

**15A NCAC 18E .0904 LARGE DIAMETER PIPE SYSTEMS**

(a) LDP systems consist of laterals composed of corrugated, polyethylene tubing encased in a nylon and polyester blend filter wrap that are installed in trenches in the dispersal field. The laterals shall be one of the following:

- (1) eight-inch inside diameter with a 10-inch outside diameter; or
- (2) 10-inch inside diameter with a 12-inch outside diameter.

(b) LDP systems shall only be used with DSE.

(c) LDP pipe, filter wrap, and fittings shall meet the following criteria:

- (1) pipe and fittings shall comply with the requirements of ASTM F667;
- (2) the corrugated pipe shall have two rows of holes, each hole between three-eighths inch and one-half inch in diameter, located 120 degrees apart along the bottom half of the pipe with each hole 60 degrees from the bottom center line, and staggered so that one hole is present in the valley of each corrugation;
- (3) pipe shall be marked with a visible top location indicator, 120 degrees away from each row of holes;
- (4) corrugated pipe shall be covered with filter wrap at the factory;
- (5) filter wrap shall be spun, bonded, or spunlaced nylon, polyester, or nylon/polyester blend filter wrap meeting the minimum requirements in Table XIX; and
- (6) the LDP with filter wrap shall be encased in a black polyethylene sleeve prior to installation in the trench to prevent physical damage and ultraviolet radiation deterioration of the filter wrap.

**Table XIX.** Minimum filter wrap requirements for LDP

Property	Value
Unit Weight	1.0 ounce per square yard
Sheet Grab Tensile Strength	Machine Direction: 23 pounds
Trapezoid Tear Strength	Machine Direction: 6.2 pounds
Mullen Burst Strength	40 psi or 276 kilopascals
Frazier Air Permeability	500 cubic feet per minute per square foot at pressure differential of one-half inch of water

(d) The requirements of Rule .0901 of this Section shall apply to LDP systems except as follows:

- (1) the LTAR determined in accordance with Rule .0901(c) of this Section shall not exceed 0.8 gpd/ft<sup>2</sup>; and
- (2) to calculate the minimum trench length in accordance with Rule .0901(d) of this Section, an equivalent trench width of two feet shall be used for eight-inch LDP and two and one-half feet shall be used for 10-inch LDP.

(e) In addition to the requirements set forth in Rule .0901(g) of this Section, LDP system installations shall comply with the following:

- (1) trenches for 8-inch LDP shall be a minimum of 10 inches and a maximum of 18 inches wide. Trenches for 10-inch LDP shall be a minimum of 12 inches and a maximum of 24 inches wide;
- (2) the infiltrative surface and pipe shall be level with a maximum fall of one inch in 100 feet;
- (3) backfill shall have no more than 10 percent by volume of fibrous organics, building rubble, rocks, large clods, or other debris and shall be Soil Groups I, II, or III;
- (4) the LDP shall be connected to the collection sewer or a stepdown pipe using an offset adapter to create a mechanical joint; and
- (5) the minimum on center spacing for eight-inch LDP shall be five feet and for 10-inch LDP shall be six feet.

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