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PUBLIC HEALTH**

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## **Cobb County Board of Health**

### **Rules and Regulations for Swimming Pools**

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## **Part 1 Title**

### Rules and Regulations for Swimming Pools, Cobb County Board of Health

## **Part 2 Purpose and Findings**

- a.) This article contains regulations establishing minimum standards governing the use and maintenance of swimming pools and structures; establishing minimum standards governing supplied utilities and facilities and other physical things, and conditions essential to make swimming pools and surrounding premises safe, sanitary and fit for human use; establishing minimum standards governing the condition and maintenance of swimming pools and structures; defining certain responsibilities and duties of owners, operators and attendants of swimming pools; authorizing the inspection of swimming pools and structures and providing for the condemnation of all swimming pools and structures deemed unfit for human use.
- b.) The purpose of this article is to provide basic and uniform standards governing the construction and maintenance of swimming pools and related structures and premises located within Cobb County, Georgia. Such purpose further provides the establishment of reasonable safeguards for the safety, health and welfare of the attendants and users thereof and of the general public.

## **Part 3 Definitions**

For the purposes of this article, certain terms and words are hereby defined. The following words, terms and phrases, when used in this article, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

*“Abandoned pool”* means a pool which the owner and/or permit holder has permanently ceased using (usually resulting in a nuisance) or a pool upon which the pool contractor or builder has ceased construction.

*“Approved”* means accepted or acceptable to the department based on a determination of conformity with this article and principles, practices and generally recognized standards that protect public health.

*“Article”* means “The Rules and Regulations for Swimming Pools” as adopted by the Cobb County Board of Health.

*“Artificial swimming lagoon”* means an artificial body of water with more than 20,000 square feet of water surface area that is intended to be used by persons for swimming or bathing and that is constructed with special features to imitate a natural bathing place.

*“Barrier”* means a fence, wall, building wall, or combination thereof, which completely surrounds the pool area and effectively obstructs access into the pool area.

*“Bather”* means any person, wearing bathing attire, using a pool, spa, hot tub or other

bathing facility and adjoining deck area for the purpose of water sports, recreation, therapy or related activities. Bather is also referred to as a user.

*“Bathhouse”* means a facility that contains toilet rooms, shower rooms, and dressing rooms to be used by swimmers before and after swimming.

*“Bathing load”* means the maximum number of bathers allowed within the pool enclosure based on the amount of the pool’s water surface area or use restrictions.

*“Certified Pool Contractor”* means a person who:

- (1) engages in the design, construction or renovation of a swimming pool governed by this article; and
- (2) has passed an examination demonstrating his or her familiarity with this article; and
- (3) consistently complies with this article; and
- (4) possesses a current business license and valid certification from the department.

*“Closed pool”* means a pool, including all areas within the pool enclosure that is inaccessible to bathers by closing and securing all entry points into the pool enclosure, and is posted with a conspicuous sign “Pool Closed” at each entry point, as ordered by the department.

*“Deck”* means the areas immediately adjacent to a pool, including the coping that are constructed specifically for bathers to stand walk or sit upon.

*“Deep area or deep end”* means the area of a pool where the water depths exceed five feet (5’).

*“Department”* means the Cobb County Board of Health or its authorized representative(s).

*“Design flow rate”* means the amount of water in gallons passing a specific point in the pool’s circulation system in a given time in minutes, expressed as gallons per minute (g. p. m.).

*“Hypo-chlorinator”* means a mechanical/electrical device for dispensing chlorine in a liquid state in measured doses.

*“Imminent health hazard”* means a threat or danger to health or safety that is considered to exist when there is evidence sufficient to show that a product, practice, circumstance, or event creates a situation that merits immediate correction or cessation of operation to prevent injury or illness.

*“Infinity/vanishing edge pool”* means a pool with a portion of one wall constructed to allow pool water to skim over the top of a pool wall.

*“Interactive play device”* means any manufactured apparatus using sprayed, jetted, or other type of water source that contacts bathers in a non-threatening manner.

*“Listed suction outlet cover/grate”* means a suction outlet cover/grate that has been tested, certified, and listed by a nationally recognized testing laboratory in accordance with the most recent edition of ANSI/ASME A112.19.8 *Suction fittings for swimming and wading pools, spas, hot tubs and whirlpool bathtub appliances*.

*“Maximum system flow rate”* means the flow resulting from the lowest possible total dynamic head (TDH) for a circulation system.

*“Modification”* means any repair, change, alteration or substitution made to the pool, pool equipment, decking, bathhouse, or any other area or facility related thereof.

(1) “Major modification” includes, but is not limited to, deck and/or pool surface refinishing; filter, pump or chemical feeder replacement; bathhouse floor replacement; plumbing or hydraulic alterations or similar changes that would require a permit.

(2) “Minor modification” includes, but is not limited to, replacement of pressure gauges and flow meters, or similar changes that normally would not require a permit.

*“Multi-purpose pool”* means a pool which is designed and constructed with a combination of bathing features which includes, but is not limited to, a waterslide, diving well, zero-depth entry, and/or other similar features.

*“Natural bathing place”* means a bathing facility or area together with associated buildings, appurtenances and equipment, on artificial or natural ponds, springs, lakes, streams, or other bodies of water where the public is allowed to bathe or swim.

*“Not open”* means any pool that has been closed by the pool owner, permit holder or authorized agent with all entry points secured and posted with a conspicuous sign that reads “Pool Closed”.

*“Nuisance”* means any condition in a pool that is conducive to the breeding of mosquitoes or other insects, or any other condition that adversely affects public health or safety.

*“Permit holder”* means the person or entity that possesses a valid permit to operate a swimming pool and is legally responsible for the operation of the swimming pool including, but not limited to, the pool owner, agent for the pool owner, or other such authorized or designated person.

*“Person”* means any individual, owner, partnership, corporation, entity or association, or designee, including governmental entities.

*“Pool Operator”* means a person who:

- (1) has been trained as a pool operator; and
- (2) is responsible for the pool operation; and
- (3) is familiar with the pool’s systems and this article.

*“Renovation”* means any two or more major modifications as defined in this section of an existing pool and/or facility involving replacement or reconstruction of equipment, pool surface, bathhouse, and/or deck, or similar changes.

*“Required”* means mandated by local, state or federal authorities or appropriate jurisdiction.

*“Ritual pool”* means a pool in which only baptisms and other similar religious functions are conducted.

*“Run Out”* means a modular pool that is approximately four feet (4’) wide and twenty feet (20’) or more in length that is used as an integral part of a water slide.

*“Seasonal pool”* means a pool that is opened for a few months during the calendar year, is then closed and reopens the next year during the same approximate time period.

*“Shallow area or shallow end”* means the area of a pool where water depths are less than or equal to five feet (5’).

*“Slip Resisting”* means a surface that has been so treated or constructed to significantly reduce the chance of a user slipping. The surface shall have a minimum coefficient of friction of 0.6, wet or dry, and not be an abrasion hazard.

*“Special-purpose pool”* means any pool designed and used primarily for training, medical purposes, physical therapy, exercise, or other approved purposes.

*“Splash pool”* means a pool designed and operated primarily to receive bathers from a water slide.

*“Spray pool”* means an artificial pool or area into which water complying with this article is jetted but is not allowed to settle.

*“Surge device”* means a structure and/or mechanical means for automatically compensating for the displacement of pool water from the pool by bathers, waves or similar actions in order to maintain the pool’s normal operating water level.

*“Sun / Tanning shelf or shelf”* means a level, extended area of the pool surface, not located within the internal pool structure that is intended for bathers to sit or lie down in a shallow depth of pool water.

*“Swimming pool”* or *“pool”* means a watertight structure composed of concrete, masonry or other approved material and finish, located either indoors or outdoors, which is used or designed to be used by humans for bathing, recreation, diving or other related purposes, together with the buildings, appurtenances and equipment required or used in connection therewith. A swimming pool or pool may be publicly or privately owned, and is operated by a person, as defined in this article, regardless whether or not a fee is charged for admission and use. “Pool” also means any swimming pool, whirlpool, wading pool, spray pool, slide pool, multi-purpose pool, zero-depth entry pool, interactive play attraction, or special

purpose pool, as used in the context of this article. Ritual pools are excluded from this article. Pools serving no more than two private residences are excluded from this article except as required in Part 4, “Approval Required,” e.) *On-site sewage management systems*.

