641—15.4(135I) Swimming pool operations. Swimming pools shall be operated in a safe, sanitary manner and shall meet the following operational standards.

15.4(1) *Filtration and recirculation.*

a. Filtration. A swimming pool shall have a filtration system in good working condition that provides water clarity in compliance with the water quality standards of 15.4(2).

b. Recirculation. The recirculation system of a swimming pool shall meet the following requirements:

(1) During the operating season, pumps, filters, disinfectant feeders, flow indicators, gauges, and all related components of the swimming pool water recirculation system shall be operated continuously except for backwashing or servicing.

(2) The recirculation system has an operating pressure gauge located in front of the filter if it is a pressure filter system. A vacuum filter system has a vacuum gauge located between the filter and the pump.

(3) The recirculation system has inlets adequate in design, number, location, and spacing to ensure effective distribution of treated water and maintenance of uniform disinfectant residual throughout the swimming pool.

(4) Swimming pools have a means for skimming the pool water surface.

1. Each skimmer has an easily removable basket or screen upstream from any valve. Self-adjusting weirs shall be in place to provide skimming action.

2. Gutter or skimmer drainage is sufficient to minimize flooding and prevent backflow of skimmed water into the swimming pool.

c. Wastewater. Backwash water from a swimming pool shall be discharged through an air break or an air gap.

d. Water supply. The water supplied to a swimming pool shall be from a water supply meeting the requirements of the department of natural resources for drinking water and meet the following criteria:

(1) Water supplied to a swimming pool is discharged to the pool system through an air gap or a reduced-pressure principle backflow device meeting AWWA C-511-97, "Reduced-Pressure Principle Backflow-Prevention Assembly."

(2) Each hose bib at a facility is equipped with an atmospheric vacuum breaker or a hose connection backflow preventer.

e. Water heaters. Swimming pool water heaters shall meet the following criteria:

(1) Electric water heaters bear the seal of UL.

(2) Gas-fired water heaters are equipped with a pressure relief valve.

(3) Fuel-burning water heaters are vented to the outside in accordance with the state plumbing code.

(4) Each indoor swimming pool equipment room with fuel-burning water heating equipment has one or more openings to the outside of the room for the provision of combustion air.

15.4(2) *Water quality and testing.*

a. Disinfection.

(1) Swimming pool water shall have a free chlorine residual of at least 1.0 ppm and no greater than 8.0 ppm, or a total bromine residual of at least 2.0 ppm and no greater than 18 ppm when the swimming pool is open for use.

(2) The swimming pool shall be closed if the free chlorine is measured to be less than 0.6 ppm or the total bromine is measured to be less than 1.0 ppm or if a free chlorine measurement exceeds 8.0 ppm or if the total bromine measurement exceeds 18 ppm.

(3) The swimming pool water shall have an ORP of at least 700 mV, but no greater than 880 mV, and be closed if the ORP is less than 650 mV or greater than 880 mV.

(4) The swimming pool shall be closed if the cyanuric acid concentration in the swimming pool water exceeds 80 ppm. The swimming pool may be reopened when the cyanuric acid concentration is 40 ppm or less.

(5) No cyanuric acid in any form shall be added to an indoor swimming pool.

b. pH level. The pH of swimming pool water shall be 7.2 to 7.8. An inspection agency may require that a swimming pool be closed if the pH is less than 6.8 or greater than 8.2.

c. Water clarity. A swimming pool shall be closed if the swimming pool is less than 8 ft deep and the grate openings on the main drain are not clearly visible from the deck or the swimming pool is 8 ft deep or deeper and the main drain is not clearly visible from the deck.

d. Bacteria detection.

(1) If coliform bacteria are detected in a sample taken in accordance with 15.4(2)*"e"*(5), the swimming pool shall be superchlorinated and a check sample taken when the disinfectant residual is within the requirements of 15.4(2)*"a."* If coliform bacteria are detected in the check sample, the swimming pool shall be closed. The swimming pool may reopen when no coliform bacteria are detected in a swimming pool water sample taken when the pool water meets the requirements of 15.4(2)*"a," "b"* and *"c."*

(2) The facility management shall notify the local inspection agency of the positive bacteriological result within one business day after the facility management has become aware of the result.

e. Test frequency. The results of the tests required below shall be recorded in the swimming pool records.

(1) The disinfectant residual in the swimming pool water shall be tested or the ORP of the swimming pool water checked each day within one-half hour of the swimming pool opening time and at intervals not to exceed four hours thereafter until the swimming pool closing time. For swimming pools at condominiums, apartments, housing cooperatives, or homeowners associations with 25 or fewer living units, testing must be performed at least once each day that the swimming pool is available for use.

