TITLE 25 HEALTH SERVICES

PART 1 DEPARTMENT OF STATE HEALTH SERVICES

CHAPTER 265 GENERAL SANITATION

SUBCHAPTER L PUBLIC SWIMMING POOLS AND SPAS

§265.181. General Provisions.

- (a) Scope and purpose. The purpose of this subchapter is to implement Texas Health and Safety Code, §341.064, Swimming Pools, Artificial Swimming Lagoons and Bathhouses, and §341.0645, Pool Safety.
- (b) Adoption by reference. Department of State Health Services (DSHS) adopts by reference the 2021 International Swimming Pool and Spa Code (ISPSC) regarding construction, alteration, renovation, enlargement, and repair of commercial swimming pools and spas; the ANSI/APSP-16 American National Standard for Suction Outlet Fitting Assemblies (SOFA) for use in Pools Spas and Hot Tubs; and the ANSI/PHTA/ICC-7 American National Standard for Suction Entrapment Avoidance in Swimming Pools, Wading Pools, Spas, Hot Tubs, and Catch Basins as specified in subsection (c) of this section.
- (c) ISPSC sections adopted. DSHS adopts by reference the following chapters and sections from the ISPSC, except as provided in subsection (d) of this section: Section 102 in Chapter 1, Scope and Administration; Chapter 2, Definitions; Chapter 3, General Compliance, only as these sections and chapters relate to the construction, alteration, renovation, enlargement, and repair of commercial swimming pools and spas; Chapter 4, Public Swimming Pools; Chapter 5, Public Spas and Public Exercise Spas; and Chapter 6, Aquatic Recreation Facilities.
- (d) ISPSC sections not adopted. DSHS does not adopt by reference the following chapters and sections from the 2021 ISPSC: Sections 102.7.1, 103, 104, 105, 106, 107, 108, 109.2, 109.3, 110, 111, 112, 113, and 114 in Chapter 1, Scope and Administration; Definitions in Section 202 in Chapter 2: Code Official, Deep Area, Design Professional, and Jurisdiction; Section 412.2 in Chapter 4, Public Swimming Pools; Section 508.3 in Chapter 5, Public Spas and Public Exercise Spas; Section 603.3 in Chapter 6, Aquatic Recreation Facilities; Chapter 7, Onground Storable Residential Swimming Pools; Chapter 8, Permanent Inground Residential Swimming Pools; Chapter 9, Permanent Residential Spas and Permanent Residential Exercise Spas; and Chapter 10, Portable Residential Spas and Portable Residential Exercise Spas.
- (e) Application of the rules. The rules in this subchapter establish minimum standards for swimming pools and spas concerning pool operation and management, water quality, safety standards unrelated to design and construction, signage, enclosures, and safety features intended to reduce to a practical minimum the possibility of drowning or injury to users.
- (f) Date of construction. The date of construction of a pool, spa, or a bathhouse is the date that a building permit for construction is issued. If no building permit is required, the date that excavation or electrical service begins, whichever is earlier, is the date of construction. In the case of the latter, the owner or operator must

produce adequate written documentation of the date of excavation or the beginning date of electrical service.

- (g) Regulations not in the ISPSC. Regarding regulations in this subchapter not addressed by the ISPSC, local regulatory authorities may, with the exception of DSHS-approved alternate methods of disinfection set forth in §265.196 of this subchapter (relating to Request for Alternate Method of Disinfectant), adopt standards that vary from the standards in this subchapter; however, such standards must be equivalent to or more stringent than the standards in this subchapter.
- (h) References to public swimming pools and public spas. The rules specify whether a particular provision concerns pool operation and management, water quality, safety standards unrelated to design and construction, signage, enclosures, and safety features applies to pools and spas constructed on or after the effective date of this subchapter or whether it applies to all public swimming pools and public spas regardless of the date of construction.

§265.182. Definitions.

The following words and terms, when used in this subchapter, have the following meanings, unless the context clearly indicates otherwise.

- (1) AED--Automated External Defibrillator. A device that automatically diagnoses the life-threatening cardiac arrhythmias of ventricular fibrillation and pulseless ventricular tachycardia and can treat those conditions by application of electricity which stops the arrhythmia, allowing the heart to re-establish an effective rhythm.
- (2) Alternate method of disinfectant--A method of disinfectant for a pool or spa requiring approval by DSHS.
- (3) Alternative communication system--Devices that alert multiple on-site staff when activated, such as pager systems, radios, or walkie-talkie communication systems. Used to notify on-site EMS, on-site medical staff, on-site certified staff such as lifeguards, or a commercial emergency monitoring service.
 - (4) ANSI--American National Standards Institute.
- (5) APSP--Association of Pool and Spa Professionals now known as the Pool and Hot Tub Alliance (PHTA).
 - (6) ARC--American Red Cross.
- (7) Artificial swimming lagoon--An artificial body of water used for recreational purposes with more than 20,000 square feet of surface area, an artificial liner, and a disinfectant method. The term does not include a body of water open to the public that continuously recirculates water from a spring or a pool.
 - (8) ASPSA--American Swimming Pool and Spa Association.
 - (9) ASTM International--American Society of Testing Materials International.

- (10) ASTM F2376--Standard Practice For Classification, Design, Manufacture, Construction, And Operation Of Water Slide Systems.
- (11) Backflow prevention device--A device designed to prevent a physical connection between a potable water system and a non-potable source, such as a pool or spa, or a physical connection between a pool or spa and a sanitary sewer or wastewater disposal system.
- (12) Breakpoint chlorination--The addition of enough of the chlorination compound to water to destroy chlorine demand compounds, chloramines, and any combined chlorine that is present. The amount added is normally 10 times the combined chlorine concentration. Breakpoint chlorination, also called "superchlorination," results in a decrease in eye irritation potential and "chlorine odors."
- (13) BVM--Bag-Valve Mask. A handheld device used to provide positive pressure ventilation to persons who are not breathing adequately. Also known by its proprietary name, Ambu bag.
- (14) Chlorine--An element that at room temperature and pressure is a heavy green-yellow gas that is used to sanitize water. Chlorine, when mixed with water, forms hypochlorous acid, which is the disinfecting agent, and hydrochloric acid.
- (15) Cleansing shower--A shower with hot and cold running water and soap for the purpose of removing dead skin, sweat, dirt, and waste material from users.
- (16) Combined chlorine--Also known as "chloramine(s)." Formed when free chlorine combines with nitrogen-containing compounds such as perspiration and ammonia. Combined chlorine, or chloramines, can cause eye and skin irritation, strong and unpleasant "chlorine" odors, and is not as effective as a sanitizer or disinfectant.
- (17) Commercial pool and spa--A public swimming pool and spa as defined in paragraph (51) of this section, referring to public pool and in paragraph (54) of this section, referring to public spa.
- (18) Cross-connection control device--A backflow prevention device as defined in this section.
- (19) Cryptosporidium parvum -- A microscopic parasite that is highly tolerant to chlorine disinfection and that causes the diarrheal disease cryptosporidiosis. It is commonly referred to as Crypto.
- (20) Day camp--A day camp as described in the Texas Youth Camps Safety and Health rules, §265.11 of this chapter (relating to Definitions).
- (21) Disinfectant--Energy, chemicals, or a combination of both used to kill or irreversibly inactivate microorganisms such as bacteria, viruses, and parasites.
- (22) DPD--A chemical testing reagent (N, N-Diethyl-P-Phenylenediamine) used to measure the levels of free chlorine or bromine in water by yielding a series of

colors ranging from light pink to dark red.

- (23) DSHS--Texas Department of State Health Services.
- (24) EMS--Emergency medical services.
- (25) Emergency monitoring service--A service that provides an emergency summoning device at pools and spas that is monitored 24 hours a day off-site by personnel trained to identify pool and spa related emergencies, such as drownings. A service capable of contacting local EMS, providing a precise location of the emergency call to local EMS, and that has personnel trained to offer the caller instructions for assisting when possible.
- (26) Exercise spa or swim spa--For purposes of the rules in this subchapter related to safety, operation and management, signage, and enclosures, exercise spas or swim spas are a variant of a spa in which the design and construction includes specific features and equipment to produce a water flow intended to allow recreational physical activity including swimming in place.
- (27) Facility--A pool, spa, public interactive water feature or fountain, and restrooms, dressing rooms, equipment rooms, deck or walkways, beach entries, enclosure, and other appurtenances directly serving the pool or spa.
 - (28) FIFRA--The Federal Insecticide, Fungicide, and Rodenticide Act.
- (29) Filter media--A finely graded material (for example, sand, diatomaceous earth, or polyester fabric) that removes filterable particles from the water.
- (30) FINA--Fédération Internationale de Natation. The organization that administers international competition in aquatic sports.
- (31) Floatation system--A combination of a float solution holding vessel and treatment system for the immersion and floatation of a person or persons in a temperature-controlled environment. Also known as a flotation system, sensory deprivation system or floatation chamber. For purposes of this subchapter, a floatation system is not considered a pool or spa.
- (32) Free available chlorine or free chlorine residual--That portion of the total chlorine remaining in chlorinated water that is not combined with ammonia or nitrogen compounds and that will react chemically with bacteria or other pathogenic organisms in the water of a pool, spa, or lagoon.
 - (33) Gpm--Gallons per minute.
- (34) Hyperchlorination--The intentional and specific raising of chlorine levels for a prolonged period-of-time to inactivate pathogens following a diarrheal release in a pool or spa as per the Centers for Disease Control and Prevention's guidance titled "Healthy Swimming: Fecal Incident Response Recommendations for Aquatic Staff".
- (35) Island--A structure inside a pool where the perimeter is surrounded by the water in the pool and the top is above the surface of the pool.