“*Turnover rate*” or “*turnover*” means the period of time required to circulate a volume of water equal to the pool capacity.

“*Wading pool*” means any shallow pool eighteen inches (18”) or less in depth used or designed to be used for wading or bathing.

“*Wave pool*” means a pool that has a mechanical means for generating waves at one end of the pool, typically the deepest portion, with the waves ending at the other end of the pool, typically a zero-depth entry point.

“*Watercourse pool*” means a “pool” as defined in this section in which water is moving continuously from one point to another, which users may be partially or wholly submerged, and users may float with or without inner tubes, rafts, or other similar approved water flotation devices. This type of pool is commonly known as a lazy river.

“*Water slide*,” “*slide*,” or “*flume*” means any device having a water channel, for users to enter into a splash pool.

“*Weir*” means a device within a skimmer that adjusts automatically to small changes in water level and assures a continuous water flow to the skimmer.

“*Whirlpool*” means a pool, spa, hot tub, or other similar structure, which may be used in conjunction with tempered water and air induction or high velocity water circulation systems, and designed for use by a small number of bathers. (Whirlpools that are emptied and cleaned after each individual use are exempt from regulation under this article.)

“*Year-round pool*” means a pool that is opened and available for use throughout the calendar year.

“*Zero-depth entry pool*” means a type of pool in which the pool floor intersects the pool water surface.

#### **Part 4 Approval Required**

a.) *Department Approval*. It shall be unlawful for any person to construct, alter, modify or operate a swimming pool or natural bathing place without having applied for and received written approval from the Cobb County Board of Health.

b.) *Other approvals*. Any person constructing, operating or modifying a pool must comply with all other applicable regulations and codes.

c.) *Use restrictions*. The department may set use restrictions on any pool and shall require

the permit holder or authorized agent to post appropriate compliance notices conspicuously in public view. The department shall post signs or require signs to be posted prohibiting or limiting the use of any pool for non-compliance with this article. Signs that are property of the department shall be removed only by the department. No person may enter the pool enclosure while the pool is posted "Closed" except an employee or agent of the department or other authorized personnel. The pool area shall remain closed until permission to reopen is requested from the permit holder or authorized agent and permission is granted by the department.

d.) *Wastewater discharge.* Direct discharge of polluted waters, such as drainage from overflow fittings, filter backwash waters or contaminated pool drainage from any pool shall not be made to any outlet or to any portion of the public storm drain system, or to any natural stream or to any body of water or ground surface within the jurisdiction of the department, unless otherwise approved by the department.

e.) *On-site sewage management systems.* Any pool and related sanitary facilities proposed to be constructed and utilizing an onsite sewage management system must be approved by the department prior to construction and in accordance with the state or local county codes.

f.) *Construction or modification without approval.* Any pool constructed or modified without the prior written approval of the department shall be subject to compliance with this article.

## **Part 5 Compliance Requirements**

a.) *Department inspections.* The department shall conduct periodic inspections at each pool to insure that good operating practices are employed and that standards are maintained in compliance with this article. Representatives of the department, after proper identification, shall be permitted to enter any pool area during hours of operation for the purpose of performing inspections to determine compliance with this article. The department shall order the pool permit holder or operator to immediately cease operation whenever the department determines that the pool related facilities and/or appurtenances are not in compliance with this article, or for non-payment of fees. Additional inspections of a pool shall be performed as necessary to ensure compliance with this article. A fee shall be charged for each re-inspection, after the initial and follow-up inspections until the pool receives a compliant inspection. Re-inspection fees must be remitted within thirty (30) days from receipt of the invoice.

b.) *Operational renewal.* Pools operating seasonally are required to have their operational approval renewed by undergoing a satisfactory inspection by the department prior to the pool being re-opened.

c.) *Inspection reports.* Findings made during an inspection shall be recorded on an inspection report form. The inspection report shall also summarize the requirements of this article. A copy of the completed inspection report form shall be furnished to the owner, permit holder and/or authorized agent at the conclusion of the inspection.



d.) *Additional documentation.* In addition to the inspection report findings, other evidence of non-compliance with this article may also be documented via photographs, samples, and any other means of documentation deemed necessary by the department.

e.) *Routine compliance.* Corrective actions for pools shall be implemented when any violations are found to exist.

f.) *Imminent health or safety hazard.* When an imminent health or safety hazard is found to exist, corrective actions for pools shall be implemented as ordered by the department, and shall include immediate cessation of operation until the facility is determined by the department to be in compliance with all provisions of this article. Failure of the owner, permit holder and/or authorized agent to comply with the corrective action plan and immediate cessation of operation of the pool shall subject the pool to immediate closure by the department. The following conditions shall be considered as or contributing to an imminent health or safety hazard:

(1) The amount of disinfectant or the pH level in the pool water is above the maximum or below the minimum level; or

(2) Inability to clearly see the main drain(s) or the inability to distinguish the type, shape, or number of grate openings in the pool, or the inability to see the bottom of the pool in the deepest point if a main drain is not present; or

(3) Missing essential safety equipment, including but not limited to, life ring and/or rope, Shepherd's hook, or the existence of an inoperable pool phone; or

(4) Any other condition deemed to be an imminent health or safety hazard by the department including, but not limited to, the following: bathing load exceeded; occurrence of fecal matter, blood or vomitus incident in the pool; sanitary facilities not functioning properly or in an unsanitary condition; exposed electrical wiring in the pool; or other similar health or safety hazards.

g.) *Procedure when infection is suspected.* When the department has reasonable cause to suspect possible disease transmission, it may require any or all of the following measures, and any other actions necessary to be taken by the permit holder or authorized agent:

(1.) The immediate exclusion of any suspected person(s) from the pool; and/or

(2) The immediate closing of the pool concerned until, in the opinion of the department, no further danger of disease transmission or outbreak exists; and/or

(3) Adequate medical and laboratory examination and results reported to the department as deemed necessary.

h.) *Fecal or vomitus accidents.* The permit holder or authorized agent shall properly eliminate the possible contamination of bathers when a fecal, vomitus or blood accident

occurs in a pool, by following the department's current "Recommended Procedures for Managing Fecal Accidents or Contamination with Vomitus in a Swimming Pool", which is adopted and incorporated herein by this reference.

i.) *Suspension or revocation of permit.* The department shall have the authority to suspend or revoke any permit for failure to comply with the provisions of this Article.

## **Part 6 Construction Approval**

a.) *Plan review.* Upon request, the department shall provide construction application forms and hydraulic analysis forms for the approval of pool construction. All applications and any supplemental data shall be submitted to the department for review.

(1) *Plan preparation.* All drawings, specifications and data as required by the department shall be prepared and submitted by a certified pool contractor at least fourteen (14) days prior to beginning construction.

(2) *Plan details.* Complete plans and details of the pool construction project shall meet the requirements as set forth in the department's current "Swimming Pool Construction Review Worksheet" and shall be accompanied by prints, including a hydraulic analysis of the pool piping and circulation equipment, and manufacturer's cut sheets and/or specifications on all equipment. Samples of pool and/or flooring tiles or other surfacing materials may be requested by the department. Prints or drawings shall comply with standard architectural/engineering practice, and shall bear identification of the certified pool contractor. Other additional data or information may be required by the department to clearly demonstrate and document the work to be undertaken. Minimum print scale shall be one-eighth inch per foot ( $\frac{1}{8}''$  / 1') architectural, or one inch per ten feet (1'' / 10'). A copy of approved pool plans shall be maintained on the premises in the pool office or equipment room.

(3) *Additional data.* Additional data required by the department for the purpose of clarification, anticipated use of the pool or to support any changes in design or scope of the project must be submitted prior to issuance of a permit to construct.

(4) *Changes to plans.* Once department approval has been granted for a pool, construction must be in accordance with approved plans and specifications. Should any changes in the plans become necessary during construction, a letter, describing any changes, revised plans and specifications from the certified pool contractor, shall be submitted to the department for review and approval prior to initiation of such changes. Previously submitted plans shall not be altered without prior approval from the department.

(5) *Plan review fee.* A plan review fee shall be remitted to the department with the plans in accordance with the department's current fee schedule. A fee shall be charged for each additional plan re-submittal after the initial and follow up review in accordance with the departments' current fee schedule.