The operator may make visual readings of ORP on site from an automatic controller in lieu of manual testing, but the swimming pool water shall be tested manually for disinfectant residual at least twice per day. Both ORP and disinfectant residual shall be recorded when manual testing is done. The operator shall specify in the swimming pool records which results are from the manual tests.

(2) The pH of the swimming pool water shall be tested each day within one-half hour of the swimming pool opening time and at intervals not to exceed four hours thereafter until the swimming pool closing time. For swimming pools at condominiums, apartments, housing cooperatives, or homeowners associations with 25 or fewer living units, testing for pH must be performed at least once each day that the swimming pool is available for use.

The operator may make visual readings of pH on site from an automatic controller in lieu of manual testing, but the swimming pool water shall be tested manually for pH at least twice per day. The operator shall specify in the swimming pool records which results are from the manual tests.

(3) If a chlorine chemical is used for disinfection, the swimming pool water shall be tested for combined chlorine at least once in each week that the swimming pool is open for use.

(4) If cyanuric acid or a stabilized chlorine is used at a swimming pool, the swimming pool water shall be tested for cyanuric acid at least once in each week that the swimming pool is open for use.

(5) At least once in each month that a swimming pool is open for use, the facility management shall have a sample of the swimming pool water analyzed for total coliform by submitting the sample to a laboratory certified by the department of natural resources for the determination of coliform bacteria in drinking water.

f. Test equipment. Each facility shall have functional water testing equipment for free chlorine and combined chlorine, or total bromine; pH; total alkalinity; calcium hardness; and cyanuric acid (if cyanuric acid or a stabilized chlorine is used at the facility) that meets the following criteria:

(1) The test equipment provides for the direct measurement of free chlorine and combined chlorine from 0 to 10 ppm in increments of 0.2 ppm or less over the full range, or total bromine from 0 to 20 ppm in increments of 0.5 ppm or less over the full range.

(2) The test equipment provides for the measurement of swimming pool water pH from 7.0 to 8.0 with at least five increments in that range.

(3) A controller used in lieu of manual disinfectant residual testing has a numerical analog or digital display with an ORP scale with a range of at least 600 to 900 mV with increments of 20 mV or less.

(4) A controller used in lieu of manual pH testing has a numerical analog or digital display with a pH range at least equal to the range required in 15.4(2)*"f"*(2) with increments of 0.2 or less over the full range.

g. Operator availability. A person knowledgeable in testing water and in operating the water treatment equipment shall be available whenever a swimming pool is open for use.

15.4(3) *Chemical feed equipment and cleaning.*

a. *Chemical feed equipment.*

(1) Equipment for continuous feed of chlorine, a chlorine compound or a bromine compound to the swimming pool water shall be provided and be operational. The equipment shall be adjustable in at least five increments over its feed capacity and, where applicable, the chemical feeder listed by NSF or another listing agency for compliance with Standard 50.

(2) Equipment for the continuous feed of a chemical for pH adjustment of the swimming pool water shall be provided and be operational for each swimming pool and, where applicable, the chemical feeder listed by NSF or another listing agency for compliance with Standard 50.

b. *Cleaning.*

(1) The inspection agency may require that a swimming pool be drained and scrubbed with a disinfecting agent prior to further usage.

(2) A vacuum system shall be provided to remove dirt from the bottom of the swimming pool.

15.4(4) *Safety.*

a. *Chemical safety.* Swimming pool chemical safety shall meet the following criteria:

(1) When chemical additions are made from the deck, the swimming pool is closed from use for at least one-half hour. The operator tests the swimming pool water as appropriate before allowing use of the swimming pool. The chemical addition and the test results are recorded in the swimming pool records.

(2) Swimming pool treatment chemicals shall be stored and handled in accordance with the manufacturer's recommendations.

(3) SDS for the chemicals used at the pool are at the facility in a location known and readily accessible to the facility staff.

(4) Chemical storage containers are clearly labeled.

(5) A chemical hazard warning sign is placed at the entrance of a room where chemicals are used or stored or where bulk containers are located.

b. *Stairs, ladders, recessed steps, and ramps.* Swimming pool stairs, ladders, recessed steps, and ramps shall meet the following criteria:

(1) Ladders or recessed steps are provided in the deep portion of a swimming pool. Stairs, ladders, recessed steps, or ramps are provided in the shallow portion if the vertical distance from the bottom of the swimming pool to the deck is more than 2 ft.

(2) Ladders, ladder rungs and ramps are securely anchored.

(3) The distance between the swimming pool wall to the vertical rail of a ladder is no greater than 6 inches and no less than 3 inches. The lower end of each ladder rail is securely covered with a smooth nonmetallic cap and within 1 inch of the swimming pool wall.

(4) Stairs, ladder rungs, ramps and recessed steps are slip-resistant.