- (36) Langelier Saturation Index--A number indicating the degree of saturation in water related to calcium carbonate solubility. The number represents the ability of water to deposit calcium carbonate, or dissolve metal, concrete, or grout.
- (37) Licensed design professional--A person licensed to engage in the practice of design in the state of Texas in accordance with relevant licensing laws, including an architect, electrician, and engineer.
- (38) Licensed architect--A person licensed to engage in the practice of architecture in the State of Texas in accordance with the Texas Occupations Code, Chapter 1051, and related rules.
- (39) Licensed electrician--A person licensed to perform electrical work on pools and spas in accordance with the Texas Electrical Safety and Licensing Act, Texas Occupations Code, Chapter 1305, and related rules.
- (40) Licensed engineer--A person licensed to engage in the practice of engineering in the State of Texas in accordance with the Texas Engineering Practice Act, Texas Occupations Code, Chapter 1001, and related rules.
- (41) Lifeguard--A person who supervises the safety and rescue of swimmers, surfers, and other water sports participants and who has successfully completed and holds a current ARC, Young Men's Christian Association, or equivalent Lifeguard Certificate from an aquatic safety organization, a current First Aid Certificate, and a current cardiopulmonary resuscitation (CPR) certificate received for training in CPR for adults, infants, and children and the use of an AED and BVM.
- (42) Local regulatory authority--A county, municipality, or other political subdivision of the state having jurisdiction over pools and spas and associated facilities.
 - (43) mV--Millivolt.
 - (44) NCAA--National Collegiate Athletic Association.
 - (45) NRPA--National Recreation and Parks Association.
- (46) ORP--Oxidation Reduction Potential. The measure of the oxidation-reduction potential of chemicals in water or the tendency for a solution to either gain or lose electrons. It is generally measured in millivolts (mV) by means of an electronic meter and depends upon types and concentrations of oxidizing and reducing chemicals in water.
- (47) pH--A value expressing the relative acidic or basic tendencies of liquids, such as water, on a scale from 0 to 14 with 7.0 being neutral, values less than 7.0 being acidic, and values greater than 7.0 being basic.
 - (48) PHTA--Pool and Hot Tub Alliance. Formerly APSP.
- (49) PIWF--Public interactive water feature and fountain. A PIWF includes any indoor or outdoor installation maintained for public recreation that includes water

sprays, dancing water jets, waterfalls, dumping buckets, or shooting water cannons in various arrays for the purpose of wetting the persons playing in the spray streams. It may be a stand-alone PIWF, also known as a splash pad, spray pad, or wet deck, or may share a water supply, disinfection system, filtration system, circulation system, or other treatment system that allows water to co-mingle with a pool.

- (50) Pool yard or spa yard--An area that has an enclosure containing a pool or spa.
- (51) Public pool--For purposes of the rules in this subchapter related to safety, operation and management, signage and enclosures, pools are classified and referred to as follows: any man-made permanently installed or non-portable structure, basin, chamber, or tank containing an artificial body of water that is maintained or used expressly for public recreation, swimming, diving, aquatic sports, or other aquatic activity. Public pools include but are not limited to activity pools, catch pools, lazy or leisure river pools, wave action pools, vortex pools, therapy pools, and wading pools. A public pool may be publicly or privately owned and may be operated by an owner, lessee, operator, licensee, or concessionaire. A fee for use may or not be charged. The term does not include a residential pool, artificial swimming lagoon, floatation system or chamber, or a body of water that continuously recirculates water from a spring.
- (A) Class A pool--Any pool maintained or used, with or without a fee, for accredited competitive events such as FINA, United States Swimming, United States Diving, NCAA, or National Federation of State High School Association events. A Class A pool may also be used for recreational swimming.
- (B) Class B pool--Any pool maintained or used for public recreation and open to the general public with or without a fee.
- (C) Class C pool--Any pool that is not a Class A or B pool that is limited to occupants, members, or students and their guests, but not to the general public. It is a pool operated for and in conjunction with:
- (i) lodging, such as hotels, motels, apartments, condominiums, RV parks, or mobile home parks;
- (ii) youth camps, property owner associations, private organizations, or clubs; or
- (iii) schools, colleges, or universities while operated for academic or continuing education classes.
- (52) Pools and Spas--Public swimming pools and public spas are referred to as pools and spas throughout this subchapter.
 - (53) Ppm--Parts per million.
- (54) Public spa--A body of water intended for the immersion of persons in either hot or cold water circulated in a closed system and not intended to be drained and

refilled after each use. A spa can include a filter, heater, a pump or pumps, blowers, and water sanitizing equipment. The term includes a swim spa or exercise spa. For purposes of the rules in this subchapter related to safety, operation and management, signage, and enclosures, spas are classified and referred to as follows:

- (A) Class A spa--Any spa maintained or used, with or without a fee, for accredited competitive events such as FINA, United States Swimming, United States Diving, NCAA, and National Federation of State High School Association events.
- (B) Class B spa--Any spa maintained or used for public recreation and open to the general public with or without a fee.
- (C) Class C spa--A spa that is not a Class A or Class B spa that is open to occupants, members, or students and their guests, but not to the general public. It is a spa that is operated for and in conjunction with:
- (i) lodging, such as hotels, motels, apartments, condominiums, RV parks, or mobile home parks;
- (ii) youth camps, property owner associations, private organizations, or clubs; or
- (iii) schools, colleges, or universities while operated for academic or continuing education classes, or hospitals or medical centers.
- (55) Regulatory authority--A federal or state agency or local regulatory authority having jurisdiction over pools and spas, and associated facilities.
- (56) Rescue tube--A piece of lifesaving equipment that is a part of the equipment used by lifeguards to make water rescue easier by helping support the victim's and rescuer's weight.
- (57) Resident youth camp--A resident youth camp as described in the Texas Youth Camps Safety and Health rules, §265.11 of this chapter.
- (58) Residential pool or spa--A pool or spa that is located on private property under the control of the property owner or the owner's tenant and that is intended for use by not more than two resident families and their guests. It includes a pool or a spa serving only a single-family home or duplex.
- (59) Rinsing shower--A shower located on the pool or spa deck for the purpose of removing sand, dirt, sweat, and user hygiene products without the use of hot water or soap.
- (60) Secchi disk--An 8-inch diameter disk with alternating black and white quadrants that is lowered in the pool and spa and is used to measure water turbidity and clarity.
 - (61) Secondary disinfection system--A process or system installed in addition to

the standard disinfection system required on all pools and spas.

- (62) Self-closing and self-latching device--A device or mechanism that causes a gate to automatically close without human or electrical power after it has been opened and to automatically latch without human or electrical power when the gate closes.
- (63) Slide--A recreational feature with a flow of water and an inclined flume or channel by which a user is conveyed downward into a pool.
- (A) Drop slide--A slide that drops users into the water from an elevated height into water.
- (B) Pool slide--A slide having a configuration as defined in the Code of Federal Regulations, Chapter II, Title 16, Part 1207 by United States Consumer Product Safety Commission or is similar in construction to a playground slide that allows users to slide from an elevated height to a pool. This includes children's (tot) slides.
- (C) Waterslide--A slide that runs into a landing pool or runout through a fabricated channel with flowing water.
- (64) Supplemental treatment system--A system, process, or water treatment which is not required on a public pool or spa for health and safety reasons that may be used to enhance overall system performance and improve water quality.
- (65) Surf pool--A pool with less than 20,000 square feet of water surface area in which waves are generated and dedicated to the activity of surfing on a surfboard or analogous surfing device commonly used in the ocean and intended for sport. A surf pool is intended for the sport of surfing as opposed to general play activities in wave pools.
- (66) Superchlorination--See paragraph (12) of this section, Breakpoint chlorination.
 - (67) TCEQ--Texas Commission on Environmental Quality.
 - (68) TDLR--Texas Department of Licensing and Regulation.
- (69) Therapeutic pool or spa--A pool or spa that is operated exclusively for therapeutic purposes, such as physical therapy, and is under the direct supervision and control of licensed or certified medical personnel.
- (70) Total alkalinity--A measure of the ability or capacity of water to resist change in pH, also known as the buffering capacity of water. Total alkalinity is measured with a test kit and expressed as parts per million (ppm) and consists mainly of carbonates, bicarbonates and hydroxides.
- (71) Total chlorine--The sum of both the free available chlorine and combined chlorine (chloramines).

- (72) UL--An independent testing laboratory (formerly Underwriters Laboratories).
 - (73) USCG--United States Coast Guard.
 - (74) User--A person using a pool, spa, or lagoon or adjoining deck.
- (75) VGBA--The Virginia Graeme Baker Pool and Spa Safety Act. A federal law that requires drain covers to comply with entrapment protection requirements specified by the American National Standards Institute (ANSI) ANSI/APSP 16 performance standard or any successor standard, and ANSI/PHTA/ICC-7 American National Standard for Suction Entrapment Avoidance in Swimming Pools, Wading Pools, Spas, Hot Tubs, and Catch Basins.
- (76) Wading pool--A pool with a maximum water depth that is no greater than 18 inches. A wading pool may contain a PIWF.
- (77) Wave pool--A pool, with less than 20,000 square feet of water surface area, designed to simulate breaking or cyclic waves for purposes of general play. A wave pool is intended for general play as opposed to a surf pool that is intended for sport.
- (78) Written instructions--Written communication that provides directions for carrying out a procedure or performing a task. Written instructions can include manuals, journals, lists, printed materials, computer-generated materials, and handwritten materials. Written instructions may be maintained in electronic form so long as electronic use and transmission of the electronic materials does not present a risk to the health and safety of individuals accessing the electronic materials.

