

15A NCAC 18E .1705 APPROVAL CRITERIA FOR INNOVATIVE SYSTEMS

(a) A dispersal system shall be approved for use as an Innovative System when the following criteria have been met:

- (1) the performance requirements for an Innovative System identified in G.S. 130A-343(a)(5) and (g) have been met;
- (2) materials used in construction are equal or superior in physical properties, chemical durability, and structural integrity compared to materials used for similar proposed systems described in other Sections of this Subchapter;
- (3) the system has been demonstrated to perform equal or superior to a system that is described in other Sections of this Subchapter or to an Innovative or Accepted System previously approved in accordance with this Section, based upon controlled pilot-scale research studies or statistically valid monitoring of full-scale operational systems;
- (4) the system has met one of the following criteria:
 - (A) the system has completed an evaluation protocol as a Provisional System in accordance with Rule .1704 of this Section;
 - (B) the manufacturer has provided comparable third-party research and testing conducted in other states, with the data and findings of all evaluations of the system performance, that support the proposed use of the system. The comparable research shall include information on relevant conditions, such as wastewater system design, soil and site conditions, climate, and hydrology; or
 - (C) the system has been evaluated in accordance with G.S. 130A-343(g)(3); and
- (5) the following documentation is provided:
 - (A) load testing that demonstrates the structural integrity to be comparable to a conventional trench system, including subjecting the trench system to an axle load of 16,000 pounds when covered with 12 inches of compacted soil and an axle load of 4,000 pounds when covered with six inches of compacted soil without collapsing, fracturing, or breaking;
 - (B) a minimum of 100 installations operational and in use for a minimum of one year. The 100 installations sites may include any combination of systems installed in conjunction with an approved Provisional System evaluation completed in North Carolina and systems in other states; and
 - (C) system hydraulic performance and rate of malfunction is equal or superior to the demonstrated performance of a conventional trench system.

(b) Advanced pretreatment systems complying with TS-I, TS-II, or RCW effluent standards shall be approved for use as an Innovative System when the following information is provided:

- (1) information required in Subparagraphs (a)(1) through (a)(4) of this Rule; and
- (2) documentation of one of the following:
 - (A) for a system that has been certified and listed by a nationally recognized certification body, as defined by G.S. 130A-343(a)(6) for a period that exceeds two consecutive years, a minimum of 50 complete third-party field verification data sets from a minimum of 15 sites in operation for a minimum of six months, including all constituents necessary to verify compliance with the applicable effluent standard. Two to five data sets may be from the same site if collected a minimum of three months apart, with no data excluded from the field sampling sites. The data may be collected from systems in-state or out-of-state. The data sets shall demonstrate compliance with TS-I, TS-II, or RCW effluent standards in accordance with Rule .1710 of this Section; or
 - (B) a minimum of 150 complete third-party field verification data sets from a minimum of 50 sites in operation for a minimum of six months, including all constituents necessary to verify compliance with the applicable effluent standard. Two to five data sets may be from the same site if collected a minimum of three months apart, with no data excluded from the field sampling sites. The 50 sites may include a combination of sites monitored in conjunction with an approved Provisional System evaluation completed in North Carolina and sites in other states. The data sets shall demonstrate compliance with TS-I, TS-II, or RCW effluent standards in accordance with Rule .1710 of this Section.

(c) Manufacturers requesting Innovative Approval as both an advanced pretreatment and dispersal system shall meet the requirements for advanced pretreatment and dispersal as described in this Rule.

History Note *Authority G.S. 130A-335(e) and (f); 130A-343;*
Eff. January 1, 2024.