

Clayton County Environmental Health Public Swimming Pool Program

Clayton County Board of Health Swimming Pool Regulations

Section -.07 Circulation Systems.

- (1) A circulation system consisting of pumps, piping, return inlets and suction outlets, filters and other necessary equipment shall be provided for complete circulation of water through all parts of the pool.
- (a) The equipment for a swimming pool shall be of adequate size to turn over the entire pool water capacity at least once every six (6) hours unless otherwise specified in (c) below. The equipment for a spa shall be of adequate size to turn over the entire spa water capacity at a minimum of once every thirty (30) minutes. This system shall be designed to give the proper turnover rate based on the manufacturer's recommended maximum pressure flow of the filter in clean media condition of the filter.
- (b) In pools other than those listed in (c) below, built prior to December 31, 2000, the turnover rate must be at least once every eight (8) hours. Upon rehabilitation of a pool which includes piping and/or circulation equipment changes, or by January 1, 2003, whichever is sooner, a six (6) hour turnover rate will be met if possible as determined by the health authority.
- (c) Turnover rates for pools by type:

Spas	30 minutes
Zero - Depth pools/Spray Pads	30 minutes
Wading Pools (without any interactive equipment)	30 minutes
Wading/Interactive Play Pools (maximum depth, 24 inches)	60 minutes
Slide Plunge Pools, Flumes and All Other Plunge/Falling Entry Pools	60 minutes
Wave Pools	3 hours
Continuous Water Course/Rivers	4 hours
Water Attraction/Equipment Pump Reservoir Tanks	30 minutes
Dual Use Swimming Pools (swimming pools with a slide or other feature and has an average	4 hours

depth exceeding 24 inches)	
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- (d) Timing devices will be allowed for the purpose of turning off the circulation system during times when a pool is not being used. Timing devices must be set to provide at least one complete turnover immediately prior to the pool reopening.
 - (e) Water clarity shall be maintained. (Clarity is a function of proper filtration and maintenance of proper chemical operational parameters.) When standing at the pool's edge at the deep end, the main drain covers or a standard black and white disc shall be clearly visible. When standing at a spa's edge, the deepest portion of the spa floor shall be visible in a still condition.
 - (f) Circulation system components which require replacement or servicing shall be accessible for inspection, repair, or replacement and shall be installed in accordance with the manufacturer's instructions.
 - (g) Where equipment sizing falls within the scope of NSF International testing, materials and equipment used in the circulation system shall comply with the appropriate requirements of NSF International Standard 50.
 - (h) Pool and spa equipment shall be properly supported to prevent damage from misalignment, settlement, etc. The equipment shall be mounted so as to minimize the potential for the accumulation of debris and moisture, following manufacturer's instructions.
- (2) **Water Velocity:** The water velocity in the pool or spa piping shall be a minimum of five feet (5') per second, but shall not exceed ten feet (10') per second for discharge piping (except for copper pipe where the velocity should not exceed eight feet (8') per second), and a minimum of four feet (4') per second, but not exceed six feet (6') per second for suction piping, unless summary calculations are provided to show that the greater flow is possible with the pump and piping provided. Pool and spa piping shall be sized to permit the rated flows for filtering and cleaning without exceeding the maximum head of the pump.
- (a) The pump shall be sized to deliver the required flow rate against the total system head involved.
 - (b) A wading pool shall have a separate circulation system of adequate size to turn over the entire pool water capacity at least once every two (2) hours.
- (3) **Piping and Fittings:** The circulation system piping and fittings shall be nontoxic, shall be considered to be process piping and shall be of material able to withstand operating pressures and operating conditions.
- (a) Pool and spa piping subject to damage by freezing shall have a uniform slope in one direction equipped with valves for adequate drainage. Pool and spa piping

shall be supported at sufficient intervals to prevent entrapment of air, water or dirt. Provision shall be made for expansion or contraction of pipes.

- (b) Equipment shall be designed and fabricated to drain the pool or spa water from the equipment, together with exposed face piping, by removal of drain plugs and manipulating valves, or by other methods. Refer to manufacturer's recommendations for specific information on draining the system.
- (4) **System Condition:** Gauges shall be provided as follows:
- (a) A pressure or vacuum gauge or other means of indicating system condition shall be provided in the circulation system in an easily readable location.
 - (b) A flow meter measuring the rate of flow through the filter system with an appropriate range readable in gallons per minute (GPM) and accurate within ten (10) percent actual flow shall be provided. The flow indicator shall be capable of measuring from one-half to at least one and one-half times the design flow rate. The gauge shall be located after the filtering equipment and in such location on the return line, so as to measure the total amount of water returning to the pool according to the manufacturer's installation specifications.
- (5) **Water Clarity and Chemistry:** The circulation system shall be capable of maintaining water clarity and water chemistry requirements and shall operate 24 hours per day, except when an automatic timing device is installed that will allow at least one complete turnover, immediately prior to beginning the next period of operation.
- (6) **Instructions:** Operation and maintenance instructions shall be provided for the circulation system.