



North Carolina Department of Health and Human Services  
Division of Public Health

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POSITION STATEMENT:

PURSUANT TO: 15A NCAC 18A .2518

SOURCE: Jim Hayes, Pools, Tattoos and State Institutions Program Supervisor

QUESTION / ISSUE: Discrepancy in Rules on Sizing Suction Piping on Public Swimming Pools

DISCUSSION AND RATIONALE:

There is misalignment between two rules regarding the method for determining the minimum pipe size for suction piping on public swimming pools. Rule .2518(C) requires skimmer piping and main drain piping for pools constructed after May 1, 2010 to each be designed to handle 100 percent of the design flow rate without exceeding a velocity of six feet per second, while rule .2518(j)(3) requires pools constructed after May 1, 2010 to meet ANSI/APSP-7 2006 American National Standard for Suction Entrapment Avoidance in Swimming Pools, Wading Pools, Spas, Hot Tubs and Catch Basins. The discrepancy is rule .2518(c) allows use of the design flow rate, which may be estimated with an assumed total dynamic head loss of 65 feet, while rule .2518(j)(3) and ANSI/APSP-7 require using the maximum pumping system flow based on the actual calculated or measured total dynamic head loss. Since the assumed design flow rate may understate the actual flow rate, basing pipe size on design flow rate could result in use of pipes too small to meet rule .2518(j)(3) and ANSI/APSP-7.

RESPONSE / INTERPRETATION:

The only way to assure pipe sizes on suction piping is compliant with the rules is to require suction pipes on both the main drains and surface skimmers to each handle 100 percent of the maximum pumping system flow based on the maximum pump flow or on the pump flow determined using a measured or calculated total dynamic head loss without exceeding a velocity of 6 feet per second in the pipes.

REFERENCES:

ANSI/APSP-7 2006 American National Standard for Suction Hazard Avoidance in Swimming Pools, Wading Pools, Spas, Hot Tubs and Catch Basins paragraphs 4.4 and 4.4.1

*NOTE: Position statements are policy documents to clarify how to interpret or enforce a law or rule. They are not enforceable on their own, but are intended to promote uniform interpretation and enforcement of the underlying law or rule.*

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