Rules and Regulations Governing Public Swimming Pools, Spas, and Recreational Water Parks

GNR PUBLIC HEALTH

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1 Definitions

The following definitions shall apply in the interpretation and enforcement of these Regulations.

(1) “Abandoned Pool” means a public pool that has not been permitted or not in operation for at least four calendar years.

(2) "Alkalinity" means the amount of bicarbonate, carbonate or hydroxide compounds present in water solution.

(3) “Aquatic Feature” means an individual component within a public pool. Examples include slides, structures designed to be climbed or walked across by bathers, and structures that create falling or shooting water.

(4) "Barrier" means a fence, wall, building wall or a combination thereof, which completely surrounds or covers the swimming pool or spa and obstructs access to the swimming pool, spa or recreational water park.

(5) "Bather" means any person who uses a swimming pool, spa, or recreational water park, or adjoining deck areas for the purpose of water sports, recreation, therapy, or related activities.

(6) "Brominator" means a device to apply or to deliver a bromine disinfectant to water at a controlled rate.

(7) "Chemical Feeder" means a mechanical device for applying chemicals to pool or spa water.

(8) "Chloramine" means a compound formed when chlorine combines with nitrogen or ammonia that causes eye and skin irritation and has a strong, objectionable odor.

(9) "Chlorinator" means a device to apply or to deliver a chlorine disinfectant to water at a controlled rate.

(10) "Chlorine Generator" means equipment that generates chlorine, hypochlorous acid or hypochlorite on site for disinfection and oxidation of water contaminants. Pools with this equipment are commonly referred to as *Salt Water Pools*.

(11) "Circulation Equipment" means the mechanical components that are part of a circulation system in a pool or spa. Circulation equipment includes, but is not limited to, pumps, hair and lint strainers, filters, valves, gauges, meters, heaters, surface skimmers, inlet/outlet fittings, and chemical feeding devices. These components may have separate functions, but when connected to each other by piping, perform as a coordinated system for purposes of maintaining pool and spa water in a clear, sanitary and desirable condition.

(12) "Circulation System" means an arrangement of mechanical equipment or components, connected by piping to a pool or spa in a closed circuit. The function of a circulation system is to direct water from the pool or spa, causing it to flow through the various system components for purposes of clarifying, heating, purifying and returning the water back to the original body of water.

(13) "Clarifier" means a chemical that coagulates and neutralizes suspended particles in water, such as inorganic salts of aluminum or iron and water-soluble organic polyelectrolyte polymers. Clarifier may also be called coagulant or flocculent.

(14) "Contact Concentration" means the concentration of a chemical in a flow of water. This concentration depends on the rate of addition, the flow rate of the water and the efficiency of the mixing. It is calculated using the equation (assumes complete mixing): Amount of Chemical (gpm)/Water Flow Rate (gpm) x 4.41 = Contact Concentration (mg/L).

(15) “Combined chlorine” means the reaction of free chlorine with ammonia and nitrogen compounds to form chloramines.

(16) "Coping" means the cap on the pool or spa wall that provides a finishing edge around the pool or spa, whether formed, cast in place, pre-cast concrete, or pre-fabricated from metal or plastic materials.

(17) "Country Club" means a location with facilities for outdoor sports and social activities for which members pay a membership fee other than a daily fee, periodically for the use of facilities and services by them and their guests. Fraternal organizations may be included in this definition.

(18) "Cove" means the radius between the pool or spa wall and the pool or spa floor.

(19) "CT Value" means a representation of the concentration of the disinfectant (C) multiplied by time in minutes (T) needed for inactivation of a particular contaminant.

(20) "Cyanuric Acid" means a chemical that helps reduce the excess loss of chlorine in water due to the ultraviolet rays of the sun. It is also called stabilizer, isocyanuric acid, conditioner or triazinetrione.

(21) "Decks" means those areas immediately adjacent to or attached to a pool or spa that are intended for bathers to sit, stand, or walk upon. It connects the pool to adjacent amenities, entrances, and exits.

(22) "Deep Areas" means water depths in excess of five feet.

(23) "Disinfectant" means an agent used to kill undesirable or pathogenic (disease-causing) organisms that have a measurable residual at a level adequate to make the desired kill.

(24) "Dwelling" means a private residence.

(25) "Effective Filter Area" means total surface area through which the designed flow rate will be maintained during filtration.

(26) "Effluent" means the water that flows out of a filter, pump or other device.

(27) “Equipment Room” means a space intended for the operation of pool pumps, filters, heaters and controllers.

(28) "Filter" means a device that removes undissolved particles from water by recirculating the water through a porous substance (a filter medium or element).

(29) "Free Available Chlorine (FAC)" means the portion of the total available chlorine that is not “combined chlorine” and is present as hypochlorous acid (HOCl) or hypochlorite ion (OCl-) and will react chemically with undesirable or pathogenic organisms.

(30) “Flume” means the riding channels of a waterslide which accommodate riders using or not using mats, tubes, rafts, and other transport vehicles as they slide along a path lubricated by a water flow.

(31) "Handhold/Handrail" means a device that can be gripped by a user for the purpose of resting or steadying him/herself. It is not limited to but may be located inside or outside the pool or spa or as part of a set of steps or deck-installed equipment.

(32) "Hardness" means the amount of calcium and magnesium dissolved in water; measured by a test kit and expressed as parts per million (ppm) of equivalent calcium carbonate.

(33) "Health Authority" means the County Board of Health.

(34) “Hot Water” means a water temperature over 90°F (32°C).

(35) "Hydrotherapy Spa or Spa” means a unit that may have a therapeutic use but which is not drained, cleaned, or refilled for each individual. It may include, but not be limited to, hydrotherapy jet circulation, hot water/cold water mineral baths, air induction bubbles or any combination thereof. Industry terminology for a spa includes, but is not limited to, "therapeutic pool," "hydrotherapy pool," "whirlpool," and "hot spa."

(36) “Imminent Health Hazard” means a product, practice, circumstance, event or condition that requires immediate correction or cessation of operation in order to prevent a significant threat of danger or death, injury or illness.

(37) “Increased Risk Public Pool” means a public pool which, due to its intrinsic characteristics and intended users, has a greater likelihood of microbial contamination. An increased-risk public pool includes spray pads, wading pools, and other pools designed exclusively for children less than five years old.

(38) “Lifeguard” means an individual who has successfully completed a recognized lifeguard training course, holds a current certificate for such training, has met the pre-service requirements, and is participating in continuing in-service training requirements of the facility.

(39) “Main Drain Suction Outlet” means any suction outlet that supplies water to a circulation system and/or an aquatic water feature such as, but not limited to, lazy river, water cannons, mushroom, or water slide.

(40) “Modification” means changes or repairs to equipment, interior finishes, or fixtures on a public swimming pool.

(41) “Monitoring” means the regular and purposeful observation and checking of systems or facilities and recording of data, including system alerts, excursions from acceptable ranges, and other facility issues. Monitoring includes human or electronic means.

(42) "Non-swimming Area" means any portion of a pool where water depth, offset ledges, or similar irregularities prevents normal swimming activities.

(43) "Organic Matter" means perspiration, urine, saliva, suntan oil, cosmetics, lotions, dead skin, and similar debris introduced to water by users and the environment.

(44) "Overflow System" means a system for the removal of pool/spa surface water through the use of overflows, surface skimmers and surface water collection systems of various design and manufacture.

(45) “Patron” means a bather or other person or occupant at a public pool who may or may not have contact with water either through partial or total immersion. Patrons may not have contact with the water, but who might still be exposed to potential contamination from the facility’s air, surfaces, or aerosols.

(46) “Peninsula / Wing Wall” means a structural projection into a pool intended to provide partial separation within the body of water.

(47) "pH" means the negative log of the concentration of hydrogen ions. As pH is raised, more ionization occurs and chlorine disinfectants decrease in effectiveness.

(48) "Pool" means any artificial water holding structure with a closed-loop circulation of water through a water treatment system with a return to the structure.

(49) "Private Pool" means any constructed pool, permanent or non-portable, that serves a single-family dwelling and is used only by the residents of that dwelling and their guests.

(50) “Public Swimming Pool" means any structure, chamber, or tank containing an artificial body of water shared and used by the public for swimming, diving, wading, recreation or therapy, together with buildings, appurtenances and equipment used in connection with the body of water, regardless of whether a fee is charged for its use. The term includes county, municipal, school, hotel, or motel pools, and any pool to which access is granted in exchange for payment of a daily fee. The term shall also include, and not be limited to, pools and spas operated by, or serving, camps, churches, day care centers, group home facilities of twelve or more clients, institutions, parks, state agencies, condominiums, mobile home parks,

recreational vehicle parks, associations, health clubs, special purpose pools, recreational water parks, apartments and homeowner's associations.

(51) "Special Purpose Pools" means any pool operated for recreational play and other special purposes, including, but not limited to, wave or surf action pools, activity pools, interactive water activity pools, wading pools, and activity pools. These include, but are not limited to the following types:

(a) Activity Pools. A pool designed for casual water play ranging from simple splashing activity to the use of attractions placed in the pool for recreation. This includes, but is not limited to slides, flumes, lilypad walks, log rolls, cable, rope, boom drops, and any other falling entry features. These pools allow for the bather to drop into the pool area from a height of six inches to four feet above the water surface and in various positions of entry.

(b) Diving Pool. A pool used exclusively for diving.

(c) Dual Use Pool. A pool that is normally used as a swimming pool, but which has no more than one water slide or one other feature other than diving boards which uses the main body of water as its landing or activity area.

(d) Exercise Spa. 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 but not limited to, biking and treadmills. Spas can include peripheral jetted seats intended for water therapy, heater, circulation and filtration system, which must be separate and distinct from the spa and must have separate controls.

(e) Interactive Water Play Pool (Spray pad). A pad which contains various fountains, interactive water sprays, or waterfall features. The pad slopes to one or more drains

which empty into a reservoir which is recirculated and disinfected before its return to the water features. These pools are also known as splash pads, spray pads, wet decks. For the purposes of these Regulations, only those designed to recirculate water and intended for public use and recreation shall be regulated.

(f) Landing Pool. A pool located at the exit of one or more waterslide flumes. The body of water is intended and designed to receive a bather emerging from the flume for the purpose of terminating the slide action and providing a means of exit to a deck or walkway area.

(g) Leisure River. A riding water course where ingress and egress is effectively limited to designated points of entry and exit. This pool may also be known as a lazy river.

(h) Sensory Deprivation Chamber (float tank). A chamber that provides a light and sound free environment, contains a saturated solution of sodium chloride or magnesium sulfate having a specific gravity of 1.27 to 1.3, and is maintained at a temperature of approximately 93.5°F (34.1°C).

(i) Wading Pool. A shallow pool with a depth of 18 inches or less, and which has no water activity features.

(j) Wading Interactive Pool. A pool with a depth of 18 inches or less and which has any number of water features within the pool area.

(k) Wave Pool. A large body of water that has a mechanism for generating an oscillating wave-form at one end and ending at the other end with a zero-depth-entry.

(l) "Zero Depth Entry Pool" means a pool in any classification that has a sloping edge or beach at one end in place of a wall.

(52) "Therapeutic Pool" means a pool used in physical programs operated by medical facilities licensed by the Department of Community Health or operated by a licensed physical therapist.

(53) "Potable Water" means any water, such as an approved domestic water supply, which is microbiologically safe and otherwise suitable for drinking.

(54) "Precipitate" means a solid material which is forced out of a solution by some chemical reaction and which may settle out or remain as a haze in suspension (turbidity).

