NORTH CAROLINA BOARD OF EXAMINERS FOR ENGINEERS AND SURVEYORS

Policy

SUBSURFACE ON-SITE WASTEWATER SYSTEM DESIGN				
NUMBER: BP-2303-1		**REV. NO.:**	**ORIGINAL BOARD APPROVAL:**	**03/15/23**
			LATEST COMMITTEE REVIEW:	
BOARD APPROVED	**03/15/23**			
CATEGORY(IES)	☐ Surveying	☒ Engineering	☐ Other	
	☐ Unlicensed	☐ Seal		
ORIGINATION:	☐ Surveying Committee	☒ Engineering Committee	☐ Other	

The design of subsurface on-site wastewater systems in G.S. 130A, Article 11, to include design consulting, is within the practice of engineering in G.S. 89C-3(6) and must be done by a licensed Professional Engineer (No individual or company shall engage in such activities unless properly licensed with the Board.) if it is one of the following systems, in addition to the systems listed in Rule 15A NCAC 18.1938:

(1) low pressure pipe (LPP) or drip irrigation systems that require pumping more than 500 feet horizontally or more than 50 feet of net elevation head;

(2) pump systems that require pumping more than 1,000 feet horizontally or more than 100 feet of net elevation head;

(3) dosing systems or force mains that have one or more intermediate high points greater than five feet;

(4) the system requires pumping downhill to a drainfield with gravity distribution, LPP, or drip irrigation where the volume of the supply line that could drain to the dispersal field between doses exceeds 25 percent of the required dose volume;

(5) LPP, drip irrigation, and pump systems with a design daily flow greater than 600 gpd serving a single dwelling unit, place of business, or place of public assembly;

(6) LPP and drip irrigation systems where there is more than 15 percent variation in line length. The 15 percent variation shall be measured by comparing the longest line length to the shortest line length in any dispersal field;

(7) two or more septic tanks or advanced pretreatment units, each serving a separate dwelling unit, place of business or place of public assembly, and served by a common dosing tank;

(8) a septic tank effluent pump system with a pressure sewer or other pressure sewer system receiving effluent from two or more pump tanks;

(9) an adjusted design daily flow is proposed based on the use of low-flow fixtures or low-flow technologies in accordance with S.L. 2013-413, Section 34(a) and S.L. 2014-120, Section 53;

(10) the proposed pump model is not listed by a third-party electrical testing and listing agency;

(11) the wastewater system is designed for reclaimed wastewater;

(12) any wastewater system designed by a licensed professional that has been determined to be within the practice of engineering in accordance with G.S. 89C-3(6) by the North Carolina Board of Examiners for Engineers and Surveyors;

(13) any wastewater system approved in accordance with Rules .1957(c) and .1969 that requires in the approval that the system be designed by a PE; and

(14) any system or system component where 15A NCAC 18A .1900 provides for an engineer to propose alternative materials, capacity determination, or performance requirements.