
 - (A) Where reuse is the only managed option utilized (e.g., reuse option such as spray irrigation alone):
 - (i) Aerated flow equalization facilities with a capacity based upon either a representative diurnal hydrograph or at least 25 percent of the daily system design flow.
 - (ii) All essential treatment units shall be provided in duplicate.
 - (iii) The treatment process shall produce a tertiary quality effluent (filtered or equivalent) prior to discharge to the irrigation pond with the following quality:
 - (I) a monthly average TSS of less than or equal to 5 mg/l and a daily maximum TSS of less than or equal to 10 mg/l;
 - (II) monthly geometric mean fecal coliform level of less than or equal to 14/100 ml and a daily maximum fecal coliform of less than or equal to 25/100 ml;
 - (III) a monthly average BOD₅ of less than or equal to 10 mg/l and a daily maximum BOD₅ of less than or equal to 15 mg/l;
 - (IV) a monthly average NH₃ of less than or equal to 4 mg/l and a daily maximum NH₃ of less than or equal to 6 mg/l.
 - (iv) Continuous on-line monitoring and recording for turbidity or particle count and flow shall be provided prior to discharge to the irrigation pond.
 - (v) Effluent from the treatment facility shall be discharged to a five-day side-stream detention pond if either the turbidity exceeds 10 NTU or if the fecal coliform levels cannot be met. The facility must have the ability to return the effluent back to the treatment facility or otherwise meet the effluent requirements prior to discharge to the irrigation pond.
 - (vi) There must be no public access to the wastewater treatment facility or the five-day detention pond. There shall be a 50 foot buffer from the five day side-stream detention pond to property lines. The five day side-stream detention pond shall have either a liner of natural material at least one foot in thickness and having a hydraulic conductivity of no greater than 1×10^{-6} centimeters per second when compacted, or a synthetic liner of sufficient thickness to exhibit structural integrity and an effective hydraulic conductivity no greater than that required of the natural material liner. Liner requirements of the five day side-stream detention pond or separation distances between the bottom of the five day side-stream detention pond and the groundwater table may be reduced if it can be demonstrated by predictive calculations or modeling methods acceptable to the Director, that construction and use of the five day side-stream detention pond will not result in contravention of assigned groundwater standards at the compliance boundary.
 - (vii) The size of any irrigation pond, that follows the five day detention pond, shall be justified using a mass water balance based upon a recent 25 year period utilizing monthly average precipitation data, potential evapotranspiration and soil drainage data that are available from, or are representative of, the area involved. There shall be a 50 foot buffer from the irrigation pond to property lines. No liners or minimum separation between the bottom of the irrigation pond and the groundwater table will be required if it can be demonstrated by predictive calculations or modeling methods acceptable to the Director, that construction and use of the irrigation pond will not result in contravention of assigned groundwater standards at the compliance boundary.
 - (viii) An automatically activated standby power source or other means to prevent improperly treated wastewater from entering the irrigation pond shall be provided.
 - (ix) There shall be a certified operator of a grade equivalent or greater than the facility classification on call 24 hours/day.
 - (B) Where reuse is utilized in combination with other managed wastewater options (e.g., reuse options and discharge via National Pollutant Discharge Elimination System (NPDES) permit):
 - (i) Aerated flow equalization facilities with a capacity based upon either a representative diurnal hydrograph or at least 25 percent of the daily system design flow.
 - (ii) All essential treatment units shall be provided in duplicate.
 - (iii) The treatment process shall produce a tertiary quality effluent (filtered or equivalent) prior to reuse with the following quality:
 - (I) a monthly average TSS of less than or equal to 5 mg/l and a daily maximum TSS of less than or equal to 10 mg/l;
 - (II) a monthly geometric mean fecal coliform level of less than or equal to 14/100 ml and a daily maximum fecal coliform of less than or equal to 25/100 ml;