(55) "Recreational Water Park" means a facility or area which incorporates one or more special purpose pools, together with associated buildings, appurtenances, and equipment designated for public bathing or swimming.

(56)"Removable" means something that can be disassembled with the use of simple tools such as a screwdriver, pliers or wrench.

(57) "Remodeling" means the activity of restoring all or part of the physical structure of a pool or spa into good condition. This includes the rebuilding or replacing of worn and broken parts or components that require disturbing segments of the piping system, decking, or watertight shell structure.

(58) "Responsible Person" means an individual that is responsible for daily water monitoring operations when a "trained operator" is not on-site or making visits to the public swimming pool daily.

(59)"Return Inlet" means the opening or fitting through which the water under positive pressure returns into a pool or spa.

(60) "Return Piping" means that piping through which water is returned to the pool.

(61) "Rinse Shower" means a shower typically located on the deck area and supplied with ambient temperature water. The main purpose is to remove dirt, sand, or organic material

prior to entering the water to reduce the introduction of contaminants and the formation of disinfection by-products.

(62) "Shallow Area" means portions of a pool or spa with water depths five feet or less.

(63) “Sanitize” means reducing the level of microbes to that level considered safe by public health standards. This may be achieved through a variety of chemical or physical means including chemical treatment, physical cleaning, or drying.

(64) "Slip Resistant" means a surface that has been treated or constructed so as to significantly reduce the chance of a patron slipping. The surface shall not be an abrasion hazard. All surfaces required to be slip-resistant shall have a minimum dynamic coefficient of friction at least equal to the requirements of ANSI A137.1-2012 or successor standard for that installation as measured by the DCOF AcuTest or broom swept concrete/cement.

(65) **“**Special Use Pool” means a pool that does not meet the operational and design characteristics of any public swimming pool class or type identified elsewhere in these Regulations. A special use pool may be considered through an application for a variance.

(66) "Suction Outlet" means the opening or fitting through which the water under negative pressure is drawn from the pool or spa.

(67) "Suction Piping" means that piping through which water is removed from the pool.

(68) "Surface Skimming System" means perimeter-type overflows, surface skimmers and surface water collection systems of various design and manufacture which permit the continuous removal of floating debris and surface water to the filter.

(69) “Supplemental Disinfection Systems” means those disinfection processes or systems installed in addition to the primary system required on all increased risk public pools.

(70) "Test Kit" means a device used to monitor specific chemical or agent residual or demands in pool or spa water.

(71) "Time Clock" means a mechanical device that automatically controls the periods that a pump, filter, chlorinator, heater, blower and other electrical devices are running.

(72) "Trained Operator" means an individual responsible for the operation and maintenance of the public pool water and the associated infrastructure of the facility that has successfully completed a Health Authority approved operator training course.

(73) "Turnover Rate" means the period of time (usually in hours) required to circulate a volume of water equal to the pool or spa capacity.

(74)"Unblockable" means a main drain suction outlet and the corresponding sump which are large enough to meet the VGB and/or APSP/ANSI standard to be considered reasonably unblockable by a person's body.

(75) "Underwater Seat Bench" means a submerged seat.

(76)"Vacuum" means the reduction of atmospheric pressure within a pipe, tank, pump or other vessel. Vacuum is measured in inches of mercury. One inch (1") of mercury is equivalent to one and thirteen hundredths feet (1.13') of head. The practical maximum vacuum is thirty inches (30") of mercury or thirty three and nine tenths feet (33.9') of head.

(77) "Waterline". The waterline shall be defined in one of the following ways:

(a) Skimmer System. The waterline shall be at the midpoint of the operating range of the skimmers when there are no bathers in the pool or spa.

(b) Overflow System. The waterline shall be at the top of the overflow rim.

(78) "Water slide" means a slide that runs into a landing pool or runout through a fabricated channel with flowing water.

(79) "Water Quality Testing Device" means a product designed to measure the level of a parameter in water. A WQTD includes a device or method to provide a visual indication of a parameter level, and may include one or more reagents and accessory items.

2 Scope

(1) These rules prescribe minimum design, construction, and operation requirements for the protection of public health and public safety in swimming pools, spas, and recreational water parks.

(2) These rules are intended to cover certain aspects of the design, equipment, operation, permanent installation, new construction and remodeling of swimming pools, spas and recreational water parks. Where adequate standards do not exist and these rules do not provide sufficient guidance for consideration of innovations in design, construction and operation of proposed pools, spas or recreational water parks, the Health Authority will establish requirements necessary to protect the health and safety of the pool patrons.

(3) These rules shall not apply to private swimming pool and hot tubs or spas serving a single-family dwelling and used only by the residents of that dwelling and their guests, therapeutic pools operated by a licensed medical facility or a licensed physical therapist, therapeutic chambers which are drained, cleaned, and refilled after each individual use, or religious ritual baths used solely for religious purposes.

(4) All single, dual, or multiple drain covers and grates shall comply with ANSI/APSP-16 or any successor standard that may be prescribed by ANSI/APSP including having water flow rates that do not exceed the manufacturer's specifications sheet maximum and sump installations that meet manufacturer instructions.

3 Permits

(1) General Provisions.

(a) It shall be unlawful for any person to operate a public pool, spa, or recreational water park without having first obtained a valid operating permit from the Health

Authority pursuant to these Regulations. Each pool must operate under a separate permit.

(b) It shall be unlawful for any person to build, alter, or remodel a public pool, spa, or recreational water park without first having obtained a valid construction approval from the Health Authority pursuant to these Regulations.

(c) Prior to the issuance of any permit under these rules, the applicant shall provide evidence of satisfactory compliance with the provisions of these Regulations. (d) All permit applications shall be prepared on forms provided by the Health Authority.

(e) Each applicant / permit holder shall pay fees in the amounts established by action of the County Board of Health. Failure to submit fees by the due date may result in permit suspension and administrative closure of the pool.

(f) Permits remain the property of the County Board of Health and are non-transferrable between individuals or organizations. A change of ownership invalidates the permit.

(2) Construction Approvals.

(a) One complete sets of scaled construction plans, along with a completed application, hydraulics worksheet, and applicable fees, must be submitted to the local Health Authority for approval when a public swimming pool, spa, or recreational water park attraction is to be constructed, modified, or remodeled, or when an existing or abandoned structure is to be converted for use as a public pool, spa, or recreational water park attraction. The plans shall be submitted and approved prior to beginning construction and shall indicate, at a minimum, the proposed layout, the mechanical plans, the piping plans, the construction materials, a cross section view, and the type and model of proposed equipment. The Health Authority can waive the

requirement for scaled plans and/or the hydraulics worksheet based on the scope of the proposed modification or remodel.

(b) When scaled plans are required, all plans shall bear the stamp of a professional engineer or registered architect.

(c) One approved set of the construction plans shall remain at the construction site at all times during construction, and all contractors must have access to the plans.

(d) Complete specifications for the project shall accompany the plans, including manufacturer's cut sheets and specifications on all equipment.

(e) Any additional data required by the Health Authority for purpose of clarification, anticipated use, or to support any changes in design or scope of the project, must be submitted before issuance of a construction approval.

(f) The swimming pool, spa, or recreational water park shall be built in compliance with the plans as approved unless written approval of changes has been given by the Health Authority.

(g) A construction approval is valid for twelve months from the date of issue. If the project has not been completed within that time, then the owner must reapply and pay any applicable fees.

(h) The owner or its agent shall notify the Health Authority at specific, predetermined stages of construction and at the time of completion of the pool to allow inspections.

(3) Operating Permit.

(a) The permit shall be prominently displayed at all times, as close to the main entrance as practicable or as determined by the Health Authority.

(b) An operating permit shall not be valid for more than twelve months.

(c) An operating permit on an existing pool or spa will not be issued to a facility if any imminent health hazard as defined in these Regulations is found during the permitting inspection, or if any outstanding fees are due.

(d) An operating permit will not be issued to a newly constructed pool or spa if any violations are present.

4 Structural Design

(1) Pools shall be constructed of reinforced concrete or impervious and structurally sound materials, which provide a smooth, easily cleaned, watertight structure capable of withstanding the anticipated loads for full and empty conditions. The structural design and materials used shall be in accordance with generally accepted structural engineering practices.

(2) Pool shell construction material may also include fiberglass, stainless steel and modular panel systems meeting the requirements of this section and any applicable American Society of Testing and Materials standards or state building code.

(3) Sand or earth shall not be permitted as an interior finish in a swimming pool or spa.

(4) Surfaces within the pool or spa intended to provide footing for users shall be designed to provide a slip-resistant surface that is rigid and resistant to puncture and tear.

(5) Polyvinyl chloride (PVC) membrane systems may be used as an interior finish of a public pool if the supporting watertight pool shell to which the system is attached meets the structure requirements of these Regulations. If the structure complies with these regulations, the contractor may permanently attach an approved PVC membrane or panel system to all surfaces within the pool. A PVC membrane shall be a minimum of 55 mils in thickness.

(6) The roughness or irregularity of such surfaces shall not be such as to cause injury or discomfort to the feet during normal use.

(7) The color of the interior shall be white or light pastel and shall not obscure the presence of a bather on the bottom of the pool, or of objects, debris, algae, or surface cracks within the pool.

(8) Swimming pools and spas and their appurtenances shall be a watertight structure with a smooth and easily cleaned surface without cracks or joints, excluding structural joints, or to which a smooth, easily cleaned surface finish is applied or attached. Materials of manufacture for swimming pools and spas shall be capable of fulfilling the design, installation, and intended use requirements in these rules. The materials of manufacture, components and accessories used in public spas shall comply with the following:

(a) Recirculation and Treatment Systems and other Components**.** All recirculation and treatment system equipment and all other components such as filters, recessed automatic surface skimmers, ionizers, ozone generators, disinfection feeders, chlorine generators and sensory deprivation chambers or float pods must be tested and approved using the current NSF Standard 50, Circulation System Components and Related Materials for Swimming Pool, Spas/Hot Tubs.

(b) Material Surfaces**.** All surfaces that come in contact with the user shall be finished so that they do not constitute a cutting, pinching, puncturing or abrasion hazard under casual contact and intended use. All materials shall be maintained in accordance with manufacturer's instructions.

(c) Ventilation/Mechanical. Ventilation shall be provided for all indoor public swimming pools and pump rooms. All systems shall be sized, installed, and maintained according to all applicable state regulations and local codes.

(d) Roofs or canopies over pools or spas shall be constructed so that water run-off does not drain into the pool or spa water.

5 Dimensional Design

(1) Swimming pools, spas, and recreational water park attractions may be constructed in any shape that is safe and which allows for adequate circulation of the water.

(a) There shall be no protrusions, extensions, or other means of entanglement or obstructions in the swimming area which can cause the entrapment or injury of the bather.

(b) There shall be construction tolerances allowed on all dimensional designs. Overall length, width and depth in the deep end of a swimming pool may vary plus or minus three inches. All other overall dimensions in a swimming pool and in a spa may vary plus or minus two inches, unless otherwise specified.

(2) Walls shall not be more than eleven degrees from plumb for a minimum depth of two feet nine inches from the waterline in deep areas or two feet three inches in the shallow areas. Below these depths the wall may be radiused to join the floor. The finished construction tolerance for the wall slope shall be ±3 percent.

(3) Floor slopes and depths shall comply with the following minimum standards:

(a) All slopes shall be uniform.

(b) The slope of the floor from the shallow end wall towards the deep end shall not exceed one foot in twelve feet to the point of the first slope change.

(c) The point of the first slope change shall be defined as the point at which the floor slope exceeds one foot in twelve feet and shall not occur at a depth of more than five feet.