(5) If a swimming pool is over 30 ft wide, recessed steps, ladders, ramps, or stairs are installed on each side. If a stairway centered on the shallow end wall of the swimming pool is within 30 ft of each side of the swimming pool, that end of the swimming pool is considered in compliance with this subparagraph.

(6) Each set of recessed steps are equipped with a securely anchored grab rail on each side of the recessed steps.

(7) Each set of stairs and each ramp are equipped with a securely anchored handrail(s).

(8) When stairs are provided for entry into a swimming pool, a slip-resistant stripe at least 1 inch wide of a color contrasting with the step surface and with the swimming pool floor is marked at the top front edge of each tread.

c. *Diving areas.* Swimming pool diving areas shall meet the following criteria:

(1) No diving is permitted in areas where the water is 5 ft deep or less except for purposes of competition or training. The diving is supervised by a lifeguard, swim instructor or swim coach.

(2) Starting blocks are only used for competition or training purposes under the supervision of a lifeguard, swim instructor, or swim coach. Starting blocks and starting block installation meet the requirements of the competition governing body (National Collegiate Athletic Association, USA Swimming, or National Federation of State High School Associations). When the swimming pool is open

for general use, the starting blocks are secured from use by removal, covering, or signage and active supervision.

(3) Diving boards are permitted only if the diving area dimensions conform to the minimum requirements indicated below in Figure 1 and Tables 1 and 2.

(4) There is a completely unobstructed clear distance of 13 ft above the diving board, measured from the center of the front end of the board, and extending at least 8 ft behind, 8 ft to each side, and 16 ft ahead of the measuring point.

(5) Diving boards and platforms over 3 meters in height are prohibited, except where used only for competition or training purposes under the supervision of a diving coach and diving area dimensions conform to minimum requirements of World Aquatics (FINA).

(6) Diving boards and platforms have a slip-resistant surface.

(7) Where the top of a diving board or platform is more than 18 inches above the deck, stairs or a ladder are provided for access to the diving board or platform.

(8) Handrails are provided at all steps and ladders leading to diving boards that are more than 32 inches above the deck.

(9) A platform or diving board that is 32 inches or more above the swimming pool deck has a guardrail on both sides. The guardrails are at least 36 inches high and extend to the edge of the deck.

(10) Supports, platforms, and steps for diving boards are of substantial construction and of sufficient structural strength to safely carry the maximum anticipated load.

NOTE: The information contained in Figure 1 and Tables 1 and 2 is for swimming pools constructed prior to March 14, 1990. Swimming pools constructed after March 14, 1990, shall comply with 15.5(13)*"a."*

When determining distances set out in Tables 1 and 2, measurements shall be taken from the top center of the front edge of the diving board. The reference water level shall be the midpoint of the skimmer opening for a skimmer pool or a stainless steel gutter system with surge weirs. The reference water level for a gutter pool shall be the top of the gutter weir.

Figure 1

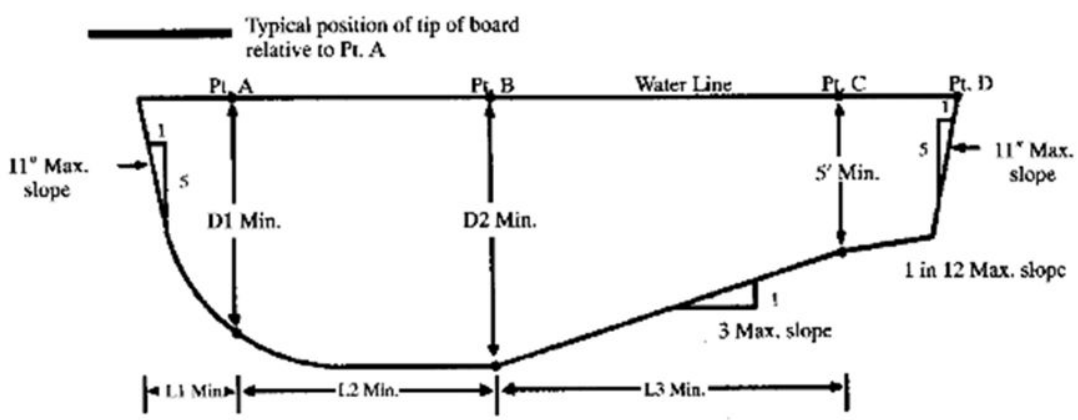

Table 1

		Minimum Dimensions				
Diving Board Height Above Water	Maximum Diving Board Length	D1	D2	L1	L2	L3
Deck level to 2/3 meter	10 ft	7 ft	8.5 ft	2.5 ft	8 ft	10.5 ft
Greater than 2/3 meter to 3/4 meter	12 ft	7.5 ft	9 ft	3 ft	9 ft	12 ft
Greater than 3/4 meter to 1 meter	16 ft	8.5 ft	10 ft	4 ft	10 ft	15 ft