§265.183. Plans and Instructions.

- (a) Plans for new construction of pools and spas. DSHS may review plans for pools and spas to ensure compliance with construction requirements. If DSHS intends to review plans, DSHS will notify the owner or operator in writing.
- (b) Additions, alterations, renovations, or repairs authorized. A minor addition, alteration, renovation, or repair to an existing pool or spa and related mechanical, electrical, and plumbing systems may be performed in accordance with the construction standard that was in place when the pool and spa was constructed.
- (c) Accepted practice for pools and spas. The structural design and materials for pools and spas constructed before the effective date of this subchapter must be in accordance with accepted industry engineering practices and methods prevailing at the time of original construction unless otherwise stated in this subchapter.

§265.184. Slides and other Aquatic Play Features.

(a) Proper installation of a slide or other aquatic play feature. A slide or other aquatic play feature, such as a climbing wall, floating amusement island, zip line, or anchored floats, must be installed according to manufacturer's instructions or in accordance with the specifications established by a licensed engineer or licensed

architect.

- (b) Amusement ride. An aquatic play feature or slide that meets the definition of "Amusement Ride" in Texas Occupations Code, Chapter 2151 (the Amusement Ride Safety Inspection and Insurance Act) must comply with that chapter.
- (c) Jumping rocks or ledges. Pools with diving or jumping rocks or ledges must be designed by a licensed engineer or licensed architect.

§265.185. Pumps and Motors for Pools and Spas.

A pump for a pool or spa must not be operated if the owner or operator of the pool or spa knows or should know in the exercise of ordinary care that the drain grate, suction outlet, or any suction outlet cover is missing, broken, or loose. If such a condition exists, the pool or spa must be closed and remain closed until corrected.

§265.186. Electrical Requirements for Pools and Spas.

- (a) Licensed electrician required. The electrical system of a pool or spa and structures in the pool yard or spa yard must be installed, maintained, repaired, or replaced by a licensed electrician in accordance with the Texas Electrical Safety and Licensing Act, Texas Occupations Code, Chapter 1305 and related rules.
- (b) Extension cords. Temporary extension cords and power connectors must not be used as a substitute for permanent wiring.
- (1) All parts of an extension cord must be restrained at a minimum of 6 feet as measured along the shortest possible path from a pool or spa during times when the pool or spa is open for use.
- (2) An extension cord may be used within 6 feet of the nearest edge of a pool or spa if a permanent wall exists between the pool or spa and the extension cord.
- (3) The circuit supplying power to an extension cord must be protected by a ground fault circuit interrupter, commonly referred to as GFCI, when the extension cord is to be used within 6 feet of a pool or spa.

§265.187. Pool or Spa Water Supply and Drinking Water for All Pools and Spas.

- (a) Water supply. For all pools and spas, the initial fill water and make-up water used to maintain the water level and water used as a vehicle for sanitizers or other chemicals for pump priming or for other additions must be from a public water system, as defined by 30 TAC §290.38 (relating to Definitions), or from a water well that complies with the requirements of subsection (c) of this section.
- (b) Water distribution system. All portions of the water distribution system must be protected against backflow and back siphonage using a high hazard preventer such as a reduced-pressure-principle backflow preventer meeting the requirements of the American Society of Sanitary Engineering Standard 1013, as amended, and approved for use in potable water systems possibly subjected to back siphonage or

high back pressure or an air gap designed to ASME Standard A112.1.2.

- (c) Private water supply. If the water supply providing water to the pool or spa does not meet the definition of a public water system, as defined in subsection (a) of this section, that water supply must comply with the following requirements.
 - (1) Water pressure system must be designed to:
- (A) maintain a minimum pressure of 35 pounds per square inch (psi) at all points within the distribution network at flow rates of at least 1.5 gallons per minute per connection;
- (B) maintain a minimum pressure of 20 psi under combined fire and drinking water flow conditions when the system is intended to provide firefighting capability; and
- (C) maintain a minimum distribution pressure not less than 20 psi at any time.
- (2) Coliform testing of the well water must be performed each month the pool or spa is open for use. Records of any bacteriological tests must be kept on-site for three years and made available during inspection.
- (3) Chemical analysis must be for the secondary constituent levels set out by 30 TAC §290.118 (relating to Secondary Constituent Levels).
- (A) Water samples for chemical analysis obtained from the entry point to the distribution system must be submitted once every three years to a laboratory certified by the TCEQ.
- (B) Records of all chemical testing must be kept on-site for three years and made available during inspection.
- (d) Drinking water provided. At least one drinking water fountain or other source of drinking water, such as bottled water, must be provided and available for pool and spa users at all pools and spas constructed on or after October 1, 1999, and must be available at all times the pool or spa is open for use. A faucet, spigot, or sink does not satisfy the requirements for providing drinking water. Glass containers must not be allowed on a deck, in the pool or spa, or anywhere within the pool yard or spa yard.
 - (1) The drinking water is not required to be chilled.
 - (2) The drinking water is not required to be in the pool or spa yard.
- (3) When the drinking water is not located in the pool yard or spa yard, a sign with letters a minimum of 1 inch in height is required. The sign must be posted so that it is visible to users that informs the users of the location of the drinking water.
- (e) Hose bibs. Hose bibs in the pool yard or spa yard must be protected with a vacuum breaker.

§265.188. Wastewater Disposal for Pools and Spas.

- (a) Filter backwash wastewater disposal. Filter backwash, cartridge wash water, and drainage water that is not reused in the pool or spa must be discharged or disposed of in accordance with the requirements of the TCEQ or local regulatory authority.
- (b) No direct connection. No direct mechanical (hard) connection may be made between the pool or spa, the drains, the chemical treatment equipment, or the system of piping and the sanitary sewer system, septic system, or other wastewater disposal system.
- (c) Pool and spa backwash. Backwash water and draining water must be discharged through an air gap formed by positioning the discharge pipe opening at least two pipe diameters above the overflow level of any barriers that could cause flooding and submergence of the discharge opening or by other means in accordance with TCEQ requirements. Splash screening barriers are permitted, as long as the barriers do not destroy air gap effectiveness.
- (d) Wastewater post treatment. Filter backwash water and circulation system drainage water must be treated either chemically or through use of settling tanks to eliminate or neutralize chemicals, diatomaceous earth, and other contaminants in the water that exceed discharge limits set by TCEQ or the local regulatory authority.
- (e) Other wastewater or drainage water disposal facilities or lines. The location of other wastewater disposal facilities or lines must meet applicable standards of 30 TAC Chapter 307, Texas Surface Water Quality Standards, Chapter 308, Criteria and Standards for the National Pollutant Discharge Elimination System, Chapter 311, Watershed Protection, and Chapter 315, Pretreatment Regulations for Existing and New Sources of Pollution, or the local regulatory authority.

§265.189. Disinfectant Equipment and Chemical Feeders.

- (a) Disinfectant agent. Pool and spa water must be continuously disinfected by a chlorine or bromine disinfectant agent that can be easily measured by simple and accurate field tests.
- (b) Supplemental treatment systems. Supplemental treatment systems may be installed and used on pools and spas.
- (1) Supplemental treatment systems used only to treat water in a pool or spa and not a public interactive water feature or fountain (PIWF) are not required to meet the minimum 3-log or 2-log inactivation of *Cryptosporidium parvum*.
- (2) Supplemental treatment systems used to treat water in a PIWF must comply with the requirements in §265.306(g) of this chapter (relating to Water Quality at Public Interactive Water Features and Fountains) referring to supplemental water treatment systems for PIWFs.
 - (3) Supplemental treatment systems must meet NSF Standard 50 or NSF

Standard 60, have an Environmental Protection Agency (EPA) or FIFRA registration, and be used in accordance with the manufacturer's instructions.

- (c) Secondary disinfection systems. Secondary disinfection systems may be installed and used on a pool or spa and must be certified, listed, and labeled to NSF Standard 50.
- (1) Secondary disinfection systems must achieve a minimum 2-log (99%) reduction in the number of infective *Cryptosporidium parvum* oocysts per pass though the treatment system; and
- (2) must be located in the treatment system so that the 2-log reduction is obtained.
- (3) Validation records, as applicable, and operation records must be maintained for any secondary disinfection system or treatment, and must be maintained onsite, or made available to the inspector within five business days upon request if kept off-site.
- (d) Water treatment chemicals. Treatment chemicals must be certified, listed, and labeled to either NSF Standard 50 or NSF Standard 60 or have an EPA FIFRA registration and be used only in accordance with the manufacturer's instructions.
- (e) Chlorine gas prohibited. Use of compressed chlorine gas is prohibited in pools and spas constructed on or after January 1, 2021.
- (f) Training and protection. Personnel responsible for the operation of the disinfectant agent and other potentially hazardous chemicals, whether it is the trained and certified operator, or someone assigned to maintain a pool or spa when the trained and certified operator is not on-site, must be properly trained and provided with appropriate protective equipment and clothing, including rubber gloves and goggles, safety information, and safety data sheets. Safety data sheets covering all chemicals for which personnel are responsible must be kept on-site and be readily available.
- (g) Application of disinfectant in a pool or spa.
- (1) Automatic distribution of chemicals. If using automatic feeders, automated controllers that adjust chemical feed based on demand or manually, or remotely managed controllers for pool and spa disinfection and pH control, must be installed. Automatic feeders must meet NSF Standard 50 for use in public pools and spas and must operate in a manner that does not invalidate the NSF rating for the system and equipment.
- (A) Controllers that adjust chemical feed either manually or automatically are required.
- (B) Disinfection equipment must be selected and monitored so that continuous and effective disinfection can be achieved under all conditions.
 - (C) Disinfectant feed systems must have the capacity to maintain up to 5

parts per million (ppm) chlorine (or equivalent bromine level) in outdoor pools and spas and up to 3 ppm chlorine (or equivalent bromine level) in indoor pools and spas under all conditions of intended use.