(d) The slope of the floor from the point of the first slope change to the deep end shall not exceed one foot in three feet. Such slopes may not provide any less water depth than those specified if the pool is intended for diving.

(e) Where pool floors meet pool wall the junction shall be coved.

(f) Water depths at the shallowest end of the swimming area shall be a maximum of three feet six inches except for competitive racing pools.

(4) Starting platforms shall be installed according to manufacturer's instructions and follow these requirements:

(a) Starting platforms shall be installed in a minimum water depth of five feet.

(b) The leading edge of starting platforms shall have a maximum height of 30 inches above the water surface.

(c) Platforms shall have slip resistant tread surfaces.

(d) Starting platforms shall be used by swimmers certified for racing starts and under the direct supervision of a qualified coach or instructor.

(5) Installation and use instructions for manufactured diving equipment shall be provided by the manufacturer and shall specify the minimum water dimensions required for each diving board and diving stand combination. The manufacturer's instructions shall refer to the water envelope type by dimensionally relating their products to Point A on the water envelopes referenced in subsection (b) below. The board manufacturer shall specify which boards fit on the design pool geometry types.

(a) When diving equipment is installed, it shall conform to the specifications set forth in Section 5, Subsection 6 *Minimum Dimensions for Diving Portion of Pools***,** and shall be located in the diving area of the pool so as to provide the minimum dimensions as shown.

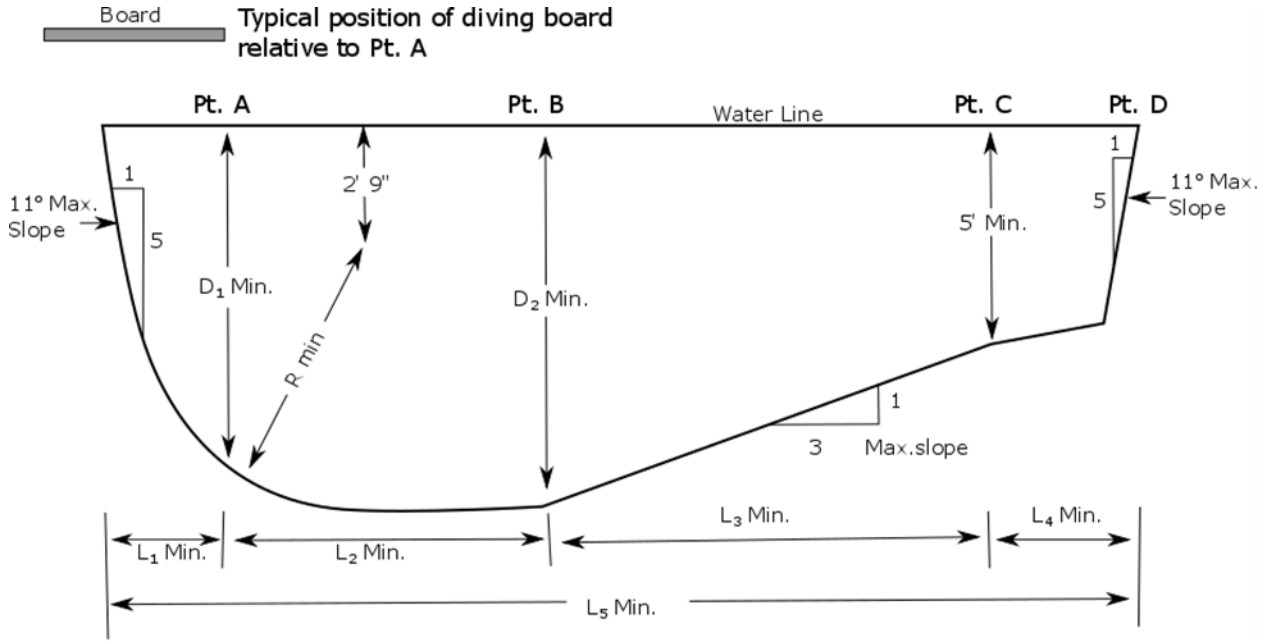
(b) The tip of the diving equipment shall be located at Point A shown in the diagram, which is the reference point of all other dimensions.

(c) There shall be a completely unobstructed clear vertical distance of thirteen feet above any diving board measured from the center of the front end of the board. This area shall extend horizontally at least eight feet behind, eight feet to each side and sixteen feet ahead of Point A shown in the diagram.

(d) Public non-competitive pools with diving facilities in excess of three meters in height, or pools designed for platform diving, shall comply with the dimensional design requirements of the Federation Internationale de Natation Amateur (FINA), U.S. Diving, National Federation of State High School Associations (NFSHSA), or similar authority.

(6) Minimum Dimensions for Diving Portion of Pools.

(a) Diagram showing points where dimensions are measured. Note that the shallow portion of the pool is not shown.



Note: L_4 is a minimum dimension to allow sufficient length opposite the board. This may of course be lengthened to form the shallow portion of the pool.

(b) Minimum dimensions for points given in diagram (a).

RELATED DIVING EQUIPMENT		MINIMUM DIMENSIONS								MINIMUM WIDTH OF POOL AT:		
MAX DIVING BOARD LENGHT	MAX BOARD HEIGHT OVER WATER	D_1	D_2	R	L_1	L_2	L_3	L_4	L_5	PT.A	PT.B	PT.C
10’	26”(2/3meter)	7’-0”	8’-6”	5’-6”	2’-6”	8’-0”	10’-6”	7’-0”	28’-0”	16’-0”	18’-0”	18’-0”
12’	30”(3/4 meter)	7’-6”	9’-0”	6’-0”	3’-0”	9’-0”	12’-0”	4’-0”	28’-0”	18’-0”	20’-0”	20’-0”
16’	1 Meter	8’-6”	10’-0”	7’-0”	4’-0”	10’-0”	15’-0”	2’-0”	31’-0”	20’-0”	22’-0”	22’-0”
16’	3 Meter	11’-0”	12’-0”	8’-6”	6’-0”	10’-6”	21’-0”	0	37’-6”	22’-0”	24’-0”	24’-0”

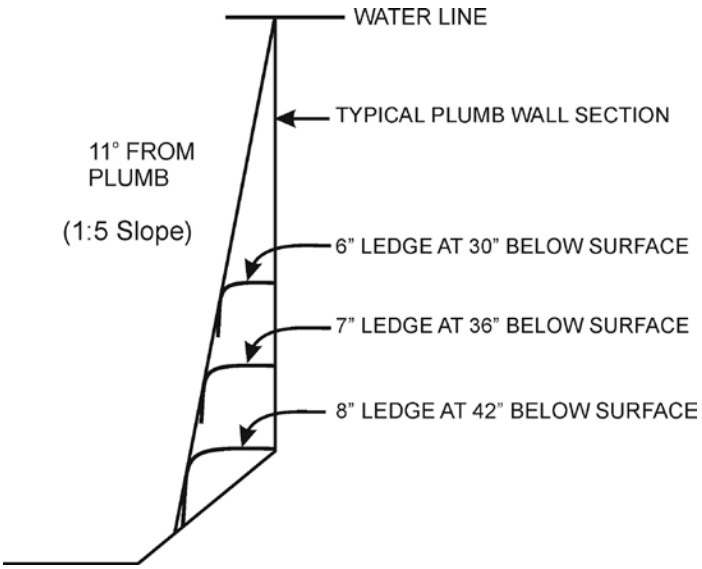
1. L2, L3, and L4 combined, represent the minimum distance from the tip of the board to pool wall opposite diving equipment.

2. Placement of boards shall observe the following minimum dimensions. With multiple board installations, minimum pool widths must be increased accordingly.

- Deck Level Board to Pool Side 8'
- 1 Meter Board to Pool Side 10'
- 3 Meter Board to Pool Side 11'
- 1 Meter or Deck Level Board to 3 Meter Board 10'
- 1 Meter or Deck Level Board to another 1 Meter or Deck Level Board 8’
- 3 Meter to another 3 Meter Board 10'

(7) When provided, offset ledges shall fall within eleven degrees from plumb starting at the junction of the pool wall and waterline and shall have a slip-resistant surface. The outer two

inch edge shall be lined with slip resistant tile in a contrasting color. The maximum width shall be eight inches. The typical allowable dimensions are based on the depths shown below.



(8) Underwater seat benches in pools, if provided, shall have a maximum horizontal seat bench depth of twenty inches below the waterline, be visually set apart by having the outer two inches of each seat lined with a slip-resistant tile in a contrasting color, and shall be located fully outside of the required minimum diving water envelope if the pool is intended for use with diving equipment.

(9) An underwater shelf used as the required entry or exit access shall be located not more than twelve inches below the waterline, the leading two inches of the outer edge shall be visually set apart with contrasting tiles, and the shelf surface area is excluded when determining the occupancy load. An underwater shelf which is adjacent to an area of the pool with a water depth of more than 3 and one-half feet (42 inches) in depth must have a float line attached on the shallow side before the edge of the shelf.

(10) Wading Pool Water Depth.

(a) Wading pools shall have a maximum water depth of eighteen inches. Water depths may be reduced from the above maximums and brought to zero at the most shallow point. The areas where the water depth at the edge of the pool exceeds nine inches shall be considered as non-entry areas.

(b) Walls in wading pools shall be vertical or within 11° of vertical except for the lower six inches which shall be radiused to the floor. Walls shall not extend more than six inches above the waterline at any point.

(c) Floors of wading pools shall be uniform and sloped to drain with a maximum slope of one foot in twelve feet vertical to horizontal.

(11) Water spas shall be provided with a suitable handhold around its perimeter in areas where water depths exceed three feet six inches. Handholds shall be provided no more than four feet apart and may consist of any one or a combination of the following options:

(a) Coping, ledges, radiused flanges or decks along the immediate top edge of the spa shall provide a suitable slip-resistant handhold located not more than twelve inches above the waterline; or

(b) Ladders, steps or seat ledges; or

(c) A secured rope or railing at or not more than twelve inches above the waterline.

(12) The slope of the floor in a spa shall not exceed one foot in twelve feet vertical to horizontal.

6 Decks and Deck Equipment

(1) **Decks**. These requirements shall apply to all decks and deck equipment at the time of construction:

(a) Decks shall be constructed with a uniform and easily cleaned surface such as concrete, tile, manufactured or acrylic surfaces.

(b) Decking shall be flush with the lip of the pool, spa walls, and copings. Decks, ramps, coping and similar step surfaces shall be slip-resistant and easily cleanable.

(c) Special features in or on decks, such as markers or brand insignias, shall conform to these Regulations.

(d) Risers for steps for the deck shall be uniform and have a minimum height of three and three-fourths inches and a maximum height of seven and one-half inches. The minimum tread depth shall be twelve inches.

(e) The deck, including coping, shall have a minimum four feet width of continuous, unobstructed walking area maintained at all times unless otherwise allowed in these Regulations.

(f) A minimum four foot deck width shall be provided on the sides and rear of any diving equipment or waterslide stairs. A deck clearance of forty-eight inches shall be provided around all deck equipment.

(g) The approved decking shall connect all site amenities, entrances, and exits.

(h) A four foot minimum continuous unobstructed deck, which may include the coping, shall be provided around at least 50 percent or more of a spa.

(i) The minimum slope of the decks shall be one-eighth inch per one foot vertical to horizontal.

(j) The maximum voids between adjoining concrete slabs, or between concrete slabs and expansion joint material, shall be three-sixteenths inch of horizontal clearance with a maximum difference in vertical elevation of one-fourth inch.

(k) Open joints or gaps larger than three-sixteenths inch wide or with vertical elevations exceeding 1/4 inches shall be rectified using appropriate fillers.

(l) Joints in decks shall be provided to minimize the potential for cracks due to a change in elevations, separation of surfaces or movement of the slab.