- (6) *Invalid permit.* If construction is not commenced within one year from the date of approval, the construction permit expires and the project must be resubmitted to the department for approval. A written request for an extension of time prior to the expiration of the permit to commence construction may be approved by the department if no changes to the project are proposed or required.
- b.) *Certified pool contractor.* The certified pool contractor shall be responsible for ensuring that all pool construction is performed in accordance with this article and shall be subject to the following conditions:
- (1) *Certification.* Certification shall be obtained by passing a written examination administered by the department or by a department recognized and approved for reciprocity.
  - (2) *Certification Renewal.* Renewal of certification shall be completed every five (5) years and prior to the contractor's certification anniversary. Certification renewal will be dependent upon the certified pool contractor's past performance and compliance with this article.
  - (3) *Fee.* A fee shall be remitted to the department with a completed application for certification. A fee shall be remitted for renewal of certification within the five (5) year period and prior to certification expiration in accordance with the department's current fee schedule.
  - (4) *Abandoned construction.* A certified pool contractor shall not abandon an incomplete installation without notification to the department within fifteen (15) working days of such event; such notification may not absolve the certified pool contractor of any liability which he/she might otherwise be subject to for the abandonment.
  - (5) *Suspension and revocation.* A pool contractor's certificate may be suspended or revoked by the department upon a hearing to determine any violation of any of the requirements of this article pertaining to certified pool contractors.
  - (6) *Duration of suspension and revocation.* Suspension of a pool contractor's certification shall be levied for a minimum of one year. Revocation of a contractor's certification shall be levied for a minimum of five years. Two suspensions within a five-year period shall be grounds for permanent revocation. A pool contractor with a suspended or revoked certificate shall not be allowed to submit plans for construction nor construct any pool covered by this article.
  - (7) *Appeal.* A certified pool contractor may appeal in writing prior to the effective date of the suspension or revocation of their certificate. If the notice of appeal of the pool contractor is filed to the department within ten (10) days, he or she will be afforded an opportunity for a hearing before this department to show cause why this

certificate should not be suspended or revoked. The decision by the department shall be based on the certified pool contractor's performance.

(8) *Listing.* The department shall maintain a current listing of certified pool contractors which shall include their last known mailing address.

(9) *Change of employment or address.* Any certified pool contractor who has a change in employment or address must notify the department in writing within thirty (30) calendar days from the date of the change.

(10) *Inspections.* A certified pool contractor must request a piping inspection and pressure test, a final construction inspection and, if necessary, any re-inspection of a newly constructed pool that they are responsible for prior to issuance of a permit to operate. A permit to operate will not be issued until all required inspections are completed. The certified pool contractor or his or her authorized agent shall be present at the site for each of these inspections.

(11) *Instructions.* Upon completion of construction and/or prior to the operation of any pool, the certified pool contractor shall give the permit holder complete oral and written operational instructions for the pool, pool equipment, water chemistry, maintenance procedures, and other related information.

c.) *Preliminary plan review.* The owner or agent for the owner may request a preliminary review of the plans by the department without obtaining a permit to construct the pool. A fee shall be charged for this consultation service, in accordance with the department's current fee schedule.

d.) *Other agencies' approvals.* All work must be inspected and approved by all appropriate agencies prior to issuance of a permit to operate.

e.) *Piping inspection.* All pool piping shall be completely exposed and subject to an induced, static water, air, or water/air pressure test at a minimum of fifty pounds per square inch (50 p.s.i.) for a minimum of thirty (30) minutes and shall be inspected by the department prior to being covered by earth, deck or the pool structure. If there are any variations from the approved plans and specifications, such variations must be brought into conformance by the certified pool contractor in accordance with the approved plans. Plans and specifications detailing the variations or changes must be submitted for a construction permit revision prior to continuance of construction.

f.) *Final construction inspection.* The department shall conduct an inspection before final pool construction approval. If the construction is not approved on the initial inspection and first follow-up inspection, then a fee shall be charged for each additional inspection until a final approval is granted.

## **Part 7 Modification Approval**

a.) *Modification approval.* An application to modify a pool must be submitted to and approved by the department prior to the modification being made. All modifications shall be in accordance with plans and specifications approved by the department. Changes in an approved project may be made only after written approval and the written consent of the department. Any additional data required by the department for purpose of clarification, anticipated use or to support the design or scope of the project must be submitted prior to issuance of a permit to modify. Permits to modify are not transferable. A permit to modify a pool is required before any major modification. Modification permits shall be effective for twelve (12) months from date of issuance or until the expiration date on the permit. Written notification shall be made to the department for all other modifications. Replacement of existing, approved equipment with the same approved equipment (i.e., same manufacturer, model number, capacity, and similar specifications) will not require a permit to modify. If the replacement equipment is not the same as the existing equipment, then a permit, along with submittal of the fee, specification sheet(s), and any other data deemed necessary by the department, is required prior to commencement of any work. A renovation shall be subject to the same requirements for permitting as for major modifications.

b.) *Invalid permit.* If modifications are not commenced by the expiration date of the permit, the permit expires and the project must be resubmitted to the department before work may commence. A written request for an extension of time prior to the expiration of the permit to commence a modification may be approved by the department if no changes to the project are proposed or required.

c.) *Renovation approval.* A renovation shall be subject to the same requirements for permitting as for modification approval above.

d.) *Fees.* A permit fee shall be submitted with the application for a major modification or renovation. A fee shall be charged for each re-inspection, if necessary, after the initial and follow-up inspections.

## **Part 8 Operational Approval**

a.) *Permit required.* No person or permit holder shall operate a pool, artificial swimming lagoon, or a natural bathing place without having first applied for and obtained a valid permit to operate from the department. A permit to operate a pool may be suspended or revoked for any violation of this article. Any swimming pool operating without a valid permit from the department shall be subject to immediate closure. Each individually treated pool shall operate under a separate permit.

b.) *Permit nontransferable.* Permits are not transferable from one person to another or from one entity to another.

c.) *Permit and current inspection report displayed.* The operating permit and current inspection report shall be displayed in a conspicuous place so that it is easily readable by the

public at all times. The report is not to be removed until a new report is issued.

d.) *Operating instructions.* All instructions necessary for the proper operation and maintenance of all pool equipment and appurtenances must be easily accessible, readable and conspicuously posted in the filter or equipment room.

e.) *Fees.* All fees must be paid in full before a swimming pool begins operation and a swimming pool operational permit is issued. Annual fees for established swimming pools must be remitted to the Board of Health within thirty (30) days from the receipt of the annual invoice. For any pool that is in operation without a valid operational permit, all applicable fees shall be doubled, in accordance with the current fee schedule.

f.) *Pools not in use/abandoned pools.* Any pool that is not in use or operation, and seasonal pools that are closed until the next swim season, shall be maintained in a safe and sanitary condition. The owner, permit holder or authorized agent for any abandoned pool shall create an opening through the shell of the bottom of the pool for drainage and fill the entire pool with clean earth. Neither an abandoned pool nor any pool not in use shall be allowed to create a nuisance or health hazard.