		Minimum Dimensions				
Diving Board Height Above Water	Maximum Diving Board Length	D1	D2	L1	L2	L3
Greater than 1 meter to 3 meters	16 ft	11 ft	12 ft	6 ft	10.5 ft	21 ft

Table 2

	Minimum Distance		
Diving Board Height Above Water	To Pool Side	To 1-Meter Diving Board	To 3-Meter Diving Board
Deck level to 1 meter	9 ft	8 ft	10 ft
Greater than 1 meter	11 ft	10 ft	10 ft

d. Lifeguards.

(1) Except for wading pools and spray pads, lifeguards are required at municipal and school swimming pools of any size and other swimming pools having a water surface area of 1,500 ft^2 or larger. Swimming pools operated by apartments, condominiums, country clubs, neighborhoods, manufactured home communities, or mobile home parks are exempt from lifeguard requirements.

(2) For open recreation swimming, there shall be at least one lifeguard guarding the pool at all times for up to 30 swimmers in the water; at least two lifeguards on duty for over 30 swimmers in the water and up to 125 swimmers in the water; and an additional lifeguard for each additional 125 swimmers in the water or fraction thereof.

NOTE: This is the minimum lifeguard coverage. It is the responsibility of the management of each facility to evaluate the facility configuration, the features of the facility, the patrons, and the type of use and to determine the facility-specific requirements for supervision by lifeguards.

(3) For a structured swimming program, such as lap swim, competitive swimming, water exercise classes, swim lessons and physical education classes, a lifeguard is not required provided the program is supervised by an instructor, teacher, or coach who is a lifeguard or who has current certification from the American Red Cross in basic water rescue, first aid, and infant, child and adult CPR, or equivalent training approved by the department. An instructor, teacher or coach may be responsible for a maximum of 30 persons within a structured activity. If more than 30 persons are involved in a structured activity, a second qualified supervisor must be present.

(4) Each water slide shall have one slide attendant trained in the operation of the slide stationed at the top of the slide and one lifeguard at the bottom of the slide.

If two or three water slides start at the same platform and the distance between the centerlines of any two start structures is 10 ft or less, one attendant may supervise the top of the slides. If two or three water slides terminate within the same landing area, one lifeguard may supervise the landing area.

e. Lifeguard chairs. For outdoor swimming pools where lifeguards are required by rule, elevated lifeguard chairs shall be provided as follows: at least one chair for a swimming pool with a water surface area of 2,000 to 4,000 ft^2 inclusive; at least two chairs if the area is 4,001 to 6,000 ft^2; and at least three chairs if the area is 6,001 ft^2 or more. Swimming pools are not required to have more than three lifeguard chairs. This requirement does not apply to wave pools, leisure rivers, spray pads, or wading pools.

f. Emergency equipment and facilities. Emergency equipment and facilities at swimming pools shall meet the following criteria:

(1) Except for wading pools, a minimum of 1 unit of lifesaving equipment is provided for each 1,500 ft^2 of water surface area or fraction thereof. The area of a swimming pool where the water is 2 ft deep or less may be subtracted from the total area for this requirement. A swimming pool is not required to have more than 10 units of lifesaving equipment.

(2) A unit of lifesaving equipment consists of one of the following:

1. A U.S. Coast Guard-recognized ring buoy fitted with a ¼-inch diameter line with a length of at least one-half the width of the pool, but no more than 60 ft; or

2. A life pole, or a "shepherd's crook" of at least 8 ft in length and having blunted ends; or

3. A rescue buoy made of lightweight, hard, buoyant plastic with molded handgrips along each side and provided with a 4- to 6-ft tow rope and shoulder strap, or

4. A rescue tube made of a soft, strong foam material 3 inches by 6 inches by 40 inches with a molded strap providing a ring at one end and a hook at the other. Attached to the end with the ring shall be a 6-ft-long towline with a shoulder strap.

NOTE: Rescue equipment identified in 15.4(4)*"f"*(2)"3" and "4" above shall be used only at swimming pools where lifeguards are employed. If a facility employs lifeguards, the lifeguards shall be provided with the minimum equipment required by their training including but not limited to rescue tubes and personal CPR masks.

(3) Lifesaving equipment is mounted in conspicuous places around the swimming pool deck during normal operations.

(4) A swimming pool facility has a first-aid kit which contains, at a minimum, the following:

1. Band-Aids.
2. Sterile 4″ × 4″ bandage compress.
3. Self-adhering gauze bandage.
4. Disposable gloves.
5. Chemical cold compress.

