

DRAFT
NC Division of Water Quality
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Alternative Design Criteria for Minimum Separation for Sewer Systems to
Wetlands
15A NCAC 2T .0305(f)

Rule 15A NCAC 2T .0305 provides design criteria for sewer line extensions including required separation distances. The rule requires that sewer systems be located at least 50 feet away from **all** wetlands and provides alternative criteria for instances when the setback cannot be maintained. The following provisions are relevant to this policy:

(f) The following minimum separations shall be provided for the sewer system except as allowed by Paragraph (g) of this Rule:

Waters classified WS (except WS-I or WS-V), B, SA, ORW, HQW, or SB from normal high water (or tide elevation) and wetlands ... 50 feet

(g) Alternatives where separations in Paragraph (f) of this Rule cannot be achieved.

(5) For all other separations, materials, testing methods and acceptability standards meeting water main standards (15A NCAC 18C) shall be specified.

While the rule provides alternatives for piping material when the separation to wetlands cannot be met, the rule does not address manholes and pump stations. In accordance with the provision for alternative design covered under 15A NCAC 2T .0105(n), adherence to the following criteria shall be considered equivalent to the Rule .0305(f):

- A. Sewer systems shall be designed to maintain maximum feasible separations when a 50 foot separation cannot be met.
- B. With regards to pump stations serving a single building:
 - 1. Pump stations shall be of a type specifically engineered to be watertight in floodplain conditions including watertight lids.
 - 2. Wet wells shall be constructed of either high density polyethylene or fiberglass reinforced polyester resins with all seams thermally welded and factory tested for leak tightness.
 - 3. All necessary penetrations shall be factory sealed and tested. No field penetrations will be allowed.
 - 4. The pump station shall be located no further than 50 feet from the building served and shall be vented back to the building.

5. All pump station wet wells shall maintain a separation of no less than 10 feet from wetlands.
- C. All other pump station wet wells shall be located a minimum of 50 feet from wetlands.
- D. With regards to manholes:
1. Manholes shall be provided with a watertight frame and cover with gasket.
 2. All manhole seams shall be externally taped/sealed.
 3. Manholes shall be provided with a full waterproof interior coating/lining.
 4. Watertight pipe connections shall be provided consisting of a flexible rubber boot or compression type connector.
 5. All manholes shall be tested in accordance with ASTM C1244 "Standard Test Method for Concrete Sewer Manholes by the Negative Air Pressure (Vacuum) Test Prior to Backfill".
 6. "Dog house" type manholes shall not be used.
 7. All manholes not included as part of a USACOE 404 Permit or Division 401 Certification shall maintain a separation of no less than 10 feet from wetlands.