## **Part 9 Construction**

a.) *Finish and materials.* Pools shall be constructed of inert, impervious, durable, non-toxic materials that will provide a smooth, watertight and easily cleanable surface. All horizontal, interior pool surfaces at pool depths of five feet (5') or less, including steps, benches, or seats, shall be slip-resisting. The surface shall have no cracks or open joints and interior corners shall be coved. Except for water line tiles, maximum twelve inch (12") wide racing lane markers, or wall turn targets, the surface below normal water level shall be finished in a very light color. Vinyl pool liners are prohibited. Rough and abrasive materials are prohibited. Any pool with a metal-based shell or utilizing dissimilar metals shall be provided with sacrificial anodes or other approved means to reduce galvanic action and electrolytic corrosion. There shall be no extensions, means of entanglement or other obstructions in the pool that may cause entrapment or injury to the user.

b.) *Design.* Pools shall be constructed to provide adequate water circulation, bather access and egress and to afford proper operational control. Pool proportioning between deep and shallow water shall be in accordance with the anticipated uses of the pool, with sound engineering and public health design and construction principles. No pool(s) shall be constructed in a manner that limits the use of life saving equipment, limits the pool operator's ability to supervise the facility or creates a hazard to bathers. No pool shall have any part of its perimeter elevated including walls, coping, decks, or similar structures. Vertical edged corners and all protrusions greater than six inches (6") below water level shall have a minimum three-inch (3") radius. Horizontal edges and corners of steps, benches, seats, and similar surfaces shall have a minimum one-inch (1") radius. The wall-to-floor juncture shall be coved with a minimum three-inch (3") radius. Interior walls shall be vertical and shall not be greater than eleven degrees (11°) from plumb. Double level and above deck pools are prohibited.

c.) *Size.* The minimum pool surface area shall be five hundred square feet (500 s. f.), except where otherwise described in this article. Calculations for determining size of a pool and the number and type of associated facilities shall be based on the maximum bathing load (see Appendix – Figure #3). Pool usage shall not exceed the maximum bathing load. The bathing load shall be calculated on the basis of one person for each twelve square feet (12 s.f.) of pool surface area where the depth is less than or equal to five feet (5’); one (1) person for each fifteen square feet (15 s.f.) of pool surface in that portion where the depth exceeds five feet (5’); and 1 person for every three hundred square feet (300 s.f.) where one or more diving boards/platforms are installed. The department shall determine the bathing load for any pool that is designated as a “Special Purpose” pool or any pool with use restrictions. Pool bathing load shall be determined by the department based on the anticipated usage and assessment of other, similar facilities.

d.) *Depths.* Water depths shall be determined by the intended use of the pool. Depth at the slope-break shall not be greater than five feet (5’) for pools with depths exceeding five feet (5’). In the diving well, depth shall be as stipulated in the section entitled “Diving Areas and Equipment”.

(1) *Depth markers.* Permanent, easily-readable, depth markers shall be provided with minimum four inch (4”) high, black numbers and letters with a white background, indicated in feet and, when applicable, in inches (i.e., 5 FT or 5 FEET; 3 FT 6 IN or 3 FEET 6 INCHES). Metric depth markings can be used in conjunction with, but not as a substitute for required depth markers. The depth of water shall be indicated on the vertical pool wall at or above the waterline. Depth markers shall indicate the actual pool depth within three inches (3”) at normal operating water level when measured three feet (3’) from the pool wall or at a tangent point where the cove radius meets the floor, whichever is deeper. Depth markers on the vertical pool wall shall be positioned to be read from the waterside. Depth markers shall be placed in such a way that they allow as much of the numerical value to be visible above the waterline as possible. Deck depth markers shall be installed within eighteen inches (18”) of the pool wall and positioned to be read while standing on the deck facing the pool water. Horizontal depth markers shall be slip resisting. Depth markers shall be installed at the maximum and minimum water depths and at all points of slope change. Depth markers shall be installed at intermediate increments of water depth not to exceed two feet (2’) and not to exceed four feet (4’) in pool areas designated for diving areas. Depth markers shall be spaced not to exceed twenty-five foot (25’) intervals. Depth markers shall be arranged uniformly on both sides and both ends of the pool. Depth markers on irregularly-shaped pools shall designate depths at all major deviations in shape.

(2) *“No diving” markers.* Deck areas at the shallow portion of the pool or where pool depths are five feet (5’) or less shall be permanently marked with either “No Diving” in black letters on a white background with minimum two inch (2”) high lettering or a black and/or red “No Diving” symbol on a white background, located next to depth markers. “No Diving” markers shall be easily readable and slip resisting. “No Diving” markers shall be installed within eighteen inches (18”) of the pool wall.

e.) *Bottom slopes.* The pool floor shall slope uniformly and continuously from the shallowest point of the pool at a maximum of one foot in twelve feet (1'/12') to the deep point, the slope break, or other approved depth change. In pools with depths exceeding five feet (5'), the floor shall have a maximum uniform slope of one foot in three feet (1'/3'). Each pool shall be constructed to facilitate complete drainage of the pool.

f.) *Steps and ladders.* Steps and/or ladders shall be in such number and location as to provide bathers safe egress from the pool. They shall have an easily-cleanable, corrosion-resistant, impervious material, with treads that have a slip-resisting finish, and shall be self-draining. Steps shall have a maximum riser height of twelve inches (12") and a minimum tread depth of twelve inches (12") with a minimum unobstructed width of twenty inches (20") on both sides of the rail on each step. All steps shall have handrails anchored in the bottom step and extended over the coping and anchored in the deck, or a handrail double anchored in the deck that extends out to the center of the bottom step with a maximum height of six inches (6") above the normal water level at that point. Recessed step treads shall have a uniform vertical spacing of twelve inches (12") maximum and seven inches (7") minimum, with a minimum depth of five inches (5") and minimum width of twelve inches (12"). The maximum distance from the coping edge to the upper tread shall be twelve inches (12"). Recessed treads shall be self-draining. Each set of recessed treads shall be provided with a set of handrails or grab rails to serve all treads. A minimum of one (1) set of steps or stairs or a ladder shall be provided at the shallowest point. A minimum of one (1) set of steps or a ladder shall be provided at the deepest point of the pool. An additional step or ladder will be required for each additional seventy five feet (75') or major fraction thereof of pool perimeter over one hundred and fifty feet (150'). Steps shall be clearly and permanently marked on the horizontal surface, within two inches (2") of the step edge, by a (2") dark, continuous line of slip resisting tile. Where water depths are twenty four inches (24") or less at the pool wall, such areas shall be considered as providing an approved mode of entry/exit into/from the pool. Pools over thirty feet (30') in width shall be provided with approved entries/exits on both sides of the deepest end and/or diving areas of the pool.

g.) *Benches and seats.* Benches and seats shall be clearly and permanently marked on the horizontal surface within two inches (2") of the bench or seat edge, by a two inch (2") dark, continuous line of slip resisting tile.

h.) *Decks.* A deck no less than five feet (5') in width, as measured from the inside wall of a pool, shall completely surround the pool.

(1) *Minimum deck width.* A minimum of four feet (4') of unobstructed deck is required behind diving boards and platforms as measured from the edge of the board's or platform's ladder or handrail, whichever is the greatest distance.

(2) *Minimum deck area.* The minimum, complying deck area required shall be equal in size to or greater than the pool surface area.

(3) *Deck surface.* The required deck shall be unobstructed in all directions and shall be constructed at the same elevation as the outside edge of the coping. Minimum



vertical clearance throughout the deck area shall be six feet, eight inches (6' 8"), except the ceiling for an indoor pool, which shall be eight feet (8'). The deck shall be light-colored, slip resisting, easily cleanable, impervious, durable, and drain properly. Rough and abrasive surfaces are prohibited. Prohibited deck surfaces include gravel, pea gravel, epoxy gravel, wood, carpeting, and vinyl. A sample of the deck surface material shall be submitted, other than broom-finished concrete, for approval prior to installation.

(4) *Deck slope and drainage.* Decks shall have a minimum transverse slope of one-quarter inch ( $\frac{1}{4}$ " ) per foot and a maximum of one-half inch ( $\frac{1}{2}$ " ) per foot away from the pool or toward deck drains. The plane of the deck surface shall be uniform, with no steps, curbs, or similar structures, within the minimum required, complying deck area. Decks shall not retain any standing water greater than one-eighth inches ( $\frac{1}{8}$ " ) in depth or greater than one (1) square foot of area for a period of time not to exceed twenty (20) minutes. Deck drainage shall not be incorporated with any pool water or any potable water source. Deck drain grates shall be secured, yet easily removable with an appropriate tool to facilitate cleaning the drains. Adjacent areas to the deck and walkway(s) within the pool enclosure shall be safe and well drained.

(5) *Sun / Tanning Shelves.* If approved, sun or tanning shelves shall be constructed entirely outside, but part of, the internal wall of a pool, with no extensions or the leading edge of the shelf extending beyond the vertical plane of the pool wall. The normal operating water depth within the shelf shall be a minimum of four inches (4") with a maximum water depth of ten inches (10"). A complying deck surface shall completely surround the shelf except for the edge-to-pool portion of the shelf edge. The distance from the surface of the deck to the surface of the shelf shall be a maximum of twelve inches (12"). A continuous line of two inch by two inch (2" x 2"), dark-colored, slip-resistant tile shall be installed along the entire top edge of the shelf. A continuous line of two inch by two inch (2" x 2"), dark-colored, glazed tile shall be installed along the entire front edge of the shelf. The shelf edge shall have a minimum radius of one inch (1"). A minimum of one (1) inlet from the circulation system shall be centrally installed for every one hundred square feet (100 s. f.) of shelf surface area, or major fraction thereof. The shelf surface shall be self-draining with a maximum slope of one foot per twelve feet (1'/12'), and shall comply with all other pool surface requirements. The shelf area must be installed at the shallowest portion of the pool. If the shelf is constructed as part of an ingress, such as steps into the pool, then one handrail may extend from the pool deck to the initial interior surface of the ingress inside the pool and a second handrail may extend from the sun/tanning shelf to the bottom step.