Where lifeguards are not provided, the first-aid kit is prominently mounted in the swimming pool enclosure or a sign stating its location is posted near the swimming pool. The first-aid kit is accessible when the swimming pool is open.

(5) A standard spine board with straps and a head immobilizer is provided at each swimming pool where lifeguards are required by rule.

(6) Except for wading pools and spray pads, each swimming pool where lifeguards are not provided has a designated emergency telephone or equivalent emergency communication system available to users of swimming pools when the swimming pool is open. When the telephone is not within the confines of the swimming pool enclosure, the location of the emergency telephone is posted in at least one conspicuous place within the swimming pool enclosure. Instructions for emergency use of the telephone are posted near the telephone.

At each swimming pool where lifeguards are employed, a telephone is available to the swimming pool staff for emergency purposes.

g. *Water level.* Water level in swimming pools shall be maintained at the skimming level.

h. *Fully submerged outlets.* Swimming pools and fully submerged outlets shall meet the following criteria:

(1) Each outlet, including the main drain(s), is designed to prevent user entrapment. A swimming pool is closed if the cover/grate of a fully submerged outlet is missing or broken.

(2) Each fully submerged outlet shall have a cover/grate that has been tested for compliance with the requirements of the ASME/ANSI standard by a testing agency that is certified for compliance by an engineer licensed in Iowa.

1. The cover/grate for an outlet system with a single fully submerged outlet has a flow rating of at least 100 percent of the maximum system flow rate. The combined flow rating for the cover/grates for an outlet system with more than one fully submerged outlet is at least 200 percent of the maximum system flow rate.

The maximum system flow rate for a main drain system is at least the design filter flow rate but may include play feature and water slide flow. The maximum system flow rate for other fully submerged outlets is the design flow rate of the pump(s) directly connected to the outlet system.

2. Fully submerged outlet cover/grates are not removable without the use of tools.

3. Purchase records and product information that demonstrate compliance are maintained by the facility for at least five years from the time the cover/grate is purchased. If a field fabricated cover/grate is certified for compliance to the ASME/ANSI standard by an engineer licensed in Iowa, a copy of the certification letter is kept at the facility for at least five years from the certification date.

(3) A swimming pool with a single fully submerged outlet that is not unblockable and that is directly connected to a pump is closed if the outlet does not have a cover/grate that complies with the ASME/ANSI standard.

If a swimming pool has two or more fully submerged outlets on a single surface that are all less than 3 ft apart on center, are not unblockable, and are directly connected to a pump, the swimming pool is considered to have a single fully submerged outlet.

(4) A swimming pool with a single fully submerged outlet that is not unblockable and that is directly connected to a pump is closed if the outlet system is not equipped with a safety vacuum release system that is listed for compliance with ASME/ANSI A112.19.17-2002 or ASTM F2387-04 (2012).

1. Purchase records and product information that demonstrate compliance are maintained by the facility for at least five years from the time the SVRS is purchased or another approved system is installed.

2. An SVRS is installed in accordance with the manufacturer's instructions.

3. An SVRS is tested for proper function at the frequency recommended by the manufacturer but at least once in each month the swimming pool is operated. The date and result of each test is recorded.

(5) In lieu of compliance with 15.4(4)*"h"*(2), (3) and (4) above, a fully submerged outlet in a swimming pool may be disabled with the approval of the department, except that an equalizer in a skimmer may be plugged without department approval if the management of the swimming pool submits to the department information, including but not necessarily limited to:

1. The area and volume of the pool;

2. The functional areas of the pool and the depths in those areas;

3. Detailed information about the inlet system, including the location of the inlets, the depth of the inlets, and the type of inlet fitting;

4. Detailed information about the overflow system, gutter or skimmer, number of skimmers, and pipe sizes;

5. Pump information and flow rates for the outlet system;

6. Filter type, number of filters, the size of the filter(s), and whether multiple filters are backwashed together or separately.

If the department approves the application to disable the outlet, the outlet valve is closed and the valve secured by removing the handle, by locking the handle closed, or by another method approved by the department. The outlet may be physically disconnected from the pump system.

i. Surface finish and float lines. Surface finish and float lines shall meet the following criteria:

(1) The bottom and sides of a swimming pool are white or a light color. This does not prohibit painting or marking racing lines, stairs or turn targets with contrasting colors.

(2) The swimming pool walls and floor have a smooth surface to facilitate cleaning.

(3) The boundary between shallow and deep water (5 ft) is marked by a float line with floats spaced no more than 5 ft apart. The float line is installed on the shallow side of the boundary within 12 inches of the boundary. When the slope of the floor of a swimming pool exceeds 1 ft vertical to 12 ft horizontal at a depth of less than 5 ft, the float line is placed on the shallow side of the slope change within 12 inches of the slope change in lieu of a float line at the 5 ft depth.