(m) The areas where the decks join concrete work shall be protected by expansion joints to protect the pool adequately from the pressures of relative movements.

(n) Decks shall be edged, have a radius, or be otherwise relieved to eliminate sharp corners.

(o) Decks shall be sloped to effectively drain either to perimeter areas or to deck drains.

(p) Site drainage shall be provided to direct all perimeter deck drainage as well as general site and roof drainage away from the pool(s).

(q) There shall be no direct connection between the deck drains and the sanitary or storm sewer system, or the gutter or skimmer recirculation system.

(r) Wing walls or peninsulas less than eighteen inches in width shall not be considered a part of the deck.

(s) Circulation system piping, other than that integrally included in the manufacture of the pool or spa, shall be subject to an induced static hydraulic pressure test (sealed system) at twenty-five pounds per square inch (psi) for at least fifteen minutes or longer if required by the local code official or Health Authority. This test shall be performed before the deck is poured and the pressure shall be maintained through the deck pour.

(t) The deck area will be kept clean of all trash and debris.

(u) Carpet, wood and artificial turf may not be used on the deck adjoining the pool. Additionally, loose plant material or bedding shall not be permitted on the deck area within four feet of the water surface area.

(2) **Entry/Exit.** All pools, except spas, shall have at least two means of entry/exit located so as to serve both ends of the pool and the deepest portion. These shall consist of ladders, stairs or recessed treads, or a walking entry, and may be used in combination. All treads shall have slip-resistant surfaces. Handicapped accessible entry/exit into the pool shall be designed and provided in accordance with federal, state or local requirements.

(a) Where water depths are twenty-four inches or less at the pool wall, such areas shall be considered as providing their own natural mode for entry/exit.

(b) For pools or water areas over thirty feet in width, each side of the deepest portions of the pool shall have its own entries/exits.

(c) A means of entry/exit shall be provided at a minimum of every seventy-five linear feet of pool wall or fraction thereof.

(d) Stairs, ladders and recessed treads shall be located to not interfere with racing lanes if applicable.

(3) **Pool Stairs.** The design and construction of protruding and recessed pool stairs shall conform to the following:

(a) Step treads shall have a minimum unobstructed horizontal depth of ten inches and a minimum unobstructed surface area of two hundred forty square inches.

(b) Risers at the centerline of the treads shall have a maximum uniform height of twelve inches, with the bottom riser height allowed to vary from the floor to not more than twelve inches.

(c) The vertical distance from the pool coping, deck, or step surface to the uppermost tread shall not be greater than twelve inches.

(d) Where stairs are located in water depths of more than forty-eight inches, the lowest tread shall be not less than forty-eight inches below the deck and the stairs shall not protrude into the pool. The stairs shall be set back into the pool wall.

(e) The outer two inches of each step shall be marked with slip resistant tiles in a contrasting color.

(f) Each set of stairs shall be provided with at least one handrail to serve all treads and risers. Handrails shall conform to the following standards:

1. Handrails, if removable, shall be installed in such a way that they cannot be removed without the use of tools.

2. The leading edge of handrails facilitating stairs and pool entry/exit shall be no more than eighteen inches plus or minus three inches, horizontally from the vertical plane of the bottom riser (where applicable).

3. The outside diameter of handrails shall be between one and one quarter inch and two inches.

(g) Underwater seats or benches may be provided as part of the stairs or recessed treads.

(h) Stairs wider than five feet shall have at least one additional handrail for every twelve feet of stair width or fraction.

(4) **Pool Ladders.** The design and construction of pool ladder(s) shall conform to the following standards:

(a) Pool ladders shall be made entirely of corrosion-resisting materials.

(b) Ladders shall provide two handholds or two handrails.

(c) Below the water level, there shall be a clearance of not less than three inches and not more than six inches between any ladders tread edge, measured from the pool wall side of the tread and the pool wall.

(d) The clear distance between ladder handrails shall be a minimum of seventeen inches and a maximum of twenty-four inches.

(e) There shall be a uniform height between ladder treads, with a seven inch minimum distance and a twelve inch maximum distance.

(f) Ladder treads shall have a minimum horizontal depth of two inches.

(5) **Recessed Treads.** The design and construction of recessed treads in the pool wall shall conform to the following standards:

(a) Recessed treads at the centerline shall have a uniform vertical spacing of twelve inches maximum and seven inches minimum.

(b) The vertical distance between the pool coping edge, deck or step surface and the uppermost recessed tread shall be a maximum of twelve inches.

(c) Recessed treads shall have a minimum depth of five inches and a minimum width of twelve inches.

(d) Recessed treads shall drain into the pool to prevent the accumulation of dirt.

(e) Each set of recessed treads shall be provided with a set of handrails, grabrails, or handholds to serve all treads and risers.

(f) The clear distance between handrails and grab rails shall be between seventeen and twenty-four inches.

(6) **Spa Entry/Exit.** Spas shall have a means of entry/exit at a minimum of every fifty feet or portion thereof, where water depths are more than twenty-four inches.

(a) Section 6, Subsection (6) (c)4. and 5. shall apply to ladders and recessed treads in spas.

(b) Spas shall be equipped with at least one handrail (or ladder equivalent) for each fifty feet of perimeter or portion thereof, to designate the point of entry and exit.

1. Handrails shall be installed in such a way that they cannot be removed without the use of tools.

2. The leading edge of a handrail in the spa shall be no more than eighteen inches plus or minus three inches horizontally from the vertical plane of the bottom riser (where applicable).

3. The outside diameter of handrails shall be between one and one-quarter inch and two inches.

(c) The design and construction of spa steps and seat benches, where used, shall conform to the following standards:

1. Step treads shall have a minimum unobstructed horizontal depth of ten inches for a minimum continuous width of twelve inches. Step treads shall have slip-resistant surfaces.

2. Riser heights shall not be more than twelve inches. Where the bottom read serves as a bench or seat, the bottom riser may be a maximum of fourteen inches above the spa floor.

3. The first and last risers need not be uniform but shall comply with riser height requirements as noted above. The top riser is measured from the finished deck.

4. Intermediate risers, those between the first and last risers, shall be uniform in height.

5. Each set of steps shall be provided with at least one handrail to serve all treads and risers.

6. The outer two inch edge of each step shall be marked with slip resistant tiles in a contrasting color.

(7) **Supports for Diving Equipment.** Stairs and ladders shall be of corrosion-resisting material, easily cleanable and with slip-resistant tread.

(a) All diving stands higher than twenty-one inches as measured from the deck to the top butt end of the board shall be provided with stairs or a ladder. Step treads shall be self-draining.

(b) Platforms and diving equipment of one meter or higher shall be protected with guard rails which shall be at least thirty inches above the diving board and extend to the edge of the pool wall. All platforms or diving equipment higher than one meter shall have guard rails which are at least thirty-six inches above the diving board and extend to the edge of the pool wall.

(8) **Diving Equipment.** Diving equipment shall be designed for swimming pool use and shall be installed in accordance with the manufacturer's recommendations. Diving boards shall be permitted only when the diving envelope conforms to the standards of the certifying agency that regulates competitive diving at the facility or, if designed for noncompetitive diving, shall follow this section.

(a) Diving equipment manufacturers shall provide installation instructions and specifications with each unit.

(b) A label shall be permanently affixed to the diving equipment or jump board and shall include:

1. Manufacturer's name, identification and address;

2. board equipment length;

3. identification as to diving or jump board;

4. fulcrum setting specifications (if applicable);

5. minimum water envelope required for each diving board and diving stand combination;

6. date of manufacture; and

7. maximum weight of the user.

(c) Diving equipment shall have slip-resistant tread surfaces.

(d) Diving equipment shall be permanently anchored to the pool deck. The edge of the board at the tip end shall be level with the water surface. The tip end of the board over the pool water surface may be higher than the butt end of the board.

(e) Maximum board height over the water shall have plus three inches tolerance.

(9) **Pool slides.** Installation and use instructions shall be provided with each unit by the manufacturer.

(10) **Play structures and other equipment.** Play structures and other equipment shall meet all requirements set by appropriate authorities such as building codes, the U.S. Consumer Product Safety Commission, ASTM standards, and amusement ride regulations.

(11) **Bridges**. Bridges must meet the following:

(a) A bridge shall have a minimum forty-two inch high barrier on both sides and a slip resistant walking surface constructed of concrete or a non-absorbent material.

(b) A "no diving and no-jumping" sign shall be placed at both ends of the bridge.

7 Circulation Systems

(1) A circulation system consisting of pumps, piping, return inlets and main drain suction outlets, filters and other necessary equipment shall be provided for complete circulation of water through all parts of the pool.

(a) The equipment for a swimming pool shall be of adequate size to turn over the entire pool water capacity. This system shall be designed to give the proper turnover rate based on the manufacturer's recommended maximum pressure flow of the filter in dirty media condition of the filter, immediately prior to cleaning the filter.

(b) Maximum turnover rates for pools by type listed below:

Type	Turnover Rate
1. Activity Pools	2 hours
2. Dual Use Swimming Pools (swimming pools with a water slide and/ or one other feature with an average depth exceeding 24 inches)	4 hours
3 Diving Pools	8 hours
4. Interactive Water Play Pools/Spray Pads	30 minutes
5. Landing Pools, (Flumes, Slides and All Other Plunge Pools	60 minutes
6.Leisure Rivers	2 hours
7. Spas/Exercise Spas	30 minutes
8. Wading Interactive Pools (maximum depth, 18 inches)	60 minutes
9. Wading Pools (without any interactive equipment)	60 minutes
10. Wave Pools	2 hours
11. All Other Pools	6 hours

(c) Timing devices will be allowed for the purpose of turning down the circulation system during times when a pool is not being used. Timing devices must be set to provide at least one complete turnover immediately prior to the pool reopening.

1. The system flowrate shall not be reduced more than 25% lower than the minimum design flowrate requirement and only reduced when the pool is unoccupied.

2. The system flowrate shall ensure the minimum water clarity required under these Regulations are met before opening to the public.

3. The system shall be required to maintain required disinfectant and pH levels at all times.

(d) For spas, a minute timer that does not exceed 15 minutes shall be connected to the agitation system. The timer shall be located out of reach of a bather in the spa.

(e) Water clarity shall be maintained. When standing at the pool's edge at the deep end, the main drain suction outlet covers shall be clearly visible. When standing at a spa's edge, the deepest portion of the spa floor shall be visible when the water is still.

(f) Circulation system components which require replacement or servicing shall be accessible for inspection, repair or replacement and shall be installed in accordance with the manufacturer's instructions.

(2) **Water Velocity.** The water velocity in the pool or spa discharge piping shall not exceed eight feet per second and for suction piping, shall not exceed six feet per second.

(a) Pool and spa piping shall be sized to permit the rated flows for filtering and cleaning without exceeding the maximum head of the pump.

(b) The pump shall be sized to deliver the required flow rate against the total system head involved.

(3) **Piping and Fittings.** The circulation system piping and fittings shall be nontoxic, shall be considered to be process piping, and shall be of material able to withstand operating pressures and operating conditions.

All piping shall comply with NSF Standard 14 or other applicable standards.

(4) **System Condition.** Gauges shall be provided as follows:

(a) A pressure or vacuum gauge or other means of indicating system condition shall be provided in the circulation system in an easily readable location.

(b) A flow meter measuring the rate of flow through the filter system with an appropriate range readable in gallons per minute (GPM) and accurate within ten percent actual flow shall be provided. The flow indicator shall be capable of measuring from one-half to at least one and one-half times the design flow rate. The gauge shall be located after the filtering equipment and in such location on the return line, so as to measure the total amount of water returning to the pool according to the manufacturer's installation specifications.