- (D) Skimmer baskets or floating dispensers may not be used to dispense disinfectant, chemicals that adjust pH, or algaecides.
- (2) Hand distribution of chemicals. Hand distribution of disinfectant chemicals, chemicals used to adjust pH, or algaecides is prohibited when users are in the pool or spa. Before users reenter the pool or spa following hand distribution of disinfectant chemicals, chemicals used to adjust pH, or algaecides, the following applies:
- (A) tests of disinfectant levels and pH must be performed 30 minutes after hand distribution; and
- (B) no one may reenter the pool or spa until the disinfectant levels and pH are checked and are found to be within the required range.
- (h) Bulk chemical tanks. All chemical bulk and day tanks must be clearly labeled to indicate the tank's contents.
- (i) Chemical storage areas.
- (1) Disinfectant agents, other chemicals, and feed equipment must be stored so that pool and spa users and other unauthorized persons do not have access.
- (2) Dry chemicals must be stored off the floor or in waterproof containers in a dry room and protected against flooding or wetting from floors, walls and ceiling.
- (3) Chlorine compounds must not be stored in the same storage room or storage area as petroleum products.

§265.190. Safety Features for Pools and Spas.

- (a) Safety rope and float lines and floor markings.
- (1) Class A pools not being used for competitive events or lap swimming must have a rope and float line.
- (A) A rope and float line must be located between 1 and 2 feet from the 5-foot depth location, toward the shallow end of the pool. Floats must be spaced at no more than 7-foot intervals and secured so they do not slide or bunch. The size of the stretched rope and float line must provide a good handhold and be strong enough to support the load normally imposed by users.
- (B) A rope and float line must be fastened securely to a wall or deck anchor made of corrosion-resistant material that is recessed or removable and does not create a hazardous projection when the line is removed.
 - (2) Class B pools over 5 feet deep must have:

- (A) a permanent method to mark the transition point of the pool floor from the shallow area to the deep area using a color contrasting with the bottom of the pool, such as a 4-inch minimum width row of floor tile;
- (B) a rope and float line located between 1 and 2 feet from the 5-foot depth location, toward the shallow end of the pool and floats must be spaced at no more than 7-foot intervals and secured so they do not slide or bunch; and
- (i) the size of the stretched rope and float line must provide a good handhold and be strong enough to support the load normally imposed by users; and
- (ii) the rope and float line may be removed when the pool is used for lap swimming or competitive events; and
- (C) the rope and float line is securely fastened to a wall or deck anchor made of corrosion-resistant material that is recessed or removable and does not create a hazardous projection when the line is removed.
- (3) Class C pools over 5 feet deep must have a permanent method to mark the transition point of the pool floor from the shallow area to the deep areas using a color contrasting with the bottom of the pool, such as a 4-inch minimum width row of floor tile.
- (A) A rope and float line may be used in addition to the transition line and must be located between 1 and 2 feet from the 5-foot depth location, toward the shallow end of the pool. Floats must be spaced at no more than 7-foot intervals and secured so they do not slide or bunch. The size of the stretched rope and float line must provide a good handhold and be strong enough to support the load normally imposed by users.
- (B) Rope and float lines must be securely fastened to a wall or deck anchor made of corrosion-resistant material that is recessed or removable and does not create a hazardous projection when the line is removed.
- (4) Wave pools, surf pools, and waterslide landing pools are not required to provide a safety rope on the shallow side of the change in floor slope.

(b) Depth markers.

- (1) Depth markers must be placed in the top 4-1/2 inches of the pool or spa wall just under the coping and be positioned to be read by a user while in the pool or spa.
- (2) There must be no less than two depth markers for each pool or spa, regardless of size and shape.
- (3) Depth markers must be permanent with numbers and letters no less than 4 inches in height and be clearly marked in a color contrasting the background of the deck and vertical wall of the pool or spa.

- (4) Depth markers must be spaced uniformly around the perimeter of the pool or spa in intervals of no more than 25 feet.
- (5) Deck depth markers must be slip-resistant and positioned to be read while standing on the deck of the pool or spa.
- (6) Depth markers must have units of measurement that either spell out "feet" or "inches" or abbreviate "FT," "IN," or fractions of a foot.
- (c) Deck "NO DIVING" marker and symbol. Where a diving marker and symbol are required in pools, the marker and symbol must comply with the requirements in the International Swimming Pool and Spa Code (ISPSC) and:
- (1) The no diving marker and symbol must not be less than 4 inches in height. The no diving symbol must consist of a diver's profile in a circle with a 45-degree slash through the diver.
- (2) The color of the letters and symbol must be permanent and contrast with the background.
 - (3) The no diving marker and symbol on the deck must be slip resistant.
- (4) The no diving marker and symbol on the deck must be within 18 inches of the water's edge and positioned to be read while standing on the deck facing the water.
- (5) If a permanent structure above the pool deck is within 5 feet of the water's surface, the 4-inch no diving marker and symbol must be on the structure so the warning is visible to persons attempting to use the structure for diving. The no diving marker and symbol are not required on diving boards or diving platforms, Americans with Disabilities Act-compliant chair lifts, slide flumes, lifeguard stands, or bridges over the water.
- (6) The no diving marker and symbol are not required on the interior tile line of a pool or spa.
- (d) Starting platforms. Starting platforms must be used during official competition only or when there is direct supervision by the team coach, a qualified instructor, or a lifeguard. Starting platforms must be removed or secured to prevent use without direct supervision.
- (e) Certain safety requirements for pools. In addition to safety signs required in the ISPSC, the following pool safety signs and operational procedures are required.
- (1) Signs must be securely mounted as applicable, readily visible to the pool user, and be posted within the pool yard unless otherwise stated within this subchapter.
 - (2) Sign panels and lettering must be durable for the weather conditions.
 - (3) Branding or artwork applied to signs must not distract from the message

panel, and signs must have a distinct border.

- (4) Safety signs can be combined on one sign or posted individually.
- (5) Safety signs for pools constructed on or after the effective date of this section or safety signs replaced at pools constructed before the effective date of this section, must comply with Figure: 25 TAC §265.190(e)(5).

Figure: 25 TAC §265.190(e)(5)

- (6) In areas of Texas where most residents are non-English speakers, signs and other written warnings or information required by this subchapter may be posted in the predominant language, in addition to English.
- (7) Variations of the language of the required safety signs in Figure: 25 TAC §265.190(e)(5) are allowed if the language of the safety signs is substantially equivalent to the language in Figure: 25 TAC §265.190(e)(5) and local swimming pool and spa regulatory officials approve the variation before the sign is posted in the pool yard.
- (f) Rescue equipment. A pool must have at least one ring buoy with throwing rope and a reaching pole for every 2000 square feet of pool surface area up to 6000 square feet. A pool with more than 6000 square feet of surface area must have an additional ring buoy, throw rope, and reaching pole for each additional 4000 square feet of surface area or fraction thereof. Reaching poles and ring buoys with rope must be visible and readily accessible from all areas of the pool yard.
- (1) The reaching pole must be light, strong, non-telescoping, and at least 12 feet long. The pole must be constructed of fiberglass or other material that does not conduct electricity and must have a body hook or shepherd's crook with blunted ends attached.
- (2) The throwing rope must be 1/4-inch to 3/8-inch in diameter and at least two-thirds the maximum width of the pool in length. A USCG-approved ring buoy must be attached to the throwing rope.
- (g) Certain safety requirements for spas.
- (1) Safety signs, for spas constructed on or after the effective date of this section or safety signs replaced at spas constructed before the effective date of this section, must be securely mounted, readily visible to spa users, and inside the spa enclosure, as required in Figure: 25 TAC §265.190(g)(1).

Figure: 25 TAC §265.190(g)(1)

- (2) Safety signs can be combined on one sign or posted individually.
- (3) Variations of the language of the required safety signs in Figure: 25 TAC $\S265.190(g)(1)$ are allowed if the language of the safety signs is substantially equivalent to the language in Figure: 25 TAC $\S265.190(g)(1)$ and local swimming pool and spa regulatory officials approve the variation before the sign is posted in

the pool yard or spa yard.