(6) *Coping.* A coping block made with a bull nosed, raised projection or other approved design, with a minimum one inch (1") radius, shall be installed along the entire perimeter of the pool except at the entry point for zero-depth entry pools. The coping shall not retain any water. The coping shall be considered as pool decking.

(7) *Hose bibs.* Hose bibs, with backflow prevention, shall be installed within the pool enclosure. The number and spacing of the hose bibs shall be adequate to reach all

areas of the pool enclosure.

(8) *Deck joints and gaps.* The maximum gaps in decks, between pool decks and the coping, or between other decks or walkways, shall be one half inch ( $\frac{1}{2}$ " ) of horizontal clearance with a maximum vertical elevation of one quarter inch ( $\frac{1}{4}$ " ). Control joints in decks shall be provided to minimize the potential for cracks. Construction joints where pool coping meets concrete deck(s) or other adjacent structures shall be watertight.

(9) *Deck edges.* The edge and corners of deck(s) shall be rounded, tapered or designed and constructed to eliminate sharp corners.

(10) *Trash receptacle.* A minimum of one (1) covered and lined trash receptacle shall be provided and placed in a convenient location in the pool area.

i.) *Construction tolerances.* Construction and design tolerances shall comply with the current edition of the ANSI/NSPI-1, "American National Standard for Public Swimming Pools."

## **Part 10 Water Quality and Sanitation**

a.) *Water source.* Water supplied to the pool, bathhouse, drinking fountain, hose bibs, or any other water supply or outlet shall be clean, clear, free of objectionable minerals and meet standards applicable to potable water. Water supplied to the pool must be delivered through a fill spout with a minimum three inch (3") air gap, installed at least two (2) pipe diameters above the rim of the pool or surge chamber, and located so as not to create an obstruction on the deck or through a make-up water system with a department approved backflow prevention device that is installed in a location which is readily accessible for inspection, repair or testing.

b.) *Backflow prevention.* Approved backflow prevention must be provided on all potable water lines.

c.) *Pool water.* A sufficient number of samples may be taken, whenever the department deems necessary, to affirm, via bacteriological analysis, that the pool water meets the requirements in this article. Samples shall be taken while the pool is in use during normal operational hours. All samples shall be collected, de-chlorinated, and examined in accordance with the procedures outlined in the latest edition of "Standard Methods for the Examination of Water and Wastewater" (American Public Health Association) and/or approved equivalent by the department.

(1) *Chemical Quality.* The pool shall be maintained in an alkaline condition at all times with the pH between 7.2 and 7.8. Chlorine disinfection shall be provided on all pools except when other approved disinfection methods are utilized. The free-chlorine residual in all parts of the pool shall be maintained at a concentration of no less than one and one-half parts per million (1.5 ppm) at all times. Where stabilizing agents are used, a free-chlorine residual shall be maintained at a concentration of no

less than three parts per million (3.0 ppm) at all times. The maximum stabilized or unstabilized free chlorine residual shall not exceed ten parts per million (10.0 ppm) except when super-chlorinating or shocking the pool. An N-diethyl-p-phenylenediamine (D.P.D) test kit, or other method approved by the department to measure the free chlorine residual shall be provided and used. When bromine is utilized, the residual in all parts of the pool shall be maintained at a concentration of no less than two parts per million (2.0 ppm) and no greater than ten parts per million (10.0 ppm.). A D.P.D. test kit or other approved method by the department to measure the bromine residual shall be provided and used. If ultra-violet (UV), ozone generating, or ionization equipment is used, it shall be recognized only as a supplementary disinfection to the minimum requirements for chlorine or bromine disinfectants. (see Appendix, Figure #4, Pool Chemical Parameters)

(2) *Stabilizing chemicals.* When cyanuric acid is used as a stabilizing agent, the maximum concentration shall not exceed one hundred parts per million (100 ppm). At pools using cyanurates, a DPD test kit with cyanuric acid test reagents to measure the cyanurate concentration shall be provided and used. The cyanurate test kit must register readings in excess of the maximum permissible concentration.

(3) *Pool chemicals.* Only chemicals approved by the Environmental Protection Agency and by the department shall be used.

(4) *Testing frequency.* The pool water shall be tested for the disinfectant level and pH at least two times each day or as often as necessary if circumstances warrant, including prior to opening and during peak bathing loads. If applicable, the cyanurate level shall be tested at least once a week. Test results shall be entered on a log that shall be maintained in the pool area for ready access whenever the pool is open. Test results shall be maintained at the pool and available upon request throughout the season or a minimum of one (1) year for pools operated year round.

(5) *Cleanliness.* All pools shall be kept free from sediment, dirt or debris by frequent brushing and vacuuming of the bottom and sidewalls. Visible scum shall be removed immediately.

(6) *Clarity.* At all times when a pool is in use, the water shall be of such clarity that the main drains on the bottom of the pool at the deepest point are clearly visible from the deck area closest to the main drain. The viewer shall be able to clearly distinguish the type, shape and number of openings of the main drain grates or covers. If a pool does not have a main drain, sufficient clarity shall be determined by placing a Secchi disc or comparable six inch (6") diameter black and white disc, on the bottom of the pool at the deepest point. The submerged disc must be clearly visible from the pool deck area closest to the deep end of the pool.

## **Part 11 Circulation System**

a.) *Design and operation.* A separate circulation system is required for each pool and shall

consist of pump(s), piping, filter(s), water conditioning and disinfection equipment, and other accessory equipment that will clarify, condition, and disinfect the water in accordance with this article. All pool equipment shall meet the standards set forth in the most recent edition of ANSI/NSF-50, "Circulation System Components and Related Materials for Swimming Pools, Spas/Hot Tubs" or other, independent testing and certifying organization, and shall be approved by the department. The equipment shall be operated continuously on a twenty-four (24) hour basis to obtain the minimum required number of four (4) turnovers per day, or one turnover every six (6) hours. All pool piping systems shall be designed to accommodate one hundred percent (100%) of the design flow rate. During normal pool operation, a maximum of twenty percent (20%) of the circulation flow shall be through the main drain and a minimum of eighty percent (80%) shall be through the overflow gutters or skimmers. All circulation system components, including filter(s), pump(s), hair lint strainer(s) and other similar components, shall function properly and be maintained in a clean condition. For circulation systems utilizing over-the-gutter circulation, an approved surge device shall be provided. Timers used in conjunction with any circulation equipment are prohibited whenever the pool is open for use, but may be used when the pool is not open during the off season.

(1) *Pumps.* Pump(s) shall be adequate in number and capacity to provide the required pool turnover rate. Pumps shall supply the design circulation and backwash flows at a dynamic head sufficient to overcome friction losses in the piping, appurtenances and maximum filter head loss. If more than one pump is utilized in design or construction, then all of the pumps shall be the same including manufacturer, size, capacity, and other similar factors. Pump performance curves shall be submitted with the plans. An adequately sized strainer shall be provided on the suction side of the circulation pump. Secondary pumps, if used, on vacuum filter systems shall be protected by a strainer sized to adequately protect the pump. Strainers shall be inspected as often as necessary and maintained in a clean condition.

(2) *Filters.* Filter(s) shall be sized and maintained to accommodate the required design circulation flow. If more than one filter is utilized in design or construction, then all of the filters shall be the same including manufacturer, size, capacity, and other similar factors.