(5) **Water Clarity and Chemistry.** The circulation system shall be capable of maintaining water clarity and water chemistry requirements and shall operate twenty-four hours per day, except as otherwise provided in these Regulations.

(6) **Instructions.** Written operation and maintenance instructions shall be provided for the circulation system.

8 Filters

(1) **Design.** Filters shall be designed and maintained so as to provide water clarity.

(a) Filters shall be listed per NSF Standard 50 with the specific maximum flow rates per surface area based on media used.

(b) The following filtration rates for the specific media shall be used in determining the filter area required for the circulation system.

1. High-rate granular media filters shall be designed to operate at no more than fifteen gallons per minute per square foot when a minimum bed depth of fifteen inches is provided per manufacturer. When a bed depth is less than fifteen inches, filters shall be designed to operate at no more than twelve gallons per minute per square foot.

2. The design filtration rate for surface-type cartridge filters shall not exceed three-tenths gallons per minute per square foot. One complete set of spare cartridges shall be maintained on site in a clean and dry condition.

3. The design filtration rate for pre-coat filters shall be based on the following types:

(i) Vacuum pre-coat filters shall not be more than either two gallons per minute per square foot, or two and one half gallons per minute per square foot when used with a continuous pre-coat media feed.

(ii) Pressure pre-coat filters shall not be more than two gallons per minute per square foot of effective filter surface area.

(iii) The filtration surface area shall be based on the outside surface area of the media with the manufacturer's recommended thickness of pre-coat media and consistent with their NSF Standard 50 listing and labeling.

(c) Alternate types of filter media shall be listed and labeled to NSF Standard 50.

(2) **Internal Pressure.**

(a) A sight glass shall be installed on the waste discharge line of pressure filters so that the progress of filter washing can be observed.

(b) All piping shall be marked with directional arrows as necessary to determine flow direction. All piping in the equipment room shall be permanently identified by its use and the pool and or aquatic feature it serves.

9 Pumps and Motors

(1) A pump and motor shall be provided for circulation of the pool and spa water. Performance of all pumps shall meet or exceed the conditions of flow required for filtering and cleaning (if applicable) the filters against the total dynamic head developed by the complete system. Where applicable, pumps shall comply with the NSF International Standard 50 or Underwriters Laboratories (UL) Standard 1081.

(2) With all pressure filter systems, a cleanable strainer or screen shall be provided upstream of the circulation pumps to remove solids and debris such as hair and lint.

(3) Pumps and motors shall be accessible for inspection and service.

(4) Pressure or vacuum gauges shall be installed on all public pools and spas.

(a) The pump vacuum gauge shall be installed as close to the suction side of the pump as possible.

(b) The pressure gauge shall be installed on the piping ahead of the filter or on top of the filter in the area of greatest filter pressure.

10 Return Inlets and Suction Outlets

(1) **Location.** Return inlets shall be installed and arranged to produce a uniform circulation of water and maintain a uniform disinfectant residual throughout the pool or spa. Where skimmers are used, the return inlets shall be located so as to help bring floating particles

within range of the skimmers. The following requirements for return inlet numbers and locations shall be met:

(a) A swimming pool shall have a minimum of two return inlets regardless of pool size.

(b) The total number of return inlets shall be based on one inlet per three hundred square feet of pool surface area or one inlet for every twenty feet of pool perimeter or fraction thereof, whichever is greater. The return inlets placement shall be as follows:

1. Wall inlets shall be placed within five feet of each pool corner and at least five feet from a skimmer.

(i) Wall return inlets for the circulation system shall be designed to include directionally adjustable fitting to provide effective distribution of water.

(ii) The fitting shall not constitute a hazard to the user.

2. Floor return inlets must be used on pools more than fifty feet in width based on the following placement:

(i) Floor inlets shall be spaced to effectively distribute the treated water throughout the pool.

(ii) Distance between floor inlets shall be no more than twenty feet.

(iii) A row of floor inlets shall be located within fifteen feet of each side wall.

(iv) Floor inlets shall be flush with the bottom of the pool.

(v) Floor inlets used in combination with wall inlets shall be spaced no more than twenty-five feet from the nearest side walls.

3. For an aquatic facility with multiple pool types in combination using the same body of water, inlets shall meet these Regulations' placement criteria, and be hydraulically sized by meeting the design requirements for return inlets to provide the required turnover rate for each pool type.

4. Inlets shall be placed in each recessed or isolated area of the pool.

5. Wall inlets shall not be required to provide directional flow if part of a manufactured gutter system in which the filtered return water conduit is contained within the gutter structure.

(2) **Main Drain Location**.

(a) All pools shall be provided with at least one of the following options: two main drain suction outlets for each pump with sumps in the lowest point of the pool floor connected together by a pipe under the pool floor, an unblockable drain with corresponding unblockable sump for each pump, or a main drain cover/grate which meets ANSI/APSP 16 or successor standard and one of the following:

1. A safety vacuum release system that has been tested by a nationally recognized independent third party and found to conform to ANSI/AMSE standard A112.19.17 or ASTM standard F2387 and installed in accordance with the manufacturer's instructions.

2. A suction-limiting vent system designed by a professional engineer.

3. A gravity drainage system designed by a professional engineer.

4. Automatic pump shut off system that has been tested by a nationally recognized independent third party and found to conform to a recognized standard.

5. Other means determined by the Health Authority to be equally effective in meeting the requirements of an applicable ASME/ANSI, ASTM or a Consumer Product Safety Commission standard.

(b) The main drain system shall be designed at a minimum to handle recirculation flow of 100% of total design recirculation flow rate. The branch pipe from each main drain outlet shall be designed to carry 100% of the recirculation flow rate

(c) One of the following options shall be met: the spacing of the main drains shall be at least three feet apart but not more than twenty feet on centers, the main drain suction outlet cover/grates are unblockable along with the corresponding sumps being unblockable, or the main drain suction covers/grates meet ANSI/APSP 16 or successor standard and one of the following:

1. A safety vacuum release system that has been tested by a nationally recognized independent third party and found to conform to ANSI/ASME standard A112.19.17 or ASTM standard F2387 and installed in accordance with manufacturer's instructions.

2. A suction-limiting vent system designed by a professional engineer.

3. A gravity drainage system designed by a professional engineer.

4. Automatic pump shut off system that has been tested by a nationally recognized independent third party and found to conform to a recognized standard.

5. Other means determined by the Health Authority to be equally effective in meeting the requirements of an applicable ASME/ANSI, ASTM or a Consumer Product Safety Commission standard.

(d) Three or more suction outlets which are not unblockable or do not meet one of the options listed in Section 10 Subsection (2)(c)1-5. are subject to the three feet spacing requirement measured from the centerline between the outermost main drain suction outlets.

(3) All spas shall have one of the following: a minimum of two suction outlets(connected together by a pipe under the pool floor) provided for each pump in the suction outlet system separated by a minimum of three feet or located on two different planes; e.g., one on the bottom and one on the vertical wall, or one each on two separate vertical walls, an unblockable drain(s) with corresponding unblockable sump(s) for each pump, or a main drain suction outlet cover/grate which meets the standards of ANSI/APSP 16 or successor standard and one of the following:

(a) A safety vacuum release system that has been tested by a nationally recognized independent third party and found to conform to ANSI/ASME standard A112.19.17 or ASTM standard F2387 and installed in accordance with manufacturers' instructions.

(b) A suction-limiting vent system designed by a professional engineer,

(c) A gravity drainage system designed by a professional engineer,

(d) Automatic pump shut off system that has been tested by a nationally recognized independent third party and found to conform to a recognized standard,

(e) Other means determined to be equally effective by the Health Authority meeting the requirements of an applicable ASME/ANSI, ASTM or a Consumer Product Safety Commission standard.

(4) When using two or more main drain suction outlets, the outlets shall be plumbed such that water is drawn through them simultaneously through a common line under the pool to the pump unless all the main suction outlets and the corresponding sumps are unblockable.

(5) Main drain suction outlets shall be provided with a cover that has been tested and approved by a nationally recognized testing laboratory and shall comply with the current /APSP-16, or a successor standard or ASME/ANSI A112.19.8. Where up to two main drain suction outlets are connected by branch piping, each branch pipe and main drain suction outlet will be designed to handle 100% of the flowrate.

(a) Where three or more main drain suction outlets are connected by branch piping, the flow through each branch pipe from each main drain suction outlet shall be calculated as follows:

1. Quantity (Q) of flow (gpm) maximum for each drain = flowrate divided by number of drains (N) minus one drain, or

2. Q(gpm per drain) = flowrate/(N-1).

(b) The main drain suction outlets shall be connected to a single main suction pipe under the pool by branch lines piped to provide hydraulic balance between the drains.

(c) The branch lines shall not be valved so as to be capable of operating independently.

(d) All covers/grates shall be in the same body of water.

(e) Each main drain suction outlet cover shall be attached to a properly manufactured or field fabricated sump that meets ANSI/APSP 16 or successor standard.

(f) The maximum flow on the pump's curve shall be used to select the cover.

(g) Field fabricated suction outlets must be designed and certified by a registered professional engineer to comply with ANSI/APSP 16 or successor standard.

1. Field fabricated suction outlet covers or grates must provide sufficient area so that the maximum velocity of the water passing the grate will not exceed one and one-half feet per second.

2. The field fabricated sumps shall be built so that the opening of the suction pipe will be no closer than one and one-half times the inside pipe diameter from the bottom of the

listed suction outlet cover/grate or in accordance with the standard or manufacturer instructions.

3. The width of openings in grating shall be not less than one-eighth inch and not more than one half inch. The pool or spa shall not be operated if the outlet grate is missing, broken or out of place.

(6) **Entrapment Avoidance.** If the main drain suction outlet system, such as a filtration system, booster system, automatic cleaning system, or solar system, has a single main drain suction outlet or multiple main drain suction outlets, where one of the main drain suction outlets is connected to a pump without being connected to another suction outlet by a pipe underneath the pool and is not an unblockable cover with corresponding unblockable sump, each main drain suction outlet shall protect against user entrapment by having a main drain suction outlet cover/grate that complies with ANSIAPSP- 16 or successor standard and one of the following:

(a) A safety vacuum release system that has been tested by a nationally recognized independent third party and found to conform to ANSI/ASME standard A112.19.17

or ASTM standard F2387 and installed in accordance with manufacturers' instructions.

(b) A suction-limiting vent system designed by a professional engineer,

(c) A gravity drainage system designed by a professional engineer,

(d) Automatic pump shut off system that has been tested by a nationally recognized independent third party and found to conform to a recognized standard,

(e) Other means determined by the Health Authority to be equally effective in meeting the requirements of an applicable ASME/ANSI, ASTM or a Consumer Product Safety Commission standard.

(7) Where provided, the vacuum cleaner fittings shall be located in an accessible position between six and eighteen inches below the minimum operating water level or as an attachment to the skimmer(s).

(8) The vacuum line shall be protected with a self-closing, self-latching fitting that complies with the current IAMPO SPS 4- Special Use Suction Fitting for Swimming Pools, Spas and Hot Tubs.

11 Surface Skimmer Systems

(1) A surface skimming system shall be provided on all swimming pools and spas and shall be designed and constructed to skim the pool or spa surface when the water level is maintained within the operational parameters of the system's rim or weir device. Surface skimming devices shall comply with NSF Standard 50.

(2) **Automatic Surface Skimmers.** Where automatic surface skimmers are used as the sole overflow system in pools, at least two surface skimmers shall be provided for the first four hundred square feet or fraction thereof of the water surface area and one skimmer shall be provided for each additional four hundred square feet of surface area. In spas, one skimmer shall be provided for each one hundred square feet of surface area.