(4) A wave pool is equipped with a float line with floats spaced no more than 5 ft apart. The float line shall be located at least 6 ft from the deep-end wall. Users are not permitted between the float line and the deep-end wall.

(5) The landing area for a swimming pool slide or a water slide that terminates in a swimming pool is delineated by a float line.

A float line is not required when the landing area is in deep water provided the distance between the slide and any diving board(s) meets the requirements for diving board spacing. The distance between the side of the slide at the slide's terminus and the swimming pool wall is in accordance with the manufacturer's recommendations, but shall be at least 8 ft.

A float line is not required for a slide that is designed for toddlers and young children and that terminates in water that is 2 ft deep or less. The landing area is designated by a brightly colored pad securely fastened to the floor of the swimming pool or by painting the floor at the end of the slide.

j. Depth marking. Depth marking shall meet the following criteria:

(1) Depth markers are painted or otherwise marked on the deck within 3 ft of the edge of the swimming pool. The depth of a wave pool is also marked on the side walls of the wave pool, above the maximum static water level, where the depth is 3 ft or more, and on the deep-end wall of the wave pool. Depth markers are not required at the zero-depth end of a wading pool, wave pool, or a zero-depth swimming pool. Depth markers are not required at a plunge pool on the flume discharge end or on the exit end if stairs are used for exit.

(2) Depth markers are located at 1-ft depth intervals but not more than 25 ft apart measured between the centers of the depth markers around the area of a swimming pool that has a water depth of 5 ft or less.

(3) Depth markers are located not more than 25 ft apart measured between the centers of the depth markers around the deep end of the swimming pool. The words "Deep Water" may be used in place of numerals.

(4) In lieu of 15.4(4)*"j"*(2) above, the maximum depth of a wading pool may be posted at each entrance to a wading pool enclosure and at one conspicuous location inside the wading pool enclosure in letters or numbers at least 3 inches high.

(5) The depth of a leisure river is posted at the entrance(s) to the leisure river in characters at least 3 inches high. The depth of the leisure river is marked on the side wall of the leisure river above the static water level at intervals not to exceed 50 ft on center. The depth of the leisure river is marked on the deck in the areas where users are permitted. The depth markers are within 3 ft of the edge of the leisure river at intervals not to exceed 25 ft on center. The depth markers at a leisure river constructed before May 4, 2005, are not required to be changed until the deck or channel structure is replaced or repaired.

(6) "No Diving" or equivalent wording or graphics are marked on the swimming pool deck within 3 ft of the edge of the swimming pool where the water is shallow and at other pool areas determined by management. The markers are 25 ft apart or less, center to center, around the perimeter of the area. This marking is not required for wading pools or at the zero-depth end of a wave pool or of a zero-depth swimming pool. "No Diving" or equivalent wording or graphics are marked on the deck of a leisure river in areas where users are permitted. The "No Diving" markers are within 3 ft of the edge of the leisure river at intervals not to exceed 25 ft on center. The "No Diving" markers at a leisure river constructed before May 4, 2005, are not required to be changed until the deck or channel structure is replaced or repaired.

(7) Letters, numbers, and graphics marked on the deck are slip-resistant, of a color contrasting with the deck and at least 4 inches in height.

k. *Deck safety.* Deck safety shall meet the following criteria:

(1) Decks are maintained slip-resistant, and free of litter, obstructions and tripping hazards.

(2) Glass objects, other than eyeglasses and safety glass doors and partitions, are not permitted on the deck.

l. *Enclosure.* Swimming pool enclosure shall meet the following criteria:

(1) Except for a circulated wading pool that is drained when not in use, or a spray pad, a swimming pool is enclosed by a fence, wall, building, or combination thereof not less than 4 ft high. The enclosure is constructed of durable materials.

(2) A fence, wall, or other means of enclosure has no openings that would allow the passage of a 4-inch sphere and are not easily climbable by toddlers. The distance between the ground and the top of the lowest horizontal support accessible from outside the facility, or between the two lowest horizontal supports accessible from outside the facility, is at least 45 inches. A horizontal support is considered accessible if it is on the exterior of the fence relative to the swimming pool, or if the gap between the vertical members of the fence is greater than 1¾ inches.

(3) At least one gate or door with an opening of at least 36 inches in width is provided for emergency purposes. When closed, gates and doors comply with the requirements of 15.4(4)*"l"*(2). Gates and doors are lockable. Except where lifeguard or structured program supervision is provided whenever the swimming pool is open, gates and doors are self-closing and self-latching.

