GENERAL ASSEMBLY OF NORTH CAROLINA
SESSION 2023

H **D**

HOUSE BILL 571
PROPOSED COMMITTEE SUBSTITUTE H571-PCS10400-BR-9

Short Title: Discharge of Highly Treated Wastewater. (Public)

Sponsors:

Referred to:

April 6, 2023

A BILL TO BE ENTITLED

AN ACT TO AUTHORIZE DISCHARGES FROM WASTEWATER TREATMENT SYSTEMS THAT MEET SPECIFIED EFFLUENT LIMITATIONS TO CERTAIN SURFACE WATERS.

The General Assembly of North Carolina enacts:

SECTION 1.(a) G.S. 143-215.1 is amended by adding a new subsection to read:

"(c8) Permitted Discharges of Highly Treated Domestic Wastewater. –

(1) Subject only to the limitations set forth in subdivision (2) of this subsection, the Department shall authorize permitted discharges of highly treated domestic wastewater to surface waters of the State, including wetlands, perennial streams, and unnamed tributaries of named and classified streams where the 7Q10 flow or 30Q2 flow of the receiving waterbody is estimated to be low flow or zero flow, as determined by the United States Geological Survey, from wastewater treatment systems capable of meeting the following water quality-based effluent limitations:

a. Biological oxygen demand (BOD_5), 5mg/L.

b. NH_3, 0.5mg/L monthly average, 1.0 mg/L daily maximum.

c. Total nitrogen, 4mg/L monthly average.

d. Total phosphorus, 1.0mg/L monthly average, 2.0mg/L daily maximum.

e. Fecal coliforms, 14 colonies/100mL.

f. Dissolved oxygen, 6mg/L, or 1mg/L more than the BOD_5 concentration.

g. Turbidity, 1 Nephelometric Turbidity Units.

h. Total suspended solids, 5mg/L monthly average.

i. Nitrate, 1mg/L monthly average.

(2) In addition to the requirements set forth in subdivision (1) of this subsection, only the following requirements shall apply to wastewater discharges to be authorized pursuant to this subsection:

a. No discharge shall be permitted to classified shellfish waters or outstanding resource waters. Discharges to unnamed tributaries of classified shellfish waters, however, shall be authorized in compliance with the requirements of this section.

b. The limitation of flow for any wastewater discharge shall be no more than one-tenth of the flow generated by the one-year, 24-hour storm event given the drainage area and calculated using the rational method.

The rational method shall be used to calculate the peak runoff for the one-year 24-hour precipitation event in cubic foot per second. The peak runoff shall then be divided by 10 and multiplied by 646,272 to convert the result to gallons per day of allowable discharge at the point studied.

c. Discharges shall be limited based on the ability of the receiving waters to hydraulicly accept the proposed flow, as demonstrated by being equal to or less than one-tenth of the flow using the rational method.

d. All discharges shall be directed to buffer systems that utilize low-energy methodologies to function as a buffer between the discharge and the receiving waters. Buffer systems shall:

1. Consist of one of the following: (i) high-rate infiltration basins that utilize engineered materials to achieve high rates of infiltration, which engineered materials shall have an ASTM gradation of a clean washed coarse grained sand; (ii) constructed free surface wetlands having a hydraulic residence time of 14 days; and (iii) other suitable technologies that provide a physical or hydraulic residence time buffer, or both, between the discharge and the receiving waters.

2. Discharge to areas that are 50 feet upland of the receiving waters or wetlands at a non-erosive velocity equal to or less than 2 feet per second through an appropriately designed energy dissipater, or other applicable designs, that meet the standard of practice for professional engineers for such devices.

3. Divide the subsequent outfall to the receiving stream so that no one particular outfall exceeds 1 cubic foot per second based on the average daily flow of the discharge. Discharges from buffer systems shall be allowed to be placed at increments along a stream or receiving waters at a distance of no less than 50 linear feet.

(3) For purposes of this subsection, the following definitions apply:

a. 7Q10 flow. – A method to calculate the minimum average flow of a receiving water for a period of seven consecutive days that has an average recurrence of once in 10 years.

b. 30Q2 flow. – A method to calculate the minimum average flow of a receiving water for a period of 30 consecutive days that has an average recurrence of once in two years.

c. Highly treated domestic wastewater. – Wastewater effluent from treatment systems that receive flows from sources of domestic wastewater that meet the effluent limitations as set forth in subdivision (1) of this subsection.

d. Rational method. – The method of computing storm drainage flow rates (Q) by use of the formula Q = CIA. For purposes of this sub-subdivision, the following definitions apply:

1. C. – The rational coefficient describing the stormwater runoff characteristics of the drainage.

2. I. – The rainfall intensity for the one-year, 24-hour precipitation event given by the National Oceanic and Atmospheric Administration through its online precipitation

data server or other appropriate sources in units of inches per hour.

3. A. – The catchment area tributary to the point being studied as further defined using methodologies that meet the standard of practice for such work, including, but not limited to web-based data and tools provided by the United States Geological Survey or by other analysis using topographic data that follows the standard of practice for such work by licensed professional engineers in units of acres.

(4) Once an applicant has submitted data to demonstrate the proposed discharge will meet the requirements of subdivisions (1) and (2) of this subsection, signed and sealed by a professional engineer licensed in accordance with the provisions of Chapter 89C of the General Statutes, the application shall be deemed complete for the purposes of review by the Department."

SECTION 1.(b) If rules are required in order to implement the requirements of this act, the Department of Environmental Quality shall adopt temporary rules no later than 60 days after this act becomes law. Any temporary rules adopted in accordance with this section shall remain in effect until permanent rules that replace the temporary rules become effective. Rules adopted pursuant to this section shall not, however, impose additional requirements on permitting of the discharge of highly treated domestic wastewater over that established under G.S. 143-215.1(c8), as enacted by subsection (a) of this section.

SECTION 2. This act is effective when it becomes law. G.S. 143-215.1(c8), as enacted by Section 1 of this act, applies to permits for new or expanded wastewater discharge facilities issued on or after that date.