(a) Nominal recessed areas such as stairs shall not be considered in the calculation.

(b) When skimmers are used, they shall be located to maintain effective skimming action over the entire surface of the pool or spa.

(c) The skimmer flow rate shall not be less than twenty- five gallons per minutes or more than fifty-five gallons per minutes unless they are based on the manufacturer's design specifications. The flow rate for the skimmers shall comply with manufacturer data plates or NSF/ANSI 50 including Annex K.

(d) Each skimmer shall have a weir that adjusts automatically to variations in water level over a minimum range of four inches.

(e) Each skimmer shall be equipped with a trimmer valve capable of distributing the total flow between individual skimmers.

(f) The skimmer equalizer lines, when used, shall be located on the wall with the center no more than eighteen inches below the maximum operating level.

(g) The skimmer equalizer lines shall be protected by a Health Authority approved cover/grate with a flow rating equal the maximum system flow divided by the number of skimmers in the system or the maximum flow rating of the skimmer, whichever is greater.

(h) Additional skimmers may be required to achieve effective skimming under site-specific conditions.

(i) The base of each skimmer shall be level with all other skimmers in the pool within a tolerance of plus or minus one-half inch.

(4) **Perimeter Surface Skimmer (Gutter).** Where a perimeter type surface skimming system is used as the sole surface skimming system, this system shall extend completely around the perimeter of the pool except at steps or recessed ladders.

(a) The lip of the gutter shall be level and shall be designed to serve as a handhold for bathers.

(b) The perimeter surface skimming system shall be connected to the circulation system with a system surge capacity of not less than one gallon for each square foot of pool surface or two and one half gallons for each square foot of spa surface.

(c) The hydraulic capacity of the overflow system shall be capable of handling one hundred percent of the circulation flow.

(d) Gutters shall be level within a tolerance of plus or minus one-sixteenth inch around the perimeter of the pool.

(e) Automatic makeup water supply equipment shall be provided to maintain continuous skimming of pools with perimeter overflow systems.

(f) Makeup water shall be supplied through an air gap or other approved backflow prevention device.

12 Lighting and Electrical Requirements

(1) **Artificial Lighting.** Artificial lighting shall be provided for all indoor and outdoor pools and spas. Lighting shall be adequate to illuminate the entire swimming pool enclosure without glare. All installations shall comply with local building code requirements. Lighting in dressing rooms, sanitary facilities, equipment rooms and concessions shall comply with local building code requirements.

(a) **Water Surface and Deck Area Illumination.** When a pool is being operated after dark, there must be enough lighting to see the deck and to see the main drain covers in the pool(s).

13 Heaters and Temperature Requirements

(1) **Water Temperature.** The owner/operator shall routinely check the in-pool or in-spa water to ensure that the temperature does not exceed 104^0F.

(a) An annual gas fired inspection shall be performed by a qualified professional.

(b) A thermometer shall be available to measure the temperature of the water. It shall be attached or available to the operator at all times.

14 Water Supply and Wastewater Disposal

(1) The water supply for public pools and spas, showers, lavatories, drinking fountains and any other uses in conjunction with the public pool shall be from an approved and potable source and shall be approved by the local Health Authority before use.

(2) No direct mechanical connection shall be made between the potable water supply and the swimming pool, chlorinating equipment, or the system of piping for the pool, unless it is protected against backflow and back-siphonage through an air gap meeting the latest ANSI/ASME standard A112.1.2 and the International Plumbing Code or other equivalent means approved by the Health Authority.

(3) An over-the-rim spout, if used, shall be located under a diving board, adjacent to a ladder or otherwise properly shielded so as not to create a hazard. Its open end shall have no sharp edges and shall not protrude more than two inches beyond the edge of the pool. The open end shall be separated from the water by an air gap of at least one and one-half pipe diameters measured from the pipe outlet to the rim.

(4) Backwash water may be discharged into a sanitary sewer through an approved air gap or into an approved subsurface disposal system or by other means approved by the Health Authority.

(5) Backwash water shall not be returned to the public swimming pool, equipment reservoir or surge tank. Use of backwash water for other purposes must meet state or local law or ordinances.

15 Disinfectant Equipment and Chemical Feeders

(1) Disinfectant equipment and chemical feeders, such as flow-through chemical feeders, electrolytic chemical generators, mechanical chemical feeders, chemical feed pumps, and automated controllers shall comply with the requirements of NSF Standard 50.

(2) The disinfection equipment shall be capable of precisely delivering a sufficient quantity of a registered disinfecting agent in the appropriate amount

(a) Every pool and spa shall be required to have at least one unit of disinfectant agent equipment that introduces the agent through the circulation system in compliance with these Regulations.

1. Additional units may be required to maintain chemical and physical parameters of the pool water, if deemed necessary by the Health Authority.

2. Increased risk public pools constructed or remodeled after the adoption of these Regulations shall deliver, monitor and control disinfectant and pH chemical feeders through an automated chemical controller.

3. Increased risk public pools constructed after the adoption of these Regulations shall be required to use an NSF Standard 50 approved supplemental disinfection treatment system such as ozone or ultraviolent light (UV).

(b) The pool or spa water shall be continuously disinfected by a disinfecting agent that imparts an easily measured residual. The disinfecting agent used shall be subject to field testing procedures that are simple and accurate.

(c) Chlorine compounds, bromine compounds, or other bactericidal agents shall be acceptable when meeting the disinfectant level parameters outlined in these Regulations. Other disinfectant agents not outlined may be used if,

1. The owner/operator provides test results to the Health Authority that show the agent to be an adequate disinfectant for swimming pool and spa use, and

2. A test kit for these other agents is supplied to the Health Authority by the manufacturer or the pool owner.

(d) All disinfectant agents shall be registered by the U.S. Environmental Protection Agency.

(e) Where water is drawn from the pool to supply water to aquatic features the water may be reused prior to filtration if;

1. The disinfectant and pH levels of the supply water are maintained at required levels and the ratio of interactive play feature, slide, or other apparatus unfiltered water to filtered water circulated in the reservoir or pool shall be no more than 3:1 in order to maintain the efficiency of the filtration system, or

2. The apparatus or device shall use only water that has been filtered and disinfected immediately prior to being discharged into the pool. This includes, but is not limited to, slides, fountains, water wheels, "mushrooms", and squirt guns.

(f) Any water discharged into the pool water shall at least be the same level of disinfection that is required for the type of pool that the device is in.

(3) **Chemical Feeders.** The installation and use of chemical feeders shall conform to the following standards:

(a) Chemical feeders must be installed downstream from the filter and heater.

(b) If the chemical feeder is equipped with its own pump, it shall be installed so it introduces the gas or solution downstream from the heater and, if possible, at a position lower than the heater outlet fitting.

(c) Chemical feed pumps and controllers shall be wired so they cannot operate unless the filter pump is running. If the chlorinator has an independent timer, the filter and chemical feed pump timers shall be interlocked.

(d) All chlorine or bromine dosing and generating equipment including erosion feeders, or in line electrolytic and brine/batch generators, shall be selected based on the volume of the pool serviced and the manufacturer's specification for the equipment.

(e) Feeders shall be capable of supplying disinfectant to maintain the minimum required disinfection levels at all times in accordance with these Regulations.

(f) In-line generators shall be permitted on pools using the following requirements:

1. In-line generators shall use pool-grade salt dosed into the water to produce and introduce chlorine into the pool treatment loop through an electrolytic chamber.

2. Electrolytic generators shall have a total dissolved solid (TDS) or salt (NaCl) readout and a low salt indicator.

3. The feed rate shall be adjustable from zero to full range.

4. The generator unit shall be listed and labeled to NSF Standard 50 and UL 1081 for electrical/fire/shock safety by an ANSI-accredited certification organization.

(g) Feeders for pH adjustment shall comply with the following:

1. Chemicals for pH adjustment shall include but not be limited to muriatic (hydrochloric) acid, sodium bisulfate, carbon dioxide, sulfuric acid, sodium bicarbonate, and soda ash.

2. A pH adjustment feeders shall be adjustable from zero to full range.

3. Reservoirs shall be clearly marked and labeled with contents.

(h) Where used, ultraviolet light (UV) systems shall be installed in the recirculation system after the filters.

(4) **Gas Feed Systems.** Carbon dioxide and ozone are the only gas feed systems permitted at a new public pool.

(5) **Elemental (Gaseous) Chlorine**. Chlorine in the gaseous form may not be used as a disinfectant.

(6) **Test Kits.** Every pool shall be supplied with an accurate and reliable water quality test kit.

(a) Digital water quality testing devices shall be listed and labeled to NSF 50 or approved by the Health Authority.

(b) All test kits should include methods for the determination of pH, free available chlorine (FAC), total available chlorine (TAC) if chlorine is used, bromine or other chemical disinfectant residuals, cyanuric acid (if used), total alkalinity, calcium hardness, and copper and silver (if a copper or copper/silver ionization unit has been installed).

(c) The local Health Authority shall be given, upon request, a field testing kit for any agents introduced into the water supply. If a field testing kit is not available, the agent cannot be introduced until standards for testing have been established by, and written approval has been obtained from, the Health Authority.

(d) The Orthotolidine test (OTO) is unacceptable since it cannot distinguish FAC and TAC.

(e) The test kit shall be stored in accordance with manufacturer's instructions. Chemical agents shall be maintained at proper manufacturer specified temperatures.

(f) A test kit that requires calibration shall be calibrated in accordance with the manufacturer's instructions.

16 Chemical Operational Parameters

The chemical operational parameters in swimming pool or spa water shall not exceed the maximum level or be lower than the minimum level given in the following parameters. Where no minimum or maximum is given, contact the Health Authority for guidance.

	Minimum	Ideal	Maximum	Comments
(**1) Disinfectant Levels** (a) Free chlorine, ppm in pools not using cyanuric acid or a stabilized chlorine				In a pool, hot weather/heavy use may require operation at or near maximum levels. Regular superchlorination is recommended (see Remedial

compound use (b),1.-4.				Practices below).
(b) All public pools except as listed below:	1.0	1.0-3.0	10.0	
1. Spas	3.0	3.0-5.0	10.0	
2. Activity/Interactive /Wading Pools	2.0	2.0-5.0	10.0	
3. Interactive Water Play Pool(Spray Pad)	2.0	2.0-5.0	10.0	
4. Wading Pools	2.0	2.0-5.0	10.0	
(c) Free Chlorine level in pools using cyanuric acid or a stabilized chlorine product	2.0	2.0-5.0	10.0	
Combined chlorine, ppm	None	None	0.4	High combined chlorine results in chloramine formation and reduced chemical efficacy. Take remedial action to establish break point chlorination (See Remedial Practices below). Other signs of combined chlorine: -Sharp chlorine odor -Eye irritation

				-Algae growth
Bromine, ppm	Pool 3.0 Spa 4.0	Pool 3.0-5.0 Spa 4.0-6.0	Pool 8.0 Spa 8.0	
(2) Chemical Values				
pH-All public pools and public spas	7.2	7.4-7.6	7.8	**If pH is:** Too High: – Low chlorine efficiency – Scale formation Cloudy Water Too Low: – Rapid dissipation of disinfectant – Eye discomfort – Plaster and concrete etching – Corrosion of metals and vinyl liner damage
Alkalinity (buffering), ppm as $CaC0_3$	60 ppm	80-100 for halogen compounds with a high pH 100-120 for halogen compounds with a low pH	180	**If total alkalinity:** Too Low: – pH bounce – Corrosion tendency Too High: – Cloudy water – Increased scaling potential – pH tends to be too high
(3) Stabilizer (if used)				
Cyanuric acid, ppm	-	30-50	90	**If stabilizer is:** Too High: – May reduce chlorine efficacy

				Too Low: – Chlorine Residual rapidly destroyed by sunlight Note: Stabilizer is not needed in indoor or brominated pools and spas.
	Minimum	Ideal	Maximum	Comments
(4) Temperature ^{0}F	--	78 -82 ^{0}F or Bather preference	104 ^{0}F	**If temperature is:** Too High: – Health hazard – Bather discomfort – Excessive fuel requirement – Increased evaporation – Increased scaling potential – Increased use of disinfectants – Increase potential for corrosion Too Low: – Bather discomfort – Increase chance of hyperthermia

17 Specific Safety Features and Markers

(1) **Handholds.** A public pool shall have a suitable handhold around its perimeter in areas where the depth exceeds three feet six inches. Handholds shall be provided no more than four feet apart and shall consist of any one or a combination of the items listed below:

(a) Coping, ledge or deck along the immediate top edge of the pool which provides a slip-resisting surface of at least four inches minimum horizontal width and located at or not more than twelve inches above the waterline; or

(b) Ladders, stairs or seat ledges; or

(c) A railing placed at or not more than twelve inches above the waterline.