(4) If a wading pool is within 50 ft of a swimming pool, the wading pool has a barrier at least 36 inches high separating it from the swimming pool. A barrier installed after May 4, 2005, has no openings that would allow the passage of a 4-inch sphere and is not easily climbable by toddlers. The barrier has at

least one 36-inch-wide gate or door. Gates and doors are lockable. Except where lifeguard supervision is provided, gates and doors are self-closing and self-latching.

The department may approve alternate management of the area between the wading pool and swimming pool at a facility where lifeguards are provided whenever the pools are open. The alternate management plan will be in writing and shall be at the facility when the pools are open.

(5) An indoor swimming pool is enclosed by a barrier at least 3 ft high if there are sleeping rooms, hallways, apartments, condominiums, or permanent recreation areas that are used by children and that open directly into the swimming pool area. No opening in the barrier permits the passage of a 4-inch sphere. The barrier is not easily climbable by toddlers. There is at least one 36-inch-wide gate or door through the barrier. Gates and doors are lockable. Except where lifeguard supervision is provided whenever the pool is open, gates and doors are self-closing and self-latching.

(6) A wave pool has a continuous barrier along the full length of each side of the wave pool. The barrier is at least 42 inches high and is installed no more than 3 ft from the side of the wave pool. Wave pool users are not permitted in this area.

m. Electrical. Electrical systems and components shall meet the following criteria:

(1) Each electrical outlet in the deck, shower room, and pool water treatment equipment areas is equipped with a properly installed GFCI at the outlet or at the breaker serving the outlet. Electrical outlets energized through an ORP/pH controller are not required to have a separate GFCI if the controller is equipped with a GFCI or is energized through a GFCI breaker. GFCI receptacles and breakers are tested at least once in each month that the swimming pool is in operation. Testing dates and results are recorded in the pool records.

(2) Lighting.

1. Artificial lighting is provided at a swimming pool that is to be used at night or that does not have adequate natural lighting so that all portions of the swimming pool, including the bottom and main drain, may be clearly seen.

2. Underwater lights and fixtures are designed for their intended use. When the underwater lights operate at more than 15 volts, the underwater light circuit is equipped with a GFCI. When an underwater light needs to be repaired, the electricity is shut off until repairs are completed.

3. For outdoor swimming pools, no electrical wiring, except for overhead illumination, extends over a swimming pool.

n. Chlorine gas and carbon dioxide. Swimming pool facilities shall meet the following criteria:

(1) Chlorine gas feed equipment and full and empty chlorine cylinders are housed in a room or building used exclusively for that purpose during the pool operation season. Chlorine gas installations constructed prior to March 14, 1990, that are housed within chain-link fence or similar enclosure may be used provided that the chlorine cylinders are protected from direct sunlight and the applicable requirements below are met.

1. A chlorine gas room or building has an airtight exhaust system that takes its suction near the floor and discharges out of doors in a direction to minimize the exposure to swimming pool patrons. The system provides one air change every four minutes.

2. An air intake is provided near the ceiling.

3. The exhaust fan is operated from a switch in a nearby location outside the chlorine room or building. The switch is clearly labeled “Chlorine Exhaust Fan.”

4. The discharge from the exhaust system is outside the pool enclosure.

5. Artificial lighting is provided in the chlorine room or building.

6. The door of a chlorine room or building is secured in an open position whenever the room is occupied.

7. A plastic bottle of commercial strength ammonia solution for leak detection is provided.

8. Rooms or buildings where chlorine is stored or used are placarded in accordance with 481—Chapter 221.

(2) CO_2 cylinders.

1. Chlorine gas and CO_2 cylinders are individually anchored with safety chains or straps.

2. Storage space is provided so that chlorine cylinders are not subject to direct sunlight.

3. The chlorinator is designed to prevent the backflow of water or moisture into the chlorine gas cylinder.

4. An automatic shutoff is provided to shut off the gas chlorinator and the pH control chemical pump when the recirculation pump stops.

o. *Water slides.* Water slides shall meet the following criteria:

(1) Water slide support structures are free of obvious structural defects.

(2) The internal surface of a flume is smooth and continuous for its entire length.

(3) The flume has no sharp edges within reach of a user while the user is in the proper sliding position.

p. *Projections or obstructions.* There shall be no underwater or overhead projections or obstructions that would endanger swimmer safety or interfere with proper swimming pool operation.

15.4(5) *Showers, dressing rooms, and sanitary facilities.* Swimming pool users shall have access to showers, dressing rooms, and sanitary facilities that are clean and free of debris. If a bathhouse is provided, the following shall be met:

a. Floors have a slip-resistant surface.

b. Floors provide adequate drainage to prevent standing water.

c. Olefin or other approved carpeting may be used in locker room or dressing room areas provided there is an adequate drip area between the carpeting and the shower room, toilet facilities, swimming pool, or other area where water can accumulate.

d. All lavatories, showers, and sanitary facilities are functional.

e. Soap is available at each lavatory and at each indoor shower fixture.