- located in commercial or industrial facilities can be approved by the department if the applicant can demonstrate that public health and the environment will be protected.
- (iv) Reclaimed water shall not be used for irrigation of direct food chain crops.
 - (v) Reclaimed water shall not be used for swimming pools, hot-tubs, spas or similar uses.
 - (vi) Reclaimed water shall not be used for direct reuse as a raw potable water supply.
- (D) The following are requirements for domestic or municipal reuse systems that distribute reclaimed water:
- (i) All reclaimed water valves, storage facilities and outlets shall be tagged or labeled to warn the public or employees that the water is not intended for drinking. Where appropriate, such warning shall inform the public or employees to avoid contact with the water.
 - (ii) All reclaimed water piping, valves, outlets and other appurtenances shall be color-coded, taped, or otherwise marked to identify the source of the water as being reclaimed water.
 - (I) All reclaimed water piping and appurtenances shall be either colored purple (Pantone 522) and embossed or integrally stamped or marked "CAUTION: RECLAIMED WATER - DO NOT DRINK" or be installed with a purple (Pantone 522) identification tape or polyethylene vinyl wrap. The warning shall be stamped on opposite sides of the pipe and repeated every 3 feet or less.
 - (II) Identification tape shall be at least 3 inches wide and have white or black lettering on purple (Pantone 522) field stating "CAUTION: RECLAIMED WATER - DO NOT DRINK". Identification tape shall be installed on top of reclaimed water pipelines, fastened at least every 10 feet to each pipe length and run continuously the entire length of the pipe.
 - (III) Existing underground distribution systems retrofitted for the purpose of distributing reclaimed water shall be taped or otherwise identified as in Subpart (I) or (II) of this Paragraph. This identification need not extend the entire length of the distribution system but shall be incorporated within 10 feet of crossing any potable water supply line or sanitary sewer line.
 - (iii) All reclaimed water valves and outlets shall be of a type, or secured in a manner, that permits operation by authorized personnel only.
 - (iv) Above ground hose bibs (spigots or other hand operated connections) shall not be present. Hose bibs shall be located in locked, below grade vaults which shall be clearly labeled as being of nonpotable quality. As an alternative to the use of locked, below grade vaults with standard hose bib services, hose bibs which can only be operated by a special tool may be placed in nonlockable underground service boxes clearly labeled as nonpotable water.
 - (v) Tank Trucks
 - (I) Tank trucks and other equipment used to distribute reclaimed water shall be clearly identified with advisory signs.
 - (II) Tank trucks used to transport reclaimed water shall not be used to transport potable water that is used for drinking or other potable purposes.
 - (III) Tank trucks used to transport reclaimed water shall not be filled through on-board piping or removable hoses that may subsequently be used to fill tanks with water from a potable water supply.
 - (vi) Cross-Connection Control
 - (I) There shall be no direct cross-connections between the reclaimed water and potable water systems.
 - (II) Where both reclaimed water and potable water are supplied to a reclaimed water use area, a reduced pressure principle backflow prevention device or an approved air gap separation shall be installed at the potable water service connection to the use area. The installation of the reduced pressure principal backflow prevention device shall allow proper testing.
 - (III) Where potable water is used to supplement a reclaimed water system, there shall be an air gap separation, approved and regularly inspected by the potable water supplier, between the potable water and reclaimed water systems.
- (2) The use of treated industrial effluents or other industrial water streams created prior to final treatment that are to be used in industrial processes such as cooling water make-up, process waters, or fire fighting or extinguishing, shall not require a non-discharge permit as long as the recycle system operates as a closed-loop system. Other uses of reclaimed industrial water are subject to the following requirements:

- water systems.
- (II) Where potable water is used to supplement a reclaimed water system, there shall be an air gap separation, approved and inspected by the potable water supplier, between the potable water and reclaimed water systems.
- (D) The following are requirements for industrial reuse systems that distribute reclaimed water outside the property boundaries of the generating facility:
- (i) All reclaimed water valves, storage facilities and outlets shall be tagged or labeled to warn the public or employees that the water is not intended for drinking. Where appropriate, such notification shall inform the public or employees to avoid contact with the water.
 - (ii) All reclaimed water piping, valves, outlets and other appurtenances shall be color-coded, taped, or otherwise marked to identify the source of the water as being reclaimed water.
 - (I) All reclaimed water piping and appurtenances shall be either colored purple (Pantone 522) and embossed or integrally stamped or marked "CAUTION: RECLAIMED WATER - DO NOT DRINK" or be installed with a purple (Pantone 522) identification tape or polyethylene vinyl wrap. The warning shall be stamped on opposite sides of the pipe and repeated every 3 feet or less.
 - (II) Identification tape shall be at least 3 inches wide and have white or black lettering on purple (Pantone 522) field stating "CAUTION: RECLAIMED WATER - DO NOT DRINK". Identification tape shall be installed on top of reclaimed water pipelines, fastened at least every 10 feet to each pipe length and run continuously the entire length of the pipe.
 - (III) Existing underground distribution systems retrofitted for the purpose of distributing reclaimed water shall be taped or otherwise identified as in Subpart (I) or (II) of this Paragraph. This identification need not extend the entire length of the distribution system but shall be incorporated within 10 feet of crossing any potable water supply line or sanitary sewer line.
 - (iii) All reclaimed water valves and outlets shall be of a type, or secured in a manner, that permits operation by authorized personnel only.
 - (iv) Above ground hose bibs (spigots or other hand operated connections) shall not be present. Hose bibs shall be located in locked, below grade vaults which shall be clearly labeled as being of nonpotable quality. As an alternative to the use of locked, below grade vaults with standard hose bib services, hose bibs which can only be operated by a special tool may be placed in nonlockable underground service boxes clearly labeled as nonpotable water.
 - (v) Tank Trucks
 - (I) Tank trucks and other equipment used to distribute reclaimed water shall be clearly identified with advisory signs.
 - (II) Tank trucks used to transport reclaimed water shall not be used to transport potable water that is used for drinking or other potable purposes.
 - (III) Tank trucks used to transport reclaimed water shall not be filled through on-board piping or removable hoses that may subsequently be used to fill tanks with water from a potable water supply.
 - (vi) Cross-Connection Control
 - (I) There shall be no direct cross-connections between the reclaimed water and potable water systems.
 - (II) Where both reclaimed water and potable water are supplied to a reclaimed water use area, a reduced pressure principle backflow prevention device or an approved air gap separation shall be installed at the potable water service connection to the use area. The installation of the reduced pressure principal backflow prevention device shall allow proper testing.
 - (III) Where potable water is used to supplement a reclaimed water system, there shall be an air gap separation, approved and regularly inspected by the potable water supplier, between the potable water and reclaimed water systems.
- (l) Wastewater Flow Rates:
- (1) 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 will 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

With cafeteria only	12 gal/student
With neither cafeteria nor showers	10 gal/student
Boarding	60 gal/person
Service Stations	250 gal/water closet or urinal
Stadiums, Auditoriums, Theaters, Drive-ins	5 gal/seat or space
Stores, shopping centers and malls -- Note: if food service is included, add 40 gal/seat	120 gal/1000 ft ²
Swimming Pools and Bathhouses	10 gal/person

- (3) An adjusted daily sewage flow may be granted upon a showing that a sewage system is adequate to meet actual daily water consumption from a facility included in Subparagraph (1) or (2) of this Paragraph. Documented, representative data from that facility or a comparable facility shall be submitted, consisting of at least 12 consecutive monthly total water consumption readings and daily total water consumption readings for at least 30 consecutive days of water use. The daily readings shall be taken during a projected peak sewage flow month. The adjusted design daily sewage flow shall be determined by taking the numerical average of the daily readings that fall within the upper 10 percent of the daily readings when ranked in descending order.
- (m) For Treatment and Disposal of Soil Containing Petroleum Products:
 - (1) Landfarming of Soils Containing Petroleum Products at Minimum Rates. Petroleum contaminated soils shall be incorporated into the native soils of the receiver site immediately upon application. Liming, fertilization, and aeration of the soils mixture shall be optional, unless otherwise required by the Division. Subsequent application of petroleum contaminated soils onto the same receiver site shall not occur for at least 18 months from the date of the most recent application of petroleum contaminated soils and shall cause the receiver site to be reclassified as a "dedicated remediation site" unless the permittee or applicant can demonstrate, through soil sampling and contaminant analytical procedures approved by the Department, that the petroleum contaminant level in the upper eight inches of the receiver site soils is below analytical detection levels;
 - (2) Landfarming of Soil Containing Petroleum Products at Conventional Rates. Landfarming of soils containing petroleum product at an application thickness greater than one inch shall require fertilization, liming, and aeration of the native soils and petroleum contaminated soils mixture as approved by the Division. Application thickness shall be based upon the nature of the receiver site soils, depth to the seasonal high water table, the intended cover crop, and the source of contamination, in accordance with procedures approved by the Division. Operation of the landfarming program shall not result in contravention of classified groundwater or surface water quality standards. Subsequent application of petroleum contaminated soils onto the same receiver site shall not occur for at least 18 months from the date of the most recent application of petroleum contaminated soils and shall cause the receiver site to be reclassified as a "dedicated disposal site" unless the permittee or applicant can demonstrate, through soil sampling and contaminant analytical procedures approved by the Department, that the petroleum contaminant level in the upper eight inches of the receiver site soils is below analytical detection levels;
 - (3) Containment and Treatment of Soil Containing Petroleum Products:
 - (A) A containment structure designed to bioremediate or volatilize soil containing petroleum products shall be constructed of either a synthetic liner of at least 30 mils thickness or of a one foot thick liner of natural material, compacted to at least 95 percent standard proctor dry density and with a permeability of less than 1×10^{-7} cm/sec.
 - (B) The bottom of the containment structure shall be at least three feet above the seasonal high water table or bedrock.
 - (C) A leachate collection system must be installed in order to prevent runoff from the petroleum contaminated soils within the containment structure, or steps taken to avoid accumulation of stormwater within the containment structure.
 - (4) Disposal of Petroleum Contaminated Soils at Dedicated Sites. Subsequent applications of petroleum contaminated soils at dedicated sites shall not recur until such time as it can be demonstrated, by computer modeling or predictive calculations, that additional applications of contaminated soils will not result in the contravention of any applicable environmental standards. Disposal of petroleum contaminated soils at dedicated sites shall conform to procedures established by the Division.
- (n) For Systems utilizing Infiltration Galleries:
 - (1) An infiltration gallery shall be designed such that its largest surface dimension is greater than its depth and