(2) **Rope and Float Line.** A rope and float line shall be provided within one foot of and on the shallow side of the break in grade between the shallow and deep portions of the swimming pool, with its position marked with visible floats at intervals of seven feet or less.

(a) The rope and float line shall be securely fastened to wall anchors of corrosion-resisting materials and of the type which shall be recessed or have no projection that will constitute a hazard when the line is removed.

(b) The line shall be of sufficient size and strength to offer a good handhold and support loads normally imposed by users.

(c) The operator may remove the float line when the pool is used for lap swimming or swim meets. The line must be reattached immediately after completion of the event.

(3) **Depth Markers for Swimming Pools**. Depth of water in feet and inches shall be plainly and conspicuously marked at or above the waterline on the vertical pool wall and on the top of the coping or edge of the deck, walk next to the pool, or in a location approved by the Health Authority. The word, abbreviation, or symbol for "feet" and "inches" must be specified and approved by the Health Authority. Where displayed in meters in addition to feet and inches, the word meter shall be spelled out.

(a) Depth markers on the vertical pool wall shall be positioned to be read from the water side. The marker shall be placed to allow as much of the number to be visible above the waterline as possible.

(b) Depth markers on the deck shall be within eighteen inches of the water edge and positioned to be read while standing on the deck facing the water.

(c) Depth markers shall be slip-resistant.

(d) Depth markers shall be installed at the maximum and minimum water depths and at all points of slope change. Depth markers are not required at the minimum depth of a zero-depth entry pool. For a zero-depth entry pool, the depth markers shall be installed on the deck and the vertical pool walls at a 1-foot water's depth along with the maximum depth and all points of slope change.

(e) Depth markers shall be arranged uniformly on both sides and both ends of the pool.

(f) Depth markers on irregularly shaped pools shall designate depths at all major deviations in shape.

(g) Depth markers number and letters shall be tile and four inches minimum in height. Numbers and letters shall be of contrasting color to the background on which they are applied.

(h) Depth markers shall indicate the actual pool depth within plus or minus three inches, at normal operating level when measured three feet from the pool wall or at the tangent point where the cove radius meets the floor, whichever is deeper.

(4) **Depth Markers for Spas.** Public spas shall have permanent depth markers with numbers and letters a minimum of four inches high plainly and conspicuously visible from all obvious points of entry and in conformance with subsections (a) thru (f) below:

(a) There shall be a minimum of two depth markers per spa, regardless of spa size or shape.

(b) Depth markers shall be positioned on the deck within eighteen inches of the water line. Depth of water in feet and inches shall be plainly and conspicuously marked at or above the waterline on the vertical pool wall.

(c) Depth markers shall be positioned to be read while standing on the deck facing the water.

(d) Depth markers in or on the deck surfaces shall be slip-resistant.

(5) **Water Temperature.** The maximum temperature in a spa shall not exceed 104^0F (40^0C).

(a) The spa operator shall be provided with an accurate thermometer ($\pm 1^0$F tolerance) and shall periodically check to ensure that the maximum temperature does not exceed 104^0F.

(b) A means to determine the spa temperature with a $\pm 1^0$F tolerance shall be provided to the user.

(6) **Water Agitation**. The agitation system on spas shall be connected to a minute timer that does not exceed fifteen minutes and shall be located out of reach of a bather in the spa.

(7) **Emergency shutoff switch.** A clearly labeled emergency shutoff switch shall be provided for all pools and spas constructed or remodeled after the adoption of these Regulations. The emergency shutoff or control switch shall stop the motor*(s)* that provide power to the circulation system and hydrotherapy or agitation system pump.

(8) **Lifeguards.** All owners, managers, or lifeguards, if provided, shall be responsible for the supervision and safety of the pool, spa, or recreational water park. If lifeguards and safety assistants are provided, then they must hold current, nationally recognized certifications in lifeguarding and a designated title commensurate to the assigned duties. Adult/child/infant

CPR and First Aid certifications also must be current. The certificates, or photocopies thereof, shall be maintained at the facility and be available to the local Health Authority for inspection.

(9) **Lifesaving Equipment.** All public swimming pools shall have lifesaving equipment conspicuously and conveniently on hand at all times. Lifesaving equipment for special purpose pools may be exempted from this requirement or the requirements will be provided as deemed necessary by Health Authority. The following will be provided:

(a) A light, strong pole not less than twelve feet long including body hook.

(b) A minimum one-fourth inch diameter throwing rope one and one-half times the maximum width of the pool or fifty feet in length, whichever is less, to which has been firmly attached a ring buoy with an outside diameter of approximately fifteen inches or a similar flotation device which is U.S. Coast Guard approved.

(c) An operable telephone shall be readily available to bathers at all times for emergency use.

(10) **Barriers.** All outdoor swimming pools and spas shall be enclosed by a barrier to prevent entry to the pool area when the pool is closed.

(a) The top of the barrier shall be at least forty eight inches above grade measured on the side of the barrier which faces away from the swimming pool.

1. The maximum vertical clearance between a solid surface and the bottom of the barrier shall be four inches measured on the side of the barrier which faces away from the swimming pool.

2. For non-solid surfaces, the vertical clearance between the bottom of the barrier and the grade shall not exceed four inches.

(b) Openings in the barrier shall not allow passage of a four inch diameter sphere.

(c) Access gates shall also comply with the requirements of these Regulations and shall be self-closing and have a self-latching device.

(d) There shall not be direct access through a door from any dwelling into the pool enclosure.

(e) Windows on a building, that is also a dwelling, that form part of a barrier around a pool shall have a maximum opening width not to exceed four inches. (f) For a passage through a wall separating the indoor portion of a pool from an outdoor portion of the same pool, the overhead clearance of the passage to the pool floor shall be at least six feet eight inches to any solid structure overhead.

(11) **Warning Signs for Swimming Pools.** Signs shall be provided as follows:

(a) Where no lifeguard is on duty, a sign or signs shall be placed in clear view at or near the entrance to the pool and shall state in clearly legible letters at least four inches high "NO LIFE GUARD ON DUTY".

(b) A sign in clearly legible letters must provide rules which address the following:

1. People with illnesses and open wounds should not use the pool.
2. Glass is not allowed within the pool enclosure.
3. Animals, except service animals, are not allowed in the pool enclosure.

(12) **Warning Signs for Spas.** Signage for spas shall include all of the language stated in *(11) Warning Signs for Swimming Pools* above, with the addition of a rule dealing with the maximum water temperature being 104°F.

18 Recreational Water Parks and Special Purpose Pools

The rule provides specifications for the design and operation of special purpose pools, such as amusement rides and water slides, whether used in recreational water parks or aquatic facilities as a standalone attraction or in combination with other attractions or pools. The

design of special purpose pools shall comply with the specifications in this Rule and other applicable rules in these Regulations. This Rule describes several types of special purpose pools, but it is not intended to be an exhaustive list of such pools.

(1) Deviation from requirements.

(a) A special purpose pool may deviate from the requirements of these Regulations if and to the extent:

1. A variance from these Regulations is obtained from the Health Authority to accommodate the design and use of the special purpose pool.

2. The design and construction of the attraction meet sound engineering practice and present no health or safety hazard.

3. The facility provides appropriate supervision onsite during hours of operation.

4. If combined pool types are approved within a recreational water park or aquatic facility, each pool must comply with the applicable Regulation provisions as if the pool functioned independently.

5. The manufacturer and either the designing engineer or architect must verify that the device or design meets the applicable American Society for Testing and Materials standard or Consumer Product Safety Commission regulation.

(2) **Interactive Water Play Pool (Spray pad).**

(a) The interactive water play pool must be equipped, at its lowest point, with an unvalved drain of sufficient capacity and design to prevent the accumulation of water in the pool. Any direct main drain suction outlets shall be prohibited.

(b) If an interactive water play pool is positioned near a deeper water swimming pool, then it must be located at the shallow end and must be separated from the deeper water by at least ten feet of deck, or by a barrier or fence meeting the requirements of these Regulations, the design shall meet the following:

1. The minimum size of the tank shall be equal to the volume of two and one-half minutes of the combined flow of all feature pumps and the filter pump.

2. When an underground reservoir is utilized, an automatic skimmer system shall be provided. A variable height skimmer may be used or a custom surface skimmer device may be substituted if deemed appropriate by both the design engineer and the Health Authority.

3. The filter system shall be capable of filtering and treating the entire water volume of the reservoir tank within thirty minutes. The filter system shall draft from the tank and return filtered and treated water to the tank through equally spaced inlet fittings.

4. The water feature pump shall draft from the reservoir tank and an automatic water level controller shall be provided.

5. The flow rate through the feature nozzles of the water features shall be such as not to harm the patrons and shall not exceed twenty feet per second unless justified by the fountain system manufacturer.

6. An overfill waste line with air gap shall be provided and a means of vacuuming and completely draining the tank shall be provided.

7. Depth markers are not required.

(c) Interactive water play pools floor slope shall be at least one foot in twelve feet vertical to horizontal or gentler slope.

(d) For zero-depth-entry into pools, the floor slope shall be at a one foot in twelve feet vertical to horizontal or gentler slope. Trench drains shall be used along zero depth entries at the waterline to facilitate surface skimming.

(3) **Water slides.**

(a) A water slide shall consist of one or more flumes, landing pools, or slide runouts, and facilities for the disinfection and chemical treatment of the water.

(b) All components of a water slide that come into contact with bathers must be assembled, arranged, and finished so that their external surfaces and edges do not present an injury hazard to the skin of users under casual contact.

(c) All water slides must meet Georgia Department of Labor, or successor agency, requirements.

(d) **Flumes.**

1. Each flume of a water slide must be water-tight. Its surfaces must be smooth and easily cleaned.

2. Flume components must be kept in good repair.

(e) **Decks**. A deck must be provided along the exit side of the landing pool and along one or more of the other sides of the pool. The pump and reservoir must be accessible from a deck not less than three feet wide.

(f) **Means of access**.

1. A concrete walkway, steps, stairway, or ramp must be provided for access between the landing pool and the top of the flume.

2. The walkway or other means of access must:

(i) conform to the structural requirements of the local building code;

(ii) be at least four feet wide;

(iii) be provided with handrails;

(iv) have a slip-resistant surface;

(g) **Slide runouts.** Slide runouts, if used, must have an exit opening or step, unless one or both of the walls of the runout are not more than nineteen inches in height.