15.4(6) *Management, notifications, and records.*

a. *Certified operator required.* Each facility shall employ a certified operator. One certified operator may be responsible for a maximum of three facilities. Condominium associations, apartments, housing cooperatives, and homeowners associations with 25 or fewer living units are exempt from this requirement.

b. *Pool rules sign.* A legible pool rules sign shall be posted conspicuously at a minimum of two locations within the swimming pool enclosure. The sign shall include the following stipulations:

(1) No diving in the shallow end of the swimming pool and in other areas marked "No Diving."

(2) No rough play in or around the swimming pool.

(3) No running on the deck.

c. *Other rules.* Management may adopt and post such other rules as it deems necessary to provide for user safety and the proper operation of the facility.

d. *"No Lifeguard" signs.* Where lifeguards are not provided whenever the pool is open, a sign shall be posted at each entry to a swimming pool, stating that lifeguards are not on duty and children under the age of 12 must be accompanied by an adult, or at each entry to a wading pool, stating that lifeguards are not on duty and children must be accompanied by an adult.

e. *Water slide rules.* Rules and restrictions for the use of a water slide shall be posted near the slide and address the following as applicable:

(1) Use limits.

(2) Attire.

(3) Riding restrictions.

(4) Water depth at exit.

(5) Special rules to accommodate unique aspects of the attraction.

(6) Special warnings about the relative degree of difficulty.

f. *Operational records.* The operator of a swimming pool shall have the swimming pool operational records for the previous 12 months at the facility and make these records available when requested by a swimming pool inspector. These records shall contain a day-by-day account of swimming pool operation, including:

(1) ORP and pH readings, results of pH, free chlorine or total bromine residual, cyanuric acid, combined chlorine, and any other chemical test results.

(2) Results of microbiological analyses.

(3) Reports of complaints, accidents, injuries, and illness.

(4) Dates and quantities of chemical additions, including resupply of chemical feed systems.

(5) Dates when filters were backwashed or cleaned or when a filter cartridge was changed.
(6) Monthly ground fault circuit interrupter test results.
(7) Dates of review of material safety data sheets.
(8) If applicable, dates and results of tests of each SVRS installed at a facility.

g. *Submission of records.* An inspection agency may require a facility operator to submit to the inspection agency on a monthly basis a copy of the records of the ORP and pH readings, chemical test results and microbiological analyses. The inspection agency will notify the facility management of this requirement in writing at least 15 days before the reports are to be submitted for the first time. The facility management shall submit the required reports to the inspection agency within ten days after the end of each month of operation.

h. *Certificates.* Copies of certified operator certificates and copies of lifeguard, first-aid, basic water rescue, and CPR certificates for the facility staff shall be kept at the facility.

i. *Operations manual.* A permanent manual for the operation of the swimming pool shall be kept at the facility and include instructions for routine operations at the swimming pool including but not necessarily limited to:

(1) Water testing procedures, including the required frequency of testing.
(2) Maintaining the chemical supply for the chemical feed systems.
(3) Filter backwash or cleaning.
(4) Vacuuming and cleaning the swimming pool.
(5) Superchlorination.
(6) Controller sensor maintenance, where applicable.

j. *Schematic drawing.* A schematic drawing of the pool recirculation system shall be posted in the swimming pool filter room or in the operations manual. Clear labeling of the swimming pool piping with flow direction and water status (unfiltered, treated, backwash) may be substituted for the schematic drawing.

k. *Safety data sheets.* Copies of SDS of the chemicals used at the swimming pool shall be kept at the facility in a location known and readily accessible to facility staff with chemical-handling responsibilities. Each member of the facility staff with chemical-handling responsibilities shall review the SDS at least annually. The facility management shall retain records of the SDS reviews at the facility and make the records available upon request by a swimming pool inspector.

l. *Emergency plan.* The facility management shall develop a written emergency plan. The plan shall include but not be limited to actions to be taken in cases of drowning, serious illness or injury, chemical-handling accidents, weather emergencies, and other serious incidents. The emergency plan shall be reviewed with the facility staff at least once a year, and the dates of review or training shall be recorded in the pool records. The written emergency plan shall be kept at the facility and be available to a swimming pool inspector upon request.

m. *Lifeguard staffing plan.* The lifeguard/program staffing plan for the facility shall be available to the swimming pool inspector at the facility and include staffing assignments for all programs conducted at the pool.

15.4(7) *Reports.* Swimming pool and spa operators shall report to the local inspection agency, within one business day of occurrence, all deaths; near drowning incidents; head, neck, and spinal cord injuries; and any injury that renders a person unconscious or requires immediate medical attention.

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