(3) *Inlets.* A minimum of two (2) adjustable inlets installed flush with the pool wall or floor shall be located in conjunction with the proposed method of circulation so as to provide effective, uniform circulation of the incoming water throughout the pool and to prevent stagnant areas. The total number of inlets shall be calculated based on one (1) inlet for fifteen (15) linear feet of pool perimeter, or major fraction thereof. Inlets shall be evenly spaced either along the pool perimeter or on the pool floor. Inlets shall be installed below the normal water level. Floor inlets shall be provided on all pools with surface areas exceeding two thousand square feet (2000 s. f.). Additional inlets may be used or may be required in addition to the minimum required number of floor inlets for steps, seats, and sun/tanning shelves to facilitate circulation. Wall inlet fittings shall not project more than one and one-half inches (1½") from the surface of the pool wall.

(4) *Main drain openings.* Each pool shall be provided with two (2) or more hydraulically balanced main drain openings for each main drain line at the deepest portion and constructed to completely drain the pool. Main drain openings must be covered by an approved, secured, and listed suction outlet cover/grate, that is installed according to all manufacturer specifications. The open area of each drain cover shall be at least four (4) times the cross-sectional area of the drain pipe, and sufficient flow area shall be provided so that the full flow velocity at any part of the cover/grate will not exceed one and one half feet per second (1½ fps). Openings between cover/grate bars shall not exceed one half inch (1/2"). Main drain openings shall be constructed in parallel, in a tee configuration, and spaced evenly across the deep portion of the pool, with a minimum spacing of five feet (5') between each main drain opening measured from center to center of suction pipes. If the listed suction outlet cover/grate manufacturer specifies a greater cover/grate separation than five feet (5'), then that distance shall be the minimum allowed separation. Alternatively, main drain openings may be located on two (2) different planes. If three or more main drain openings are installed, their installation shall be in accordance with ANSI/APSP-7 2006 or any successor standard. Main drain opening sumps shall meet the minimum design criteria designated by the manufacturer of the suction outlet cover/grate.

(5) *Skimmers and overflow gutters.* A surface skimming or gutter system shall be provided for each pool and shall be designed and constructed to skim the pool surface when the water level is maintained within the operating water level range of the system's weir device or rim.

(6) *Vacuum cleaning system.* A vacuum system shall be provided for pool cleaning. Wall mounted vacuum cleaning fitting(s) shall be located in an accessible position(s) at least six inches (6") and no greater than eighteen inches (18") below the minimum operating water level or as an attachment to the skimmer(s). A vacuum fitting cover(s) that is self closing, self latching, and compliant with IAPMO SPS 4 shall be provided for wall mounted type vacuum systems. If approved for use, portable vacuum systems shall not be stored on the pool deck.

(7) *Flow meters.* An adequately sized flow meter, capable of measuring and indicating a minimum range of one half (½) to one and one half (1½) times the design flow rate shall be installed on the pool return line to accurately indicate the circulation rate in gallons per minute. Flow meters shall be conspicuously located and installed in accordance with the manufacturer's instructions for placement.

(8) *Heaters.* Pools equipped with heaters shall have a fixed thermometer in the circulation line. Water temperature shall be thermostatically controlled. Adequate external valves and piping shall be provided to enable bypassing the heater and to facilitate complete removal for repairs without interruption of pool circulation. At all times the temperature in the pool water shall not exceed one hundred and four degrees Fahrenheit (104° F). Heaters shall be installed according to the manufacturer's instructions and in accordance with all applicable state, county and local codes. An unbreakable thermometer designed for use in a pool must be available for bathers and

pool staff to monitor pool water temperatures. Control of the pool's water temperature shall not be accessible to bathers.

## **Part 12 Piping and Hydraulics**

a.) *Piping.* The piping system shall consist of non-toxic materials and be able to withstand a minimum pressure of fifty pounds per square inch (50 p.s.i.). Piping configuration shall be designed to minimize friction losses. All piping used for pool circulation and manufacturers must meet the standards set forth in the current edition of ANSI/NSF 50, "Circulation System Components and Related Materials for Swimming Pools, Spas/Hot Tubs", or alternate criteria approved by the department. All pool piping shall bear the N.S.F. seal for potable water and be schedule 40 or greater. Pipe installation shall comply with the applicable local plumbing code and this article. All valves and piping in the equipment room shall be clearly labeled, and water flow direction shall be indicated on exposed piping in the filter room. Piping shall be installed to facilitate complete drainage of the system. Heat bending of any pool piping for installation is prohibited.

(1) *Maximum velocity.* Velocity shall not exceed ten feet per second (10 f.p.s.) in pressure piping or six feet per second (6 f.p.s.) in suction piping.

(2) *Main drain line.* The main drain line shall be designed and constructed to accommodate 100% of the design flow rate, and head loss calculations shall include friction losses of the pipe, fittings and the hair and lint strainer. The size of the main drain pipe shall be continuous throughout the length of the line.

(3) *Skimming system lines.* The skimming system lines shall be designed and constructed to accommodate 100% of the design flow rate. The flow-through rate of the skimming system, based on the manufacturer's minimum recommendations, shall be used to determine the turnover rate if the turnover rate exceeds the manufacturer's recommendations.

(4) *Waste lines.* Pool wastewater shall be directed to an approved sewage disposal system. The backwash waste line shall be no smaller than the size of the pipe exiting the filter for the entire length of the backwash line. There shall be no direct connection between any pool piping and the approved disposal system. Discharge points shall be shown on the plans.

(5) *Piping details.* Plans must include complete details of all pool piping. All pool piping shall be supported in accordance with manufacturer's recommendations.

(6) *Unknown Total Dynamic Head.* Existing pools utilizing sand filters with an unknown total dynamic head shall be considered to have a minimum of sixty (60') feet of head. Existing pools utilizing diatomaceous earth filters with an unknown total dynamic head shall be considered to have a minimum of fifty (50') feet of head on vacuum systems and ninety (90') feet of head on pressure systems. Existing pools utilizing cartridge filters with an unknown total of dynamic head shall be considered

to have a minimum of fifty (50') feet of head.

(7) *Hydraulic calculations.* Hydraulic calculations shall be submitted on approved department forms together with the pool plans. All pool pipe sizing shall be determined by a friction/flow chart for schedule 40 rigid PVC pipe based on the "Williams and Hazen" formula using a constant of 150 or approved equivalent. If approved, other types of piping shall be sized in accordance with an approved friction/flow chart. A copy of the friction/flow chart and a copy of the chart used to determine equivalent pipe lengths shall be submitted with the plans and specifications for new pool construction or for pool piping modification.

### **Part 13 Filters**

a.) *Design.* Filters shall be sized to accommodate or exceed the design flow rate of the system and provide sufficient water clarity as noted in Part10 (c.) (6) *Clarity.*

(1) Filters shall meet the standards of or be listed in the most recent edition of ANSI/NSF 50, or other approved certification organization listing.

(2) Filters shall be designed so that filtration surfaces can be inspected and serviced.

(3) The maximum flow rate of filters shall not exceed the requirements of the most recent edition of ANSI/NSF 50 or other approved organization certification listing.

b.) *Internal pressure.* On pressure-type filters, a means shall be provided to permit the release of internal pressure.

(1) Any filter incorporating an automatic internal air release as its principal means of air release shall have a lid(s) that provide(s) a slow and safe release of pressure as a part of this design and shall have manual air releases in addition to automatic releases.

(2) A separation tank used in conjunction with a filter tank shall have a manual method of air release or a lid that provides a slow and safe release as it is opened.

(3) The following statement shall be conspicuously visible within the area of the air release: "Do not start the system after maintenance without first opening the air release and properly reassembling the filter and separation tank and opening the air release valve."

c.) *Filter Piping.* Piping furnished with the filter shall be of suitable material capable of withstanding one and one half (1½) times the working pressure. The suction piping should be of such construction that it will not collapse when there is a complete shut-off of flow on the suction side of the pump.

## **Part 14 Sand Filters**

a.) *Appurtenances.* Each filter tank shall have an access port for inspection and servicing. Each filter shall have both influent and effluent pressure gauges with a minimum face size of two inches (2"). The filter system shall have an adequately sized, in-line backwash sight glass on the backwash line. All appurtenances shall be conspicuously located for quick inspection.

b.) *Piping and valves.* The filtering system shall be designed with all valves and piping required that allows filtering to pool, filtering to waste, filter bypass to waste, and complete drainage of the system. The piping layout shall accommodate proper maintenance, operation and inspection.

