

15A NCAC 18A .2535 WATER QUALITY STANDARDS

Whenever a public swimming pool is open for use, water quality shall be maintained in accordance with the following:

- (1) The chemical quality of the water shall be maintained in an alkaline condition at all times with the pH between 7.2 and 7.8.
- (2) The clarity of the water shall be maintained such that the main drain grate is visible from the pool deck at all times.
- (3) Disinfection shall be provided in accordance with manufacturers' instructions for all pools by a chemical or other process that meets the criteria listed as follows:
 - (a) registered with the U.S. Environmental Protection Agency for pool water or potable water;
 - (b) provides a residual effect in the pool water that can be measured by portable field test equipment;
 - (c) will not impart any immediate or cumulative adverse physiological effects to pool bathers when used as directed;
 - (d) will not produce any safety hazard when stored or used as directed;
 - (e) will not damage pool components or equipment; and
 - (f) will demonstrate reduction of total coliform and fecal coliform to a level at least equivalent to free chlorine at a level of one part per million in the same body of water.
- (4) When chlorine is used as the disinfectant, a free chlorine residual of at least one part per million (ppm) shall be maintained throughout the pool whenever it is open or in use. Pools that use chlorine as the disinfectant must be stabilized with cyanuric acid except at indoor pools or where it can be shown that cyanuric acid is not necessary to maintain a stable free chlorine residual. The cyanuric acid level shall not exceed 100 parts per million.
- (5) When bromine or compounds of bromine are used as the disinfectant, a free bromine residual of at least two parts per million, shall be maintained throughout the pool whenever it is open or in use.
- (6) When chlorine or bromine are used as the disinfectant, automatic chemical feeders shall be used. Automatic chlorine or bromine feeders shall be manufactured and installed in accordance with NSF/ANSI Standard number 50. Automatic chlorine and bromine feeder pumps shall be automatically prevented from operating when the circulation pump is not in operation.
- (7) When biguanide is used as the disinfectant, a residual of 30 to 50 parts per million shall be maintained throughout the pool whenever it is open or in use.
- (8) When silver/copper ion systems are used, the copper concentration in the pool water shall not exceed one part per million and a chlorine residual must be maintained in accordance with Item (4) of this Rule.
- (9) The use of chlorine in its elemental (gaseous) form for disinfection of public swimming pools is prohibited.
- (10) Test kits or equipment capable of measuring disinfectant level, pH, and total alkalinity must be maintained at all public swimming pools. Pools using cyanuric acid or chlorinated isocyanurates must have a test kit capable of measuring cyanuric acid levels.
- (11) The pool operator shall inspect the pool at least daily and maintain written records of the operating conditions of each pool. Records shall be maintained at the pool site for a period of not less than six months. Records shall include the following:
 - (a) daily recording of the disinfectant residual in the pool;
 - (b) daily recording of pool water pH;
 - (c) daily recording of water temperature in heated pools; recording of activities pertaining to pool water maintenance including chemical additions and filter backwash cycles;
 - (d) weekly recording of total alkalinity and cyanuric acid levels; and
 - (e) daily recording of pool drain cover/grate inspection.
- (12) Water temperature in heated swimming pools shall not exceed 90 degrees Fahrenheit (32 degrees Celsius) and in heated spas shall not exceed 104 degrees Fahrenheit (40 degrees Celsius).
- (13) The pool operator shall take the following steps to manage fecal and vomitus accidents:
 - (a) Direct everyone to leave all pools into which water containing the feces or vomit is circulated and do not allow anyone to enter the pool(s) until decontamination is completed;

- (b) Remove as much of the feces or vomit as possible using a net or scoop and dispose of it in a sewage treatment and disposal system;
- (c) Raise the free available chlorine concentration to two ppm at a pH of 7.2 to 7.5 and test to assure the chlorine concentration is mixed throughout the pool; and
- (d) For accidents involving formed stools or vomit, maintain the free available chlorine concentration at two ppm for at least 25 minutes or at three ppm for at least 19 minutes before reopening the pool. For accidents involving liquid stools increase the free chlorine residual and closure time to reach a CT inactivation value of 15,300 then backwash the pool filter before reopening the pool. CT refers to concentration (C) of free available chlorine in parts per million multiplied by time (T) in minutes.

History Note: Authority G.S. 130A-282;
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Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.