- (4) Safety signs for spas constructed on or after the effective date of this section, or safety signs replaced at spas constructed before the effective date of this section, must comply with Figure: 25 TAC §265.190(g)(1).
- (h) Emergency summoning device. A pool or spa must have a minimum of one emergency telephone, emergency monitoring contact device, or alternative communication system that is capable of immediately summoning emergency services and that is readily accessible, within 200 feet of the water, and functioning when the pool or spa is open for use. An emergency summoning device for a pool or spa with a seasonal operation schedule must function 24 hours a day during the season the pool or spa is in use. Clear operating instructions for the emergency summoning device must be posted.
- (1) The fixed-location telephone, emergency monitoring device, or alternative communication system must be visible, easily identified by users, and have no obstruction to access.
- (2) The telephone or emergency monitoring device must not be answered by an on-site office. An alternative communication system may be answered by an on-site office if the system complies with paragraph (5) of this subsection.
- (3) The telephone must be capable of making calls to 911 dispatch or to an emergency service.
- (4) When activated, the emergency monitoring contact device must directly connect to a 24-hour monitoring service, 911 dispatch, or emergency medical services.
- (5) An alternative communication system contacting an on-site office may be used if the pool or spa is in a remote area with limited or delayed emergency medical services response times and employees on-site are trained and certified or licensed to perform emergency medical intervention when the pool or spa is open for use.
- (6) A cell phone dedicated for use at the pool or spa, mounted in the pool yard or spa yard for public use, and labeled as the emergency phone may be used if the cell phone is activated by a service provider, has a permanent power supply, and can reach the emergency service provider or 911 emergency services.
- (7) A sign must be posted above the emergency summoning with the precise location of the pool or spa, such as an address, building number, Global Positioning System (GPS) location, or other location identifying information in letters a minimum of 1-inch in height.
- (i) Lighting at pools and spas. A pool or spa operating at night must have lighting providing visibility to all areas of the pool or spa while standing on the deck at the water's edge.

§265.191. Lifeguard Personnel Requirements and Standards at Pools.

- (a) Lifeguards required. Pools and spas are required to meet the operational standard that is most applicable to their respective use. For example, a pool or spa that is normally operated as a Class C pool or spa but is occasionally made available to the public, with or without a fee, must meet Class B lifeguard standards when the pool is open to the general public, with or without a fee. A minimum of two lifeguards must be provided at:
 - (1) Class A pools during competitive events;
 - (2) Class B pools whenever the Class B pool is open;
- (3) any pool where a user enters the water from any height above the deck or wall, including from diving boards, diving platforms, drop slides, waterslides, starting platforms, zip lines, or climbing walls that are open for use;
 - (4) any wave or surf pool; or
- (5) any pool while it is being used for the recreation of youth groups, including youth camps, visiting childcare groups, or visiting school groups, and a minimum of two lifeguards must be provided by either the aquatic facility or by the youth group using the aquatic facility.
- (b) Closing diving boards, diving platforms, drop slides, waterslides, starting platforms, zip line, or climbing wall. A diving board, diving platform, drop slide, waterslide, starting platform, zip line, climbing wall, or any other structure that allows entry from any height above the deck will be considered open unless there is a lock, chain, or other method used to prevent access to these structures, and a sign is posted on the entry to these structures stating that they are closed.
- (c) Lifeguards at spas. Lifeguards are not required at spas.
- (d) Lifeguard staffing plan required. A staffing plan specifying the number of onduty lifeguards must be prepared by the pool operator, lifeguard supervisor, or pool owner, and must provide adequate supervision and close observation of all users at all times. A copy of the plan must be available on-site and be provided to a DSHS or local regulatory authority inspector upon request.
- (e) Surveillance area. Each lifeguard must be given an assigned surveillance area commensurate with ability and training. The lifeguard must be able to view the entire assigned surveillance area.
- (f) Other duties must not distract. Lifeguards conducting surveillance of users must not be assigned duties that would distract the lifeguard's attention from proper observation of the users or that would prevent immediate assistance to persons in the water.
- (g) Lifeguard rotation required. When lifeguards are provided or required, a rotation procedure for lifeguards is required. Lifeguards must have break time from guarding activities as recommended by ARC or equivalent aquatic safety organization.

- (h) Lifeguard training and drills. When lifeguards are provided or required, alertness and response drills and any other training is required, including:
 - (1) a pre-season training program;
- (2) a continual "in-service" program of at least a minimum of 60 minutes for every 40 hours of employment by the lifeguard or other aquatic safety personnel;
- (3) a review of the Centers for Disease Control and Prevention standards for responding to formed-stool contamination, diarrheal-stool contamination, vomit contamination, and contamination involving blood;
- (4) performance audits as recommended by the ARC, Young Men's Christian Association, or by an equivalent aquatic safety organization; and
- (5) a facility emergency action plan for an event, such as submersion, suspected spinal injury, medical emergency, thunderstorm, missing person, bad weather, or chemical exposure.
- (i) Emergency action plan. Any pool or spa emergency action plan must contain the following:
- (1) a list of emergency phone numbers and contacts, including the trained and certified operator;
- (2) the location of the first-aid kit and other rescue equipment such as the AED, BVM, and backboard;
- (3) a response plan for inclement weather such as a thunderstorm, lightning, or high wind, including evacuation areas; and
- (4) a plan following the Centers for Disease Control and Prevention standards for responding to formed-stool contamination, diarrheal-stool contamination, vomit contamination, and contamination involving blood.
- (j) Lifeguard records. All training must be kept current. Records confirming the status of training must be made available upon request. If records are not kept onsite, records must be provided to DSHS or local regulatory authority within five business days of the request. The following records pertaining to lifeguards must be kept three years:
 - (1) each lifeguard's certification, including the expiration date; and
- (2) records of the most current training, including date, length of training, training topic, trainer name, and attendee.
- (k) Lifeguard access to safety equipment. Lifeguards must have access to safety equipment including:
- (1) an Occupational Safety and Health Administration (OSHA) compliant, minimum 24-unit first aid kit housed in a durable weather-resistant container that is fully stocked and ready for use. The kit must include disease transmission

barriers and cleaning kits meeting OSHA standards;

- (2) at least one backboard equipped with a head immobilizer and sufficient straps to immobilize a person to the backboard located close enough to a pool or spa to enable a two-minute response time to an incident in a pool or spa.
- (3) at least one portable AED and one BVM kept in a secure location that can be easily and quickly accessed by lifeguards or other trained personnel.
- (I) Lifeguard stands. OSHA-compliant lifeguard stands with platforms for lifeguards are required where water depth is greater than 5 feet and must have a protective umbrella or sunshade high enough to give lifeguards a complete and unobstructed view of the assigned area of surveillance for the lifeguards. Lifeguard stands and platforms must be located such that there are no hazards such as electrical wires directly overhead.
- (m) Personal lifeguard equipment. Each lifeguard must be provided with the following personal equipment:
- (1) uniform attire that readily identifies the lifeguard as a staff member and a lifeguard;
 - (2) a rescue tube with attached rope or strap;
- (3) personal protective devices including a resuscitation mask with one-way valve and non-latex, non-powdered, single use disposable gloves worn in a hip pack or attached to the rescue tube; and
- (4) a whistle or other signaling device for communicating to users, other lifeguards, or staff.
- (n) Minimum lifeguard standards. The standards in this subsection are considered minimum standards. Pool owners or operators may require additional and more stringent lifeguard policies, procedures, staffing requirements, training requirements, and performance audits.

§265.192. Pool Yard and Spa Yard Enclosures.

- (a) Fence or barrier required. All pool yards and spa yards must be completely enclosed by a fence, wall, or equivalent barrier that is durable and is not easily climbed. An enclosure can surround multiple pools and spas within an aquatic facility.
- (1) Planters, light poles, and other structures and site furnishings must not be permitted within 36 inches, as measured horizontally, outside of the enclosure.
- (2) Planters, light poles, and other structures and site furnishings inside the pool or spa enclosure must be constructed and placed such that the fence is not made easily climbable from outside the pool or spa enclosure.
 - (3) Tree limbs must be kept trimmed to prevent a tree or the limbs of the tree

from being used by children to climb over the enclosure.

- (4) Solid barriers that do not have openings must be smooth and not have any indentations or protrusions that could be used as a handhold or foothold except for normal construction tolerances and tooled masonry joints on the side away from the pool or spa.
- (b) Enclosures for Class A and Class B pools and spas and resident youth camp pools and spas. Enclosures for Class A and Class B pools and spas and resident youth camp pools and spas must meet the following requirements.
- (1) Class A and B pools and spas and pools and spas at resident youth camps must have an enclosure consisting of a fence, portion of a building, wall or other durable enclosure, or an equivalent structure. Chain link material with a maximum opening of 1-3/4 inch mesh may be used for fencing at Class A, Class B, and residential youth camp pools and spas.
- (2) A building that serves as part of the enclosure must have doors or gates that open into the pool or spa yard only if:
- (A) any doors or gates between the building and the pool or spa yard are for entry into a storage room, restroom, shower room, dressing room, or mechanical room adjacent to the pool or spa; and
- (B) the room does not have any door or gate openings to the outside of the pool yard or spa yard enclosure.
- (3) The enclosure, including doors and gates, must be designed and constructed so that it cannot be easily climbed and:
- (A) have a minimum effective perpendicular height of at least 6 feet as measured from the ground surface on the outside of the enclosure;
- (B) have no openings in the enclosure, either through or under it, which would allow passage of a 4-inch sphere;
- (C) have no horizontal mid-rail and be designed and constructed so that it cannot be readily climbed;
- (D) have all doors and gates in the enclosure directly and continuously supervised by staff at the pool during hours of operation or locked to prevent unauthorized entry; and
- (E) have no windows in the enclosure lower than 6 feet from the ground as measured from outside of the enclosure that can be opened.
- (4) Gates and doors of Class A, Class B, and resident youth camp pool and spa enclosures must open outward away from the pool or spa, be capable of being locked, and must be locked if the pool or spa is not open for use. The gate or door must be locked if the pool or spa is closed for repairs, hazards, weather related hazards, adding chemicals by hand, or any other condition that warrants closure of

the pool or spa.