## **Part 15 Diatomaceous Earth Filters**

a.) *Filter tank and septa.* The filter area shall be determined on the basis of effective filtering surfaces, with no allowance given for areas of impaired filtration, such as broad supports, folds or portions which may bridge the filter elements. The bottom of open vacuum filter tanks shall slope to a drain to facilitate complete drainage of the tanks.

b.) *Appurtenances.* Pressure filters shall be equipped with an air-relief valve, influent and effluent pressure gauges with a minimum face size of two inches (2"), and an in-line sight glass on the backwash line. A vacuum gauge with a minimum face size of two inches (2") shall be provided on the pump suction line for vacuum filter systems. All appurtenances shall be conspicuously located for quick inspection.

c.) *Piping and valves.* The filtering system shall be designed with all valves and piping that allows filtering to pool, pre-coat recirculation and/or pre-coat to waste, complete drainage of the system, bypass filter to waste, and backwashing to waste. The piping layout shall accommodate proper maintenance, operation and inspection. If pre-coat recirculation is used in a pressure system, an in-line sight glass, minimum two inches (2") in length, and a valve shall be provided in the pre-coat piping.

## **Part 16 Cartridge Filters**

a.) *Appurtenances.* Each filter shall be equipped with influent and effluent pressure gauges with a minimum face size of two inches (2"). All appurtenances shall be conspicuously located for quick inspection.

b.) *Piping and valves.* The filtering system shall be designed with valves and piping that allows filtering to pool, bypass filter to waste, and complete drainage of the system. The piping layout shall accommodate proper maintenance, operation and inspection.

c.) *Cartridges.* Two (2) sets of cartridges shall be provided so that one set may be cleaned



while the filter is in operation. Disposable cartridges will be replaced when the required filtration rate is impaired. Modular-type cartridge filters, if approved, are not required to have a second set of cartridges.

## **Part 17 Skimmers and Overflow Gutters**

a.) *Surface Skimming.* The actual water level shall be maintained within the operating water level range of the system's weir device or rim. Each skimmer or overflow system shall be designed and installed so as not to constitute a hazard to the user, and to prevent entrance or entrapment of limb, body, or hair.

(1) *Number of skimmers required.* Each pool utilizing skimmers shall have at least two (2) skimmers. One additional skimmer shall be provided for each five hundred square feet (500 s.f.) of water surface area, or fraction thereof.

(2) *Skimmer location.* Skimmers shall be built into the pool wall and shall be evenly spaced along the pool perimeter and located to prevent stagnant areas in circulation.

(3) *Skimmer design.* Each skimmer shall be designed for a flow through rate of at least twenty-five gallons per minute (25 g.p.m.). Additional skimmers shall be provided when the design flow through rate, based on the turnover rate of the pool, exceeds the manufacturer's recommendations. If the manufacturer's recommended maximum flow through the skimmers is not available, then a maximum of fifty-five gallons per minute (55 g.p.m.) per skimmer shall be utilized.

(4) *Skimmer weir.* Each skimmer shall have a properly designed and operating weir or other department-approved means of providing effective skimming.

(5) *Equalizer line.* Each skimmer shall be provided with a device to prevent air-lock in the circulation system suction line. Equalizer lines shall be at least one and a half inches (1½") in diameter, installed with the center no more than 18 inches (18") below the maximum operating level, provided with an equalizer valve, a check valve, and a listed suction outlet cover/grate with a flow rating equal to the maximum system flow divided by the number of skimmers when piped through a common suction line, or the maximum flow rate of the skimmer, whichever is greater.

(6) *Adjustments for circulation.* Each skimmer shall be equipped with a valve that is adjustable to allow for fluctuation in water flow to balance water circulation during operation.

(7) *Basket or Screen.* A non-corrosive basket or screen shall be provided to trap large debris. It shall be installed to allow ready removal and cleaning from an opening in the deck.

(8) *Skimmer access.* Skimmer openings in the deck shall be secured with a cover that

is installed flush to the deck surface, has a slip-resisting surface, and is of such strength to withstand normal deck use.

b.) *Overflow gutters.* Overflow gutters shall be constructed of sufficient size to retain normal overflow, and the top of the gutter shall be uniformly level. Overflow gutter drain lines shall be connected to the circulation system through a surge chamber or other approved surge system. The surge system capacity shall be based upon a minimum of one (1) gallon of surge chamber volume for each square foot of pool surface area. The hydraulic capacity of the overflow gutter system shall be capable of handling one hundred percent (100%) of the circulation flow. Gutter drain lines shall carry the pool overflow to the circulation system. A gutter system may be used for any pool.

c.) *Recessed gutters.* Recessed gutters shall not be less than four inches (4") deep and four inches (4") wide with a minimum of four inches (4") open area above the gutter lip. No part thereof shall be visible from a position directly above the gutter.

d.) *Open gutters.* Open gutters shall not be more than six inches (6") deep nor less than twelve inches (12") wide.

e.) *Rollover or trough gutters.* Rollover or trough gutters shall be provided with a sturdy, non-corrosive, non-slip grate to completely cover the trough. The grate shall be securely fastened to the gutter during operation. Openings in the grate shall not exceed one-quarter inches ( $\frac{1}{4}$ ").

## **Part 18 Disinfection and Chemical Feeders**

a.) *Disinfection required.* The water in each pool shall be continuously chemically treated with an approved disinfecting agent, with associated, approved equipment, whereby the residual can be easily measured by simple and accurate field tests. Each pool shall have its own, separate, disinfecting equipment.

b.) *Hypo-chlorinators.* Positive-displacement, peristaltic, or other approved types of hypo-chlorinators or chemical solution feeders used for hypo-chlorination shall be of sturdy construction, shall be able to withstand normal wear, corrosion and deterioration by disinfectant solutions, and shall be capable of continuous, metered feeding of required, approved solution on a 24-hour basis. The feed rate shall be adjustable from zero to full range. Hypo-chlorinators shall be capable of feeding an unstabilized chlorine dosage to the circulation flow from chlorine solutions at a pressure greater than the circulation system pressure. The hypo-chlorinator shall be wired electrically to turn off automatically whenever the circulation pump is not operating. External "on-off" timers used in conjunction with hypo-chlorinators are prohibited. An adequately sized, corrosion-resistant, and appropriately labeled container with a tight-fitting lid shall be provided and used to hold chlorine solutions. Chlorine solutions shall be delivered down-line from the pool filter and, if applicable, the pool heater, to achieve an effective pressure differential.

c.) *Chemical feeders.* If chemical feeders are provided to add pH solutions into return pool piping, they shall meet the requirements of subsection (b) above. A single feeder may not be alternately used for chlorination and pH control. External “on-off” timers used in conjunction with chemical feeders are prohibited. Chemical feeders shall be wired electrically to turn off automatically whenever the circulation pump is not operating. An adequately sized, corrosion-resistant, and appropriately labeled container with a tight-fitting lid shall be provided and used to hold pH solutions.

d.) *Carbon dioxide gas.* Pools utilizing compressed carbon dioxide gas for pH control shall adhere to all applicable local, state, and federal requirements.

e.) *Chlorine erosion feeders.* Only those erosion feeders specifically approved by the department may be used for pool disinfection. Erosion feeders shall be capable of feeding a chlorine dosage to the circulation return piping. Each pool shall have its own erosion feeder, if an erosion feeder is permitted.

f.) *Bromine feeders.* Only those bromine feeders specifically approved by the department may be used for pool disinfection. Bromine feeders shall be capable of feeding a bromine dosage to the circulation return piping. Each pool shall have its own bromine feeder, if a bromine feeder is permitted.

g.) *Other chemicals and methods.* No other chemical for disinfection or pH control may be used unless the chemical is specifically approved by the U.S. Environmental Protection Agency and the department, following demonstration of all aspects of the disinfection and toxicological properties thereof. No other method of disinfection or pH control may be used unless it is listed by the National Sanitation Foundation, complies with the most recent edition of ANSI/NSF-50, “Circulation System Components and Related Materials for Swimming Pools, Spas/Hot Tubs,” and is approved by the department.