- compliance and enforcement procedures have failed;
- (3) Limit the use of the fund to wastewater treatment works with design flow capacities of less than or equal to one hundred thousand gallons per day (100,000 GPD);
 - (4) Notify the permittee by certified mail of the intention to take emergency corrective action and to recoup monies spend;
 - (5) Make every effort to recoup fund expenditures, including collection costs, from the parties responsible; and
 - (6) Coordinate use of the fund with the program of the Public Utilities Commission when a permittee is also a regulated utility.

*History Note: Authority G.S. 143-215.3(a); 143-215.3B(c); 143-215.3B(e);
Eff. August 1, 1988;
Amended Eff. February 1, 1993.*

.0223 DEMONSTRATION OF FUTURE WASTEWATER TREATMENT CAPACITIES

In order to insure that treatment systems do not exceed their hydraulic treatment capacities, no permits for sewer line extensions will be issued to wastewater treatment systems owned or operated by municipalities, counties, sanitary districts or public utilities after January 1, 1994 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 calendar year 1993 or any subsequent calendar year), the permittee must submit an approvable engineering evaluation of their future wastewater treatment needs. This evaluation must outline specific plans for meeting future wastewater treatment needs by either expansion of the existing system, elimination or reduction of extraneous flows, or water conservation and must include the source(s) of funding for the improvements. If expansion is not proposed or is proposed for a later date, a detailed justification must be made and approved by the Director 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 systems permitted hydraulic capacity, (based on the average flow of calendar year 1993 or any subsequent calendar year), the permittee must obtain all permits needed for the expansion of the wastewater treatment system and, if construction is needed, submit approvable final plans and specifications for expansion including a construction schedule. If expansion is not proposed or is proposed for a later date, a detailed justification must be made and approved by the Director 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 may on a case by case basis, allow permits to be issued to facilities that are exceeding the 80 percent or 90 percent loading rates 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 his satisfaction that adequate progress is being made in developing the needed engineering evaluations or plans and specifications.

*History Note: Filed as Temporary Amendment Eff. September 13, 1993, for a period of 180 days or until the permanent rule becomes effective, whichever is sooner;
Authority G.S. 143-215.3;
Eff. February 1, 1993;
Amended Eff. February 1, 1994.*

.0224 TREATMENT FACILITY OPERATION AND MAINTENANCE

(a) For facilities permitted under this Section, the permittee must 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 15A NCAC 8A .0202. Copies of this Rule are available from the Division of Environmental Management, Water Quality Section, Archdale Building, 512 N. Salisbury Street, P.O. Box 29535, Raleigh, North Carolina 27626-0535 at no charge.

(b) In order to insure the proper operation and maintenance of facilities permitted under this Section, the Operator in Responsible Charge, or a back-up operator when appropriate, must operate and visit the facility as required by the Water Pollution Control System Operators Certification Commission as established in 15A NCAC 8A .0202. Copies of this Rule are available from the Division of Environmental Management, Water Quality Section, Archdale Building, 512 N. Salisbury Street, P.O. Box 29535, Raleigh, North Carolina 27626-0535 at no charge.

residuals to waters of the state;

(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 Section.

*History Note: Authority G.S. 143-215.1; 143-215.3(a)(1); 143-215.10C;
Temporary Adoption Eff. November 8, 1996;
Temporary Amendment Eff. May 8, 1997.*

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