- (c) Enclosures for pools and spas subject to Texas Health and Safety Code, Chapter 757. A pool or spa that is in a multiunit rental complex or owned, controlled, or maintained by a property owners association and subject to Texas Health and Safety Code, Chapter 757, must have an enclosure as required in Chapter 757.
- (d) Enclosures for all other Class C and day camp pools and spas. A Class C or day camp pool or spa not subject to Texas Health and Safety Code, Chapter 757 must have an enclosure that complies with this subsection and, if applicable, subsection (h) of this section.
- (1) The pool yard or spa yard enclosure must consist of one or a combination of a fence, portion of a building, wall, or other durable enclosure that meets the requirements of this section. The enclosure must comply with the following:
- (A) The enclosure must have a minimum perpendicular height of at least 48 inches as measured from the ground surface on the outside of the enclosure.
- (B) An enclosure with horizontal and vertical members constructed or replaced on or after January 1, 2021, must have no horizontal mid-rail and be constructed so that it cannot be easily climbed. The distance between horizontal members of the fence that is 48 inches in height must not be less than 45 inches.
- (C) Openings in, under, or through all enclosures at Class C and day camp pools and spas must not allow the passage of a 4-inch diameter sphere.
- (D) Chain link fencing material is prohibited for Class C pools and spas constructed on or after October 1, 1999. Pool and spa fences at Class C pools and spas constructed before October 1, 1999, that replace a chain link fence are prohibited from using chain link fencing material.
- (E) Windows that are capable of being opened are not allowed as a part of a pool or spa enclosure unless those windows are above the required enclosure height as measured from the ground level outside of the pool enclosure, and have a maximum opening of 4 inches, or are provided with a non-removable screen.
- (F) Doors or gates of a building that are capable of being opened are not allowed as part of an enclosure unless:
- (i) the doors or gates between the building and pool yard or spa yard are for entry into a storage room, restroom, shower room, dressing room, or mechanical room adjacent to the pool or spa;
- (ii) the room does not have any door or gate openings to the outside of the pool yard or spa yard enclosure; or
- (iii) the pool yard or spa yard is indoor and complies with the requirements of subsection (h) of this section.
 - (2) Gates and doors of a pool or spa enclosure subject to this subsection must:

- (A) be equipped with self-closing and self-latching devices meeting the definition in §265.182(62) of this subchapter (relating to Definitions);
- (B) be designed to close and to keep the gate or door securely closed and latched whenever the gate or door is not in use;
 - (C) open outward away from the pool or spa;
- (D) be capable of being locked and be locked if the pool or spa is not open for use; and
- (E) be locked if the pool or spa is closed for repairs, hazards, weather-related hazards, adding chemicals by hand, or any other condition that warrants closure of the pool or spa.
- (3) Self-closing and self-latching devices on gates and doors of a pool or spa constructed on or after January 1, 2021, must:
- (A) have hand-activated door- or gate-opening hardware located at least 3-1/2 feet above the deck or walkway; or
- (B) have hand-activated door- or gate-opening hardware located on the pool yard side of the gate that is at least 3 inches below the top of the gate;
- (C) have a gate or enclosure with no opening greater than 1/2 inch in any direction within 18 inches from the latch including the space between the gate and the gate post to which the gate latches; and
- (D) have a gate latch that may be located 42 inches or higher above the ground if the gate cannot be opened except by key, card, or combination on both sides of the gate.
- (e) Entry into pool yard or spa yard. Pool yard and spa yard enclosures must be constructed so that all persons will be required to pass through an enclosure gate or door to gain access to the pool or spa. All gates and doors exiting a pool or spa yard must open into a public area or walkway accessible by all users of the pool or spa.
- (f) Propping open gates prohibited. No gate or door into a pool yard or spa yard may be propped open or remain propped open unless an agent, employee, or contractor of the owner is present and doing construction, maintenance, or repair work in the pool yard or spa yard or on its enclosure that reasonably requires the gate to be propped open.
- (g) Service gates or doors. Service gates or doors at a Class A, Class B, or Class C facility used only by service personnel are not required to be self-closing and self-latching. Service gates and doors must not be used as a user entry or exit and must be kept securely closed and locked when not in actual use by service personnel entering or exiting the pool or spa yard. A service gate or door may include:

- (1) a gate or door used by chemical delivery services, facility maintenance services, and lawn and landscaping services; or
- (2) a door or service window used solely by food service staff from a food preparation area, bar, or snack bar.
- (h) Enclosures for pools and spas in a building. For pools and spas that are in a building, the interior or exterior building walls may be designated as the enclosure.
- (1) Entry and exit gates or doors into the pool or spa located in a building must comply with the requirements for entry and exit gates and doors for Class A, Class B, or Class C pool and spa gates and doors in subsections (b), (c), and (d) of this section, as applicable.
- (2) Elevator doors are not to be used as an entry or exit into the pool yard or spa yard when the pool or spa is inside a building or accessed from the interior of a building.
- (3) Where separate indoor and outdoor pools and spas are located at the same site, a door or gate may be provided between them if they comply with all the requirements in subsections (b), (c), and (d) of this section for Class A, Class B, and Class C pool and spa gates and doors, as applicable, except that if the gate or door between the indoor and outdoor pool or spa does not provide an exit from the pool or spa yard, that gate or door may open inward into the outdoor pool or spa yard.

§265.193. Water Quality at Pools and Spas.

- (a) Environmental Protection Agency (EPA) registration. A sanitizer, disinfectant, or other chemical used to disinfect or sanitize the pool or spa water must be EPA-registered for use in pools and spas under the Federal Insecticide, Fungicide, and Rodenticide Act.
- (b) Algae. Pools and spas must be treated to eliminate algae in order to prevent creation of a slip hazard, to prevent the water from becoming cloudy reducing visibility in the pool or spa, and to prevent uncontrolled growth of algae that could harbor pathogens.
- (c) Required chemical levels. Water quality for a pool or spa must meet the following criteria when the pool or spa is open for use. The water quality parameters in Figure: 25 TAC §265.193(c) apply to both pools and spas unless otherwise indicated.

Figure: 25 TAC §265.193(c)

- (d) Cyanuric acid. Cyanuric acid and stabilized chlorine such as dichlor, must not be used in any indoor pool or spa or in therapy pools.
- (e) Water clarity. Water clarity must be sufficient such that an 8-inch black disk or Secchi disk on the floor at the deepest part of the pool can be clearly and immediately seen by an observer on the water surface above the disk or by

someone standing on the deck closest to the disk.

- (f) Reliable means of water testing required. A reliable means of testing for pH, free and total (combined) chlorine, bromine, cyanuric acid, alkalinity, and calcium hardness to minimum and maximum levels and levels in between, must be provided and available for the pool operator at the pool or spa when the pool or spa is open for use.
- (g) DPD chemical test. Free available chlorine levels and bromine levels must be determined using the DPD testing method.
- (h) ORP reading frequency. ORP readings must be recorded at the same time required sanitizer and pH tests are performed where in-line ORP meters are used. The date and the mV level must be recorded in the required pool or spa logs required in this section.
- (i) Storage of test kits and reagents. Test kits and reagents must be stored according to the manufacturer's instructions and protected from extreme heat and cold and from exposure to water, chemicals, petroleum products, or any other element or environment that could adversely affect the efficacy of water quality test results.
- (j) Accuracy of test reagents. Testing reagents must be changed at frequencies recommended by the manufacturer to ensure accuracy of the tests.
- (k) Chemical balance. Water in the pool or spa must be chemically balanced. Testing methods to determine the chemical balance of the water in the pool or spa, such as the Langelier Saturation Index, must be conducted at least once every 10 days while the pool or spa is open. The date of the test and the results of the testing and any adjustments made to the pool or spa to correct water quality must be recorded in the required pool or spa logs required in this section. Logs must be made available upon request. If logs are not kept on-site, logs must be provided to DSHS or local regulatory authority within five business days of the request.
- (I) Water monitoring records of public pools and spas. A record of all pool and spa water chemical testing must be recorded in a pool or spa log, either electronically or manually in a logbook, and must be made available upon request. If logs are not kept on-site, logs must be provided to DSHS or local regulatory authority within five business days of the request. Records shall be maintained for a minimum of three years and must include:
 - (1) if multiple pools or spas on-site, identification of the pool or spa tested;
 - (2) date and time of testing;
- (3) chemical levels as required in Figure: 25 TAC §265.193(c) in accordance with the testing schedule requirements in subsection (o) of this section;
 - (4) mV of ORP meter where applicable; and
 - (5) any action taken to correct chemical readings including addition of sanitizer,

algaecide, or chemical to correct pH and tests to ensure chemical levels return to required levels, closure of the pool or spa, formed stool or diarrhea in a pool or spa and remedial actions taken as a result, or any other significant action taken which impacts pool and spa water quality.