(h) **Main drain suction outlets.** The main drain suction outlet of the falling-entry pool must be clearly visible from the deck with the flume water turned off.

(4) **Activity pools.** Amusement devices used in activity pools must be designed and maintained so that their surfaces are smooth and easily cleanable. The surfaces of the devices must be kept in good repair. The pool and equipment shall meet the following:

(a) Play and water activity equipment shall be installed in accordance with the manufacturer's instructions.

(b) A rope and float line shall be provided to identify a water depth of more than four and one half feet in a constant floor slope configuration.

(c) Floating devices not intended to be mobile shall be anchored in a manner to restrict movement to the range established by the manufacturer; and

(d) ASTM F2469-09 Standard Practice for Manufacturer, Construction, Operation, and Maintenance of Aquatic Play Equipment and Consumer Product Safety Commission standards shall be met.

(5) **Wave pools.**

(a) The generation of waves more than three feet in height in a wave pool, regardless of the depth of the pool, must not continue for more than fifteen minutes at a time.

(b) The main drain must be clearly visible from the deck with the wave generating equipment turned off.

(c) Bather access to the wave pool shall be allowed only at the shallow or beach end. The sides of the pool must be protected from unauthorized entry into the pool by the use of a fence or other comparable barrier.

(d) Wave pools must be provided with handholds at the static water level. These handholds must be self-draining and must be installed so that their outer edge is flush with the pool wall. The design of the handholds must ensure that body extremities will not become entangled during wave action.

(e) Life jackets must be provided free for use by bathers who request them.

(f) Each permanent station for pool attendants and lifeguards must be provided with a clearly labeled and readily accessible emergency shut-off switch for the control of the wave action. A minimum of two emergency shut-off switches to disable the wave action shall be provided, one on each side of the wave pool.

(g) An audible warning system must be provided to alert bathers of the beginning of wave generation.

(h) Stepholes and handrails must be provided at one or more locations along the wall of the wave pool. The stepholes and handrails must extend down the wall so they will be accessible during wave generation at the lowest water level. The distance between the handrail and the wall must not exceed six inches.

(i) A rope and float line shall be installed to restrict bather access to the wave pool caisson wall. The location of the rope and float line shall be in accordance with the wave equipment manufacturer's instructions. The wall anchors shall be recessed and

be made of corrosion-resistant material. A float line is not required to separate the first point of transition from shallow to deep.

(6) **Wading Interactive/Child amusement lagoons.** Devices used in child amusement lagoons must be designed and maintained so that their surfaces are smooth and easily cleanable.

(a) The surfaces of the devices must be kept in good repair.

(b) The devices shall comply with ASTM F2469-09 Standard Practice for Manufacturer, Construction, Operation, and Maintenance of Aquatic Play Equipment and Consumer Product Safety Commission Standards.

(7) **Leisure River, Continuous Water Channel - Watercourse rides.**

(a) Handrails, steps, stairs, and booster inlets for watercourse rides must not protrude into the watercourse.

(b) An approved method of exit must be provided at least every two hundred feet along the watercourse.

(c) A deck must be provided along at least one side of the water course.

(d) All bridges spanning a watercourse shall have a minimum clearance of both seven feet from the bottom of the watercourse and four feet above the water surface to any structure overhead.

19 Sanitary Facilities

(1) There shall be at least one shower for each gender for facilities less than 4000 square feet of water surface area. One additional shower head for each gender shall be added for each additional 4000 square feet of water surface area or fraction thereof. The requirement of

showers may be waived / modified by the health authority based on need and the proximity of other showers (e.g. hotel / motel, subdivision homes, etc).

(2) Restrooms shall be provided and meet the following criteria based on peak bather load (assuming 50/50 male to female ratio) as determined by the architect or engineer:

(a) One toilet, one sink, and one urinal for the first fifty male users. One additional toilet, sink, and urinal for each additional one hundred fifty male users or fraction thereof.

(b) Two toilets and two sinks for the first fifty female users. One additional toilet and sink for each additional hundred female users or fraction thereof.

(3) All sanitary facilities provided by the facility for use by pool patrons shall be maintained clean and in good repair and shall be provided with stocked liquid or powdered soap dispensers, toilet paper, and paper towels.

20 Food Service

(1) Food Service facilities shall comply with provisions of Article 13 of O.C.G.A. Chapter 26-2 and DPH Rule 511-6-1.

(2) Bathers shall not be allowed to eat or drink while in or partially in the water.

(3) Food and beverages shall only be served on non-breakable containers. The pool must be drained and vacuumed if any broken glass enters the water.

(4) Covered trash containers shall be provided where food or beverages are available and allowed to be consumed.

21 Operation and Management

(1) All swimming pools and spas covered by these Regulations shall be maintained under the supervision and direction of a properly trained operator who shall be responsible for the sanitation, safety, and proper maintenance of the pool and all related equipment.

(2) The trained operator shall have a current certificate showing completion of an approved operator training course. A copy or the original certificate or documentation shall be available onsite for inspection by the Health Authority.

(3) Contact information of the trained operator must be posted on the exterior of the primary entrance gate. Any facility that has staff on-site during all times of the pool being open to the public is not required to post the contact information of the trained operator.

(4) The trained operator may be an employee or a contract service provider.

(5) Training for the operator shall be obtained by completion of a course approved by the Health Authority.

(6) The trained operator must be able to provide assistance whenever needed.

(7) **Fecal, Vomit, and Blood Contamination Response.** After an incident, the public swimming pool must be closed for the time required to achieve the correct contact concentration and time (CT) value (CT, mg-min/L) for the hazard, in accordance with the most recent recommendations published by the Centers for Disease Control and Prevention.

(8) All pool and spa components, equipment, and surfaces shall be maintained in good repair.

22 Compliance Procedures

(1) A swimming pool, spa, or recreational water park shall not operate until a valid operating permit has been issued by the Health Authority after inspection.

(2) An operating permit for a newly constructed pool shall not be issued until appropriate inspections show compliance with the requirements of these Regulations, with no violations noted on the inspection report.

(3) The Health Authority shall inspect the swimming pool, spa, or recreational water park for compliance as follows:

(a) Swimming pools, spas, or recreational water parks which open on or after April 1 and which close on or before October 31 shall be inspected at least once during the period of operation.

(b) All other swimming pools, spas, or recreational water parks shall be inspected at least twice each year. Additional inspections may be made as determined necessary by the Health Authority.

(c) The inspection, testing and monitoring frequency may be changed by the Health Authority based on the occurrence of injury and illness or inspection history.

(d) The operator shall receive a copy of the inspection and place it in a location designated by the Health Authority that is protected from the weather and in public view.

(e) Representatives of the Health Authority shall be permitted to enter any swimming pool or spa facility or the grounds of any recreational water park at any time the pool is open to the public for the purpose of making inspections to determine compliance with these Regulations. The failure of the pool permit holder to provide access to the pool for inspection may result in permit suspension by the Health Authority.

(4) **Imminent Health Hazards**. Items that are considered imminent health hazards include the following:

(a) During operation, disinfectant levels are less than the minimum level. If the level of the disinfectant used is not specified in this rule, the disinfectant must be approved and kept at levels determined necessary by the Health Authority.

(b) During operation, the pH is less than the minimum or more than the maximum levels allowed.

(c) The pump, automatic disinfectant equipment, or other equipment necessary for continuous filtration and disinfection of the swimming pool, spa, or recreational water park attraction is not working satisfactorily.

(d) The water turbidity is such that the main drain suction outlet cover is not visible from the deck.

(e) Broken glass or sharp objects in the water or on the deck area;

(f) Broken, out of place, or missing main drain suction outlet cover or a broken or missing vacuum line cover.

(g) Failure to provide and maintain a barrier to inhibit unauthorized access to the outdoor facility when required;

(h) Use of an unapproved or contaminated water supply source for potable water use;

(i) A fecal and/or vomit matter contamination in the water; and

(j) Other hazards as determined by the Health Authority.

(5) Fecal incidents shall be reported to the Health Authority at the time of the incident.

(6) The Health Authority may require the preparation of a water sampling and a water safety plan by an appropriate professional when operational conditions and safety warrant such action.

(7) **Voluntary Closure.** In lieu of suspension or revocation of a permit, a swimming pool, spa, or recreational water park attraction may be allowed to voluntarily close until such time as all the imminent health hazards are corrected. The Health Authority shall inspect the premises within two working days of notification that the hazard has been corrected by the operator.

(8) **Suspension or Revocation.** The Health Authority may deny permit applications, and may suspend or revoke permits, for failure to comply with the provisions of these Regulations. The Health Authority shall suspend permits for imminent health hazards which cannot be corrected while the inspector is on-site. When an application for a permit is denied or the permit previously granted is to be suspended or revoked, the applicant or holder thereof shall be afforded notice and an opportunity for a hearing.

(a) The action of the Health Authority is effective upon service of a written notice thereof, and operation must cease immediately in the case of a suspension or revocation.

(b) The notice must state the basis for the action and advise the permit holder or applicant of the right to a hearing on request within 72 hours.

(c) If requested, the hearing will be conducted by an experienced supervisory level employee of the Health Authority not directly involved in the suspension.

(d) The rules of evidence will not apply, but both the Health Authority and the permit holder or applicant may present witnesses, documents, and argument.

(e) The hearing official will be authorized to rescind, affirm, or modify the action, and may impose conditions on any decision allowing the pool to operate.

(f) If a hearing is not requested, the owner may request an inspection to reinstate the permit after correcting all violations.

(g) **Notice of Hearing.** A notice of hearing is properly served when delivered in person, or by registered or certified mail, to the owner, operator, responsible person, or authorized agent of the swimming pool, spa, or recreational water park.

(h) If the permit holder or applicant is unsatisfied by the decision of the hearing officer, then it may pursue an appeal to the County Board of Health

(9) **Other Regulations**. All pools, spas, and water parks must meet all other regulations, whether federal, state, or local.

(10) **Waterborne Illness Outbreaks**. In the event of a waterborne illness, the affected facility may be required to submit remediation procedures to the Health Authority for review, approval, and implementation.

23 Interpretation

The Health Authority shall have sole responsibility with regards to interpreting these Regulations.

24 Severability

In case any provision of these regulations shall be held invalid, illegal, or unenforceable, the validity, legality, and enforceability of the remaining provisions shall not in any way be affected or impaired thereby.

25 Abandoned pools

Any pool which is abandoned must be completely filled with soil or other Health Authority approved material.

26 Pre-existing pools and other aquatic structures

The lawful use of any pool, spa, or aquatic structure existing at the time of the effective date of these Regulations may be continued, although such use does not conform with the provisions hereof.

(1) Discontinuance. If a non-conforming pool's permit shall not be renewed on a continuous basis for a period of twenty four (24) months any subsequent attempt to renew a permit shall conform to the provisions of these Regulations.

(2) Wear and Tear. Nothing in these Regulations shall prevent the maintenance and simple repairs of a non-conforming pool or part thereof rendered necessary by wear and tear or deterioration.

(3) Change of Ownership. A non-conforming pool may at the discretion of the Health Authority be changed to another ownership without complying with all the provisions of these Regulations.

(4) Expansion/Modification. Pools undergoing an extensive modification and or expansion may, at the discretion of the Health Authority, be required to bring the facility into compliance with all requirements of these Regulations. Facilities undergoing minor modifications/changes may be limited to bringing those areas affected by said modification into compliance with the applicable code sections of these Regulations.

(5) All public pools, spas, or aquatic structures, regardless of age, in existence prior to the adoption of these Regulations are required to meet all areas of these Regulations pertaining to Imminent Health Hazards.