

SECTION .0200 - APPLICATION REQUIREMENTS

15A NCAC 02U .0201 APPLICATION SUBMITTAL

(a) The requirements in this Rule shall apply to all new and expanding reclaimed water and closed-loop recycle facilities.

(b) A soil evaluation of the utilization site where the reclaimed water is applied to the land surface or otherwise used in a ground absorption manner shall be provided to the Division by the applicant. Evaluations shall include recommended loading rates of liquids, solids, and other constituents. For systems that utilize reclaimed water through irrigation, the evaluation shall also include recommended maximum irrigation precipitation rates. If required by G.S. 89F, a soil scientist shall prepare this evaluation.

[Note: The North Carolina Board for Licensing of Soil Scientists has determined, via letter dated December 1, 2005, that preparation of soils reports pursuant to this Paragraph constitutes practicing soil science pursuant to G.S. 89F.]

(c) Engineering design documents. If required by G.S. 89C, a professional engineer shall prepare engineering design documents. The following documents shall be provided to the Division by the applicant:

- (1) engineering plans for the entire system, including treatment, storage, application, and utilization facilities and equipment except those previously permitted unless those previously permitted are directly tied into the new units or are necessary to understanding 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;
- (3) engineering calculations, including hydraulic and pollutant loading for each treatment unit, treatment unit sizing criteria, hydraulic profile of the treatment system, total dynamic head, and system curve analysis for each pump, buoyancy calculations, and irrigation design; and
- (4) closed-loop facilities utilizing storage ponds shall provide a water balance calculation documenting all inputs and losses.

[Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via letter dated December 1, 2005, that preparation of engineering design documents pursuant to this Paragraph constitutes practicing engineering under G.S. 89C. In addition, the North Carolina Board of Examiners for Engineers and Surveyors has determined that design of residential reclaimed irrigations systems owned by the property owner does not constitute engineering pursuant to G.S. 89C.]

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

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

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

(e) The applicant shall provide property ownership documentation to the Division consisting of:

- (1) legal documentation of ownership, such as a contract, deed, or article of incorporation;
- (2) an agreement of an intent to purchase the property that is written, notarized, and signed by both parties, accompanied by a plat or survey map;
- (3) an easement running with the land indicating the intended use of the property and meeting the condition of 15A NCAC 02L .0107(f); or
- (4) an agreement to lease the property that is written, notarized, and signed by both parties, indicating the intended use of the property, accompanied by a plat or survey map. When this Subparagraph is utilized to document property ownership, groundwater standards must be met across the entire site

and a compliance boundary need not be provided. Lease agreements shall adhere to the requirements of 15A NCAC 02L .0107.

(f) Public utilities shall submit a Certificate of Public Convenience and Necessity or a letter from the NC Utilities Commission to the Division stating that it has received a franchise application.

(g) For reclaimed or recycled water generated from industrial wastewater, the applicant shall provide a chemical analysis of the typical reclaimed water to be utilized, and a listing of any toxic pollutant that the applicant currently uses or manufactures as an intermediate or final product or byproduct. The Director may waive or modify this requirement for any applicant if the applicant demonstrates that it would be unduly burdensome to identify each toxic pollutant. The Director may determine that subsequent toxicity testing is required based on the provided chemical analysis. New facilities may provide chemical analysis of the source water along with predictive calculations for chemical characteristics prior to utilization. The analysis shall include:

- (1) total organic carbon;
- (2) 5-day biochemical oxygen demand (BOD5);
- (3) chemical oxygen demand (COD);
- (4) nitrate nitrogen (NO₃-N);
- (5) ammonia nitrogen (NH₃-N);
- (6) total kjeldahl nitrogen (TKN);
- (7) pH;
- (8) chloride;
- (9) total phosphorus;
- (10) phenol;
- (11) total volatile organic compounds;
- (12) escherichia coli (E.coli) or fecal coliform;
- (13) coliphage (Type 2 reclaimed water only);
- (14) clostridium perfringens (Type 2 reclaimed water only);
- (15) calcium;
- (16) sodium;
- (17) magnesium;
- (18) sodium adsorption ratio (SAR);
- (19) total trihalomethanes; and
- (20) total dissolved solids.

(h) For irrigation sites, the applicant shall provide to the Division a project evaluation and a receiver site agronomic management plan and recommendations concerning cover crops and their ability to accept the proposed application rates of liquid, solids, minerals, and other constituents of the wastewater.

*History Note: Authority G.S. 143-215.1; 143-215.3(a);
Eff. June 18, 2011;
Readopted Eff. September 1, 2018.*