- (m) Skimmers. Skimmers must not be used for dispensing chemicals into the pool or spa.
- (n) Off-season circulation system operation. When an outdoor pool or spa is not in use for an extended period of time (such as off-season), clarity must be maintained. Circulation rates must provide acceptable water clarity as required in this section.
- (o) Testing frequency and record keeping when pools and spas are open for use.
 - (1) When Class A and Class B pools and spas are open for use:
- (A) Tests for disinfectant levels and pH must be made and recorded in pool or spa logs every two hours.
- (B) If a system is used to automatically control disinfectant and pH, tests for disinfectant level and pH must be performed and the results recorded in the pool or spa logs at least three times per day and a reading of the automatic control device must also be made and recorded in the pool or spa logs.
- (C) Where cyanuric acid is used either in stabilized chlorine or used as needed, tests for cyanuric acid levels must be performed once each week and the results recorded in the pool or spa log.
- (2) Class C pools and spas that have on-site staff primarily responsible for pool and spa operations, such as lifeguards, must be tested for disinfectant levels and pH a minimum of three times a day. Results of the testing must be recorded in pool or spa logs.
- (A) If a system is used to automatically control disinfectant and pH, testing for disinfectant level and pH must be performed and the results recorded a minimum of once a day and a reading of the automatic control device must also be made and the results recorded in the pool or spa log.
- (B) Where cyanuric acid is used either in stabilized chlorine or as needed, tests for levels of cyanuric acid must be performed once each week and the results recorded in the pool or spa log.
- (3) Class C pools and spas that do not have on-site staff primarily responsible for pool and spa operations, such as lifeguards, must be tested for disinfectant levels and pH a minimum of one time a day and the results must be recorded in the pool or spa log.
- (A) If a system is used to control disinfectant and pH electronically, and the system has the ability to record and transmit the mV level or free chlorine level and pH to the trained and certified operator once a day, sanitizer level and pH must be

measured once each week using a test kit and recorded in the pool or spa log.

- (B) A reading of the automatic control device must also be recorded at the same time the sanitizer level and pH are measured using the test kit and recorded in the pool or spa log.
- (C) Where cyanuric acid is used either in stabilized chlorine or as needed, tests for levels of cyanuric acid must also be performed once each week and the results recorded in the pool or spa log.
- (4) Other required tests for pools and spas. Tests for alkalinity, calcium hardness, and chemical balance must be performed at least once every 10 days, or more often, if necessary, to maintain required water quality parameters in subsection (c) of this section and water clarity requirements in subsection (e) of this section. Results of the tests must be recorded in the pool or spa log.
- (5) Records of all testing of the pool and spa water must be maintained for at least three years and be available or made available upon request by DSHS or local regulatory authority. If records are stored off-site, they must be provided within five business days.
- (p) Cyanuric acid levels must not exceed 100 ppm. Whenever cyanuric acid levels exceed 100 ppm the following is required.
- (1) Sanitizer level must be raised to 2.0 ppm free available chlorine and maintained at that level until the cyanuric acid level drops to less than 100 ppm.
- (2) Sanitizer level, pH, and cyanuric acid levels must be measured and recorded at least once a day in the pool or spa log until the cyanuric acid level drops below 100 ppm.
- (3) Records of cyanuric acid levels exceeding 100 ppm and actions taken to return those levels to at or below the allowable maximum must be recorded in the pool or spa log.
- (q) Clarifiers, flocculants, and defoamers.
- (1) Clarifiers, flocculants, and defoamers must be used per manufacturer's instructions and must not create a hazardous condition, compromise disinfectant efficacy, or interfere with other water quality measures in Figure: 25 TAC §265.193(c).
- (2) Clarifiers, flocculants, defoamers, and any other chemical used in a pool or spa must be certified, listed, and labeled to either NSF Standard 50 or NSF Standard 60.
- (r) Chemical feed equipment. All chemical feed equipment must be maintained in good working condition at all times.

§265.194. Operation and Management of Pools and Spas.

- (a) Operational standard for all pools and spas. Pools and spas must be required to meet the operational standard that is most applicable to their respective use. For example, a pool or spa that is being operated as a Class C pool or spa but is generally or for specific occasions made available to the public, with or without a fee, must meet Class B operational standards.
- (b) Required operator certification. All Class A, Class B, and Class C pools and spas must be maintained under the supervision and direction of a properly trained and certified operator.
 - (1) The operator is not required to be on-site when the pool or spa is open.
 - (2) The operator may be responsible for multiple pools and spas.
- (3) The trained and certified operator's name and contact information must be made available to on-site staff, such as lifeguards, and to property management companies or property managers, and must be made available at the request of DSHS or a local regulatory authority.
- (c) Operator responsibilities. The trained operator must ensure that the staff is properly trained in day-to-day operations of the pool and spa circulation system, as defined in the International Swimming Pool and Spa Code, and that the circulation system is being maintained in good operating condition in accordance with manufacturer's instructions.
- (d) Operator training and certification. Operator training and certification can be obtained by completion of one of the following courses or the equivalent:
 - (1) the NRPA, "Aquatic Facility Operator;"
 - (2) the PHTA, "Certified Pool Operator;"
 - (3) the ASPSA, "Licensed Aquatic Facility Technician;" or
- (4) an equivalent course which requires testing and provides certification and that is approved by the local regulatory authority.
- (e) Documentation required for pools and spas.
- (1) Documentation for all pool and spa suction outlets confirming compliance with ANSI/APSP-16 or any successor standard, whether the suction outlet is manufactured or field fabricated, must be kept on-site at all times the pool or spa is open for use or must be made available within five business days upon request by a regulatory official.
- (2) Documentation of compliance with ASME/ANSI A112.19.17, ASTM F 2387, or any successor United States Consumer Product Safety Commission approved standard for manufactured pool and spa Safety Vacuum Release Systems and Automatic pump shut-off systems must be kept on-site at all times the pool or spa is open for use or must be made available within five business days upon request by a regulatory official.

- (f) Proper use and protection from chemicals in pools and spas. Personnel in charge of maintaining a pool or spa, whether it is the trained and certified operator or someone assigned to maintain a pool or spa when the trained and certified operator is not on-site, must be properly trained in accordance with §265.193 of this subchapter (relating to Water Quality at Pools and Spas).
- (1) The use of chemicals at pools and spas must be according to the chemical manufacturer's directions.
- (2) No chemical may be used in a way that violates the manufacturer's instructions for the chemical feed system or NSF 50 certification of that chemical feed system.
- (g) Pool and spa equipment access. Pool and spa circulation equipment, mechanical spaces, and chemical storage spaces, whether indoors or out-of-doors, must be inaccessible to pool and spa users or other unauthorized persons. A warning sign against unauthorized entry must be posted on the entry door or gate to the pool and spa equipment room, building, or area.
- (h) Water clarity standards for pools and spas. When the pool or spa is open and available for use the water must be of sufficient clarity that the bottom of the pool or spa is clearly visible while the water is static. Visual occlusion by sediment or other matter must be checked before opening and periodically, as necessary, while the pool or spa is in use. The pool or spa must be open for use only if the bottom and the submerged suction outlets, when present, are clearly visible.
- (i) Off-season water quality. When an outdoor pool or spa is not in use for an extended period of time, such as off-season, clarity must be maintained, and algae growth must be prevented; however, other water quality parameters as required in §265.193 of this subchapter do not need to be maintained. Other methods may be used to maintain pools and spas during extended periods of non-use if approved by local regulatory officials in writing and water clarity is maintained.
- (j) Pool and spa closure. When a pool or spa is not in use, such as after seasonal operation, while under construction, renovation, or for any reason, entry to the pool yard or spa yard by users or other unauthorized persons must not be allowed. A sign must be posted on the entry gates indicating the pool and spa are closed. The pool and spa and facility, when closed, must not give off objectionable odors, become a breeding site for insects, or create any other nuisance conditions or hazards.
- (k) Domestic animals prohibited at pools and spas. Domestic animals and other pets must not be allowed within a pool or spa enclosure area or in the pool or spa except as required by 28 CFR §36.302(c) and, if applicable, 24 CFR §100.204. Animals permitted under 28 CFR §36.302(c) and 24 CFR §100.204 must be allowed on the deck and within the pool and spa yard, but not in the pool or spa.
- (I) Wave pools constructed or renovated on or after the effective date of this subchapter. The wave pools must have a minimum of two emergency shutoff switches capable of immediately stopping wave generation, one on each side of the

wave pool, clearly marked as emergency shutoffs and readily accessible to lifequards.

- (m) Surf pools constructed or renovated on or after the effective date of this subchapter. The surf pools must have a minimum of two emergency shutoff switches capable of immediately stopping wave generation, one on each side of the surf pool, clearly marked as emergency shutoffs and readily accessible to lifequards.
- (n) Actual water level at pools and spas. The actual water level in pools and spas must be maintained within the designed operating water level range of the rim, gutter, or skimmer system. When the water level is below the operating water level range of the pool or spa rim, gutter, or skimmer system, the pool or spa must be closed.
- (o) Use of personal floatation devices (PFD). No person may be prohibited from the use of a USCG-approved PFD in a pool or spa.
- (p) Food and beverages. Food and beverages may be consumed in the pool or spa only if it is privately owned and operated. Consumption of food and beverages in a pool or spa that is not privately owned and operated is prohibited.
- (q) Glass containers prohibited. Food and beverages in the pool or spa or in the pool yard or spa yard must be in non-breakable containers. Glass containers and glass furniture must not be allowed on a deck, in the pool or spa, or anywhere within the pool yard or spa yard.
- (r) Covered trash receptacles required. Covered trash receptacles must be provided where food and beverages are allowed or served.
- (s) Standing water on decks. Decks must not have standing water and deck drains must be cleaned and maintained to prevent water accumulating on a pool or spa deck.
- (t) Slime and biofilm. Slime and biofilm layers must be removed from all accessible pool and spa surfaces including steps and ladders, sidewall tile, depth markers, and from all aquatic features such as slides, climbing walls, and diving boards.

§265.195. Additional Requirements for Aquatic Activity Devices and Specific Pools.

- (a) Slide flumes. Slide flumes constructed on or after the effective date of this subchapter must be easily cleanable, have proper drainage in all valleys and dips, and have safety measures that ensure a rider cannot fall or be ejected from the flume.
- (b) Wave pools.
- (1) Wave pools must be fitted with a rope and float line located to restrict access to the caisson wall if required by the wave pool equipment manufacturer. Safety rope and float lines typically required at the shallow to deep water transition do not

apply to wave pools.

- (2) A minimum of two emergency shutoff switches to disable the wave action must be provided, one on each side of the wave pool.
- (3) Caisson barriers must have no openings that would allow passage of a 4-inch sphere and must be provided for all wave pools. Wave pools using forced air to generate waves must not be required to have caisson barriers unless recommended by the manufacturer.
- (4) Safety rope and float lines required at the shallow to deep water transition do not apply to surf pools.
- (c) Leisure rivers. Leisure rivers constructed on or after the effective date of this subchapter must comply with the following:
- (1) Obstructions such as landscaping, walls, or bridges are allowed provided they do not impact lifeguarding, sight lines, or rescue operations.
- (2) Depth markers at leisure rivers are required on the sidewalls on both sides of all entry and exits, but if the depth is consistent, they are not required in the landscape, where there is no deck, or on the sidewalls in the main channel of the leisure river.
- (d) Movable floor pools.
- (1) The use of starting platforms in the area of a movable floor is prohibited when the water depth is shallower than 5 feet.
- (2) Use of the moveable floor portion of the pool must not be open to users when the floor is being raised or lowered.
- (3) Pools or spas with movable floors must have a sign indicating movable floor and varied water depth. The posted water depth must be the water level to the floor of the pool or spa measured vertically 3 feet from the wall of the pool or spa.
- (4) A sign must be posted to inform the user that the pool or spa has a varied depth and refer to the sign showing the current depth.
- (e) Surf pools.
- (1) Surf pools must be fitted with a float line located to restrict access to the caisson wall if required by the surf pool equipment manufacturer.
- (2) Wave caisson barriers must be provided for all surf pools and may not have an opening that would allow passage of a 4-inch sphere. Surf pools using forced air to generate waves may not have caisson barriers unless recommended by the manufacturer.
- (3) Safety rope and float lines required at the shallow to deep water transition do not apply to surf pools.

- (4) In addition to the requirements for lifeguards in §265.191 of this subchapter (relating to Lifeguard Personnel Requirements and Standards at Pools), lifeguards must be provided with any equipment necessary to reach the deepest area of the surf pool during an emergency. The equipment must be accessible to all lifeguards, clearly labeled "For Lifeguard Use Only," and be available when the surf pool is open and used for surfing.
 - (5) No surfer may enter the surf pool unless:
 - (A) tethered to the surfboard;
 - (B) wearing a USCG-approved PFD; or
- (C) a lifeguard is in the surf pool in the surfing area directly supervising surfing activity.
- (6) Non-surfing users may not be allowed to enter the wave areas of the surf pool over 5 feet of depth while waves are being generated unless they are wearing a USCG-approved PFD.
- (f) Islands in Pools and Spas Constructed on or After the Effective Date of This Subchapter.
- (1) An island not designed or intended for walking on by pool or spa users must have signs stating "No Entry" in letters a minimum of 2 inches in height.
- (2) An island must have a demarcation tile line on the perimeter of the island that is a minimum of 4 inches in height and must be positioned in the top 4-1/2 inches of the island wall just under the coping.

§265.196. Request for Alternate Method of Disinfectant.

- (a) Application. Pursuant to Texas Health and Safety Code, §341.064(b-1), an owner or operator may apply to use an alternate method of disinfectant.
- (b) Submission. A completed application for use of an alternate method of disinfectant must be submitted to DSHS's Consumer Protection Division at least 180 days before the opening of the pool or spa. The application must include:
 - (1) the type and level of primary disinfectant;
- (2) the type and level, where applicable, of any supplemental method of water treatment;
- (3) the method and equipment used for storing, delivering, and measuring primary disinfectant levels and supplemental water treatment levels;
- (4) data supporting the effectiveness of the primary disinfectant and supplemental method of water treatment in maintaining required water quality;
- (5) descriptions of any specialized equipment, application methods, or other water treatment methods that may differ from the requirements in §265.193 of this

subchapter (relating to Water Quality at Pools and Spas);

- (6) a proposed testing schedule for determining levels of biological and chemical levels as specified by DSHS to ensure the health and safety of the public;
- (7) a detailed drawing or map of the pool that indicates swimming areas and non-swimming areas; and
 - (8) any additional information DSHS requires to make its decision.
- (c) Decision. DSHS approves or rejects a request to use an alternate method of disinfectant no later than 90 days after the completed application is submitted.
- (d) Additional information. If DSHS requires additional information to make its decision, the application is not considered complete for purposes of subsections (b) and (c) of this section until DSHS receives the additional information as requested.

§265.197. Compliance, Inspections, and Investigations.

- (a) DSHS or the local regulatory authority has the right to enter at all reasonable times any area or environment, including a building, storage, equipment room, bathhouse, or office to inspect and investigate for compliance with this subchapter, to review records, to question any person, or to locate, identify, and assess the condition of the pool or spa.
- (b) Advance notice or permission for entry is not required.
- (c) DSHS or the local regulatory authority must not be impeded or refused entry during its official duties by reason of any company policy.
- (d) It is a violation of this subchapter for a person to interfere with, deny, or delay an inspection or investigation conducted by DSHS or a local regulatory authority.

§265.198. Enforcement.

- (a) If a person violates Texas Health and Safety Code, §341.064 or §341.0645 or this subchapter, DSHS or the local regulatory authority may, in accordance with Texas Health and Safety Code, §341.092, institute a civil suit in district court for the assessment of civil penalties, injunctive relief, or both.
- (b) A person who violates Texas Health Safety Code, §341.064 or §341.0645, or this subchapter may also be subject to a criminal penalty under Texas Health and Safety Code, §341.091.
- (c) If a pool or spa closes, either voluntarily or by court order, public access to the pool or spa must be restricted and a notice posted on the entry gates or doors.

Figure: 25 TAC §265.190(e)(5)

Required Pool Sign or Signs	Letter and Symbol Size
"WARNING-NO LIFEGUARD ON DUTY" (Where no lifeguard is required or provided.)	4-inches
"NO DIVING" and International No Diving Symbol (Where no lifeguard is required or provided.)	4-inches
"IN CASE OF EMERGENCY, DIAL 911"	4-inches
Precise Location of the Pool on or with the Emergency Phone (address, directions, GPS location, or building number, as appropriate)	Minimum 1-inch
Hours of Operation	Minimum 1-inch
Directions to and Location of Emergency Phone if Phone Not Visible in Pool Yard	Minimum 2-inches
Maximum User Load Limit	Minimum 2-inches
"PETS IN THE POOL ARE PROHIBITED"	Minimum 2-inches
"DO NOT SWIM IF YOU HAVE BEEN ILL WITH DIARRHEA WITHIN THE PAST 2 WEEKS"	Minimum 2-inches
"CHANGING DIAPERS WITHIN 6 FEET OF THE POOL IS PROHIBITED"	Minimum 2-inches
"GLASS ITEMS NOT ALLOWED IN THE POOL YARD"	Minimum 2-inches
"PERSONS UNDER THE AGE OF 14 MUST NOT BE IN THE POOL WITHOUT ADULT SUPERVISION" (Where no lifeguard is required or provided.)	Minimum 2-inches
"EXTENDED BREATH HOLDING ACTIVITIES ARE DANGEROUS AND PROHIBITED"	Minimum 2-inches

Figure: 25 TAC §265.190(g)(1)

D : 10 6'	Letter and Symbol
Required Spa Signs	Size
"WARNING – NO LIFEGUARD ON DUTY" (Where no lifeguard is provided or required.)	4-inches
"DO NOT USE THE SPA IF THE WATER TEMPERATURE IS ABOVE 104 DEGREES FAHRENHEIT"	Minimum 1-inch
Maximum User Load	Minimum 1-inch
Location of the nearest emergency phone or device	Minimum 2-inches
EMERGENCY SPA SHUTOFF	Minimum 2-inches
"DO NOT SWIM IF YOU HAVE BEEN ILL WITH DIARRHEA WITHIN THE PAST 2 WEEKS"	Minimum 2-inches
"PERSONS UNDER THE AGE OF 14 MUST NOT BE IN THE SPA WITHOUT ADULT SUPERVISION" (Where no lifeguard is required or provided.)	Minimum 2-inches
"PETS IN THE SPA ARE PROHIBITED"	Minimum 2-inches

Figure: 25 TAC §265.193(c)

Required Chemical Levels

Disinfectant Level	Minimum	Ideal	Maximum
Pool Free Available Chlorine	1.0 ppm	2.0 – 3.0 ppm	8.0 ppm
Spa Free Available Chlorine	2.0 ppm	3.0 ppm	8.0 ppm
Pool Bromine	3.0 ppm	4.0 - 6.0 ppm	10.0 ppm
Spa Bromine	4.0 ppm	5.0 ppm	10.0 ppm
Combined Chlorine	None	None	0.4 ppm
рН	Not less than 7.0	7.2 – 7.6	7.8
Cyanuric Acid	None	30 – 50 ppm	100 ppm
ORP	600 mV	650 – 750 mV	900 mV
Alkalinity	60 ppm	60 ppm – 180 ppm	>180 ppm
Calcium Hardness in Pools	150 ppm	>150 – 400 ppm	1000 ppm
Calcium Hardness in Spas	100 ppm	150 – 400 ppm	800 ppm