(h) *Gas chlorine.* All applicable local, state, and federal requirements concerning the proper handling of chlorine gas must be followed. Pools utilizing chlorine gas shall have the following provided:

(1) *Gas chlorination room.* Where gas chlorine is used, the chlorinator shall be housed in an enclosure located above grade. The enclosure must be ventilated with outside air by a chlorine-resistant exhaust fan with vents that are located a maximum of four inches (4") above the floor level, equipped with automatic louvers to achieve cross-flow ventilation located at the top of the enclosure for admitting fresh air, and capable of providing one (1) enclosure air change per minute. Exhaust air shall be directed away from the pool area and shall not affect evacuees, or any adjacent, inhabited area, in the event of a chlorine gas leak. Exhaust fans shall be wired to operate continuously. Adequate lighting, with a minimum of twenty foot candles (20 f. c.) at thirty inches (30") above gas chlorination floor level, to illuminate the entire enclosure shall be provided. The enclosure’s light switch shall be located outside the enclosure entrance. The enclosure door shall have a sealed, reinforced glass

observation port with a minimum observation opening of four inches by six inches (4"x 6"), centered and installed at sixty inches (60") above the exterior ground level, to enable inspection of the interior of the gas chlorine enclosure without entry. The telephone numbers of the gas chlorine supplier and the local fire department or 911 shall be posted on the exterior side of the gas chlorine enclosure.

(2) *Gas chlorination room signage.* A warning sign shall be posted on the exterior side of the enclosure door(s) that states, in minimum four inch (4") high letters, "DANGER - CHLORINE". The entrance door shall open to the exterior of the enclosure and shall be secured at all times except for authorized entry.

(3) *Gas chlorination tanks.* All chlorine tanks shall be secured by chains or other approved devices. Full and empty tanks shall be segregated, appropriately tagged, and stored in an upright position. Chlorine cylinder valve protection caps and valve outlet caps must be in place at all times except when the cylinder is connected for use. New, approved washers must be used each time a cylinder is connected. A chlorine valve cut-off wrench shall be kept on the cylinder valve stem that is in use. Platform scales or other means of gauging available chlorine gas supply must be provided, or a full reserve tank of chlorine gas shall be kept onsite at all times. The chlorinator and all line and tank fittings must be checked for leaks at regular intervals and after every tank exchange. The gas chlorine system shall be wired electrically to turn off automatically whenever the circulation pump is not operating. A small bottle of fresh ammonia solution or other approved detection method shall be provided to test for leaks and stored securely outside the gas chlorine enclosure.

(4) *Gas chlorine personnel.* At least one (1) person trained in the performance of routine gas chlorination operation, maintenance, and emergency procedures must be readily available during the pool's normal operating hours. All pool personnel must be informed about gas chlorine leak control procedures. Only trained, designated personnel shall operate the chlorinator and change chlorine cylinders.

(5) *Gas chlorine personnel protection.* Two full-face, self-contained breathing apparatus (SCBA) or supplied air respirator that meets Occupational Safety and Health Administration (OSHA) standards for construction and operation must be provided for protection against chlorine in the event of a leak. This equipment shall have sufficient capacity for the purpose intended. SCBA equipment must be readily accessible at a location outside the chlorine gas enclosure that is acceptable to the local fire chief. A written respirator program shall be provided and employees shall be trained in the use and maintenance of such equipment to insure operability and safety. Entry into the chlorine gas room must not occur without necessary safety equipment, such as SCBA, for leaks, or escape type half-face or mouthpiece, cartridge-type respirator or SCBA when conducting general maintenance, changing cylinders, or other related work.

i.) *Hand feeding.* Whenever a pool is open to a member of the public, no disinfectant or pH

control chemical may be added by hand, whether to skimmers or directly to the pool.

j.) *Automatic controllers.* If an automatic controller for adjusting chemical levels is to be used at a pool, the device and connections thereof shall be installed in accordance with the manufacturer's instructions. The device must be directly wired to the recirculation pump and a flow switch, such that when the pump stops, the chemical feeders are switched off. Automatic controllers must be submitted for approval by the department prior to installation. An automatic pool chemical controller, if approved for installation, shall not substitute for the requirement to manually perform onsite chemical pool water tests.

k.) *Chemical storage.* All pools shall have an adequate, safe and secure designated storage area for pool chemicals. If used, dedicated chemical storage rooms must have ventilation with one air change every three minutes exhausted to the exterior away from occupied areas. Chemical vaults or storage containers must not allow a person to enter inside.

l.) *Fail-safe feature.* Fail-safe features approved by the department shall be incorporated to prevent the pool chemicals from siphoning or being fed directly into the pool, pool piping, water supply, or pool enclosure if the circulation equipment is not in operation or fails.

## **Part 19 Equipment Room**

a.) *Equipment Room or Enclosure.* Pumps, disinfection equipment, filters, appurtenances and any other approved equipment shall be located in a permanent room, or completely enclosed area. The entry door shall open to the exterior of the equipment room or enclosure and shall be kept locked except for servicing the pool equipment. The equipment room or enclosure and any storage area used for pool supplies, additional equipment, or chemicals shall be kept clean, safe and adequately lighted. Approved overhead protection shall be provided to completely cover the entire equipment room or enclosure.

b.) *Ventilation and drainage.* Suitable drainage (such as a sump pump or floor drain) and ventilation of fresh make-up air must be provided for all equipment rooms. Above grade equipment rooms or enclosures shall have either forced draft or cross ventilation. Below grade equipment rooms or enclosures shall have stairway access and forced ventilation. The open area for cross ventilation shall be calculated as at least five percent (5%) of the total wall area of the enclosure. The total cross ventilated area shall be comprised of a louvered opening or louvered door and an additional louvered opening on at least one other side of the enclosure. Forced draft ventilation shall require a chlorine-resistant exhaust fan, capable of providing one (1) enclosure air change every three (3) minutes and a vent with louvers located in an equipment room wall or door. The exhaust fan shall be installed so as to exhaust the equipment room air away from the pool enclosure and adjacent inhabited areas. The entire enclosure shall have a smooth concrete floor that slopes one-quarter inch per foot ( $\frac{1}{4}'' / 1'$ ) to a floor drain connected to an approved sewage disposal system. Hose bibs located in an equipment room shall be protected by an approved backflow prevention system.

c.) *Equipment clearance.* All equipment and piping shall be installed to facilitate servicing with minimal effort. Filter tanks shall be at least eight inches (8”) apart, twelve inches (12”) from walls, and thirty-six inches (36”) from the ceiling. Ceiling height shall be a minimum of eight feet (8’) from the floor surface. Clearance around all equipment and appurtenances must permit unobstructed, ready access for inspection, maintenance, and operation.

d.) *Electrical controls.* No switches, starters, panel boards or similar electrical equipment shall be located in areas accessible to bathers, except for therapy or booster pump jet or inlet timers and emergency shut-off switches that must be properly grounded.

## **Part 20 Diving Areas and Equipment**

a.) *Dimensions.* Dimensions (width, depth and length) of the diving area shall be in accordance with anticipated use by divers, and with the applicable sanctioning organization recognized and approved by the department. The dimensions shall comply with the requirements as stipulated in the Appendix, Figures #1 & #2.

b.) *Clearance.* Diving boards or diving platforms must be installed no less than ten feet (10’) apart (edge to edge) and no less than ten feet (10’) from any pool side wall, or in accordance with the manufacturer’s specifications, whichever is the greater distance. At least fifteen feet (15’) of free, unobstructed clearance shall be provided above diving boards and diving platforms.

c.) *Finish and Use.* Diving boards and platforms shall have a light colored, slip-resistant finish. Starting platforms shall be used only for competitive swimming, shall have a light-colored, slip-resistant finish, and shall be removed from the deck when not being used for their intended purpose.

d.) *Safety.* Approved diving equipment shall be installed only on pool types that are equal to or larger than the pool type designated by the manufacturer. Diving equipment shall be installed according to the manufacturer’s instructions and specifications and this article. All diving stands higher than twenty-one inches (21”) measured from the deck to the top of the secured end of the board shall be provided with stairs and/or a ladder. Steps and ladders shall be of corrosion-resistant material, easily cleanable and with treads that are slip-resistant and self-draining. Platforms and diving equipment of one meter (1m) shall be protected with handrails that shall be at least thirty inches (30”) above the diving board or platform surface. All platforms or diving equipment higher than one meter (1m) shall have dual handrails that are approximately eighteen inches (18”) from the bottom rail and thirty-six inches (36”) from the top rail above the diving board or platform surface. All platform or diving equipment greater than one meter (1m) in height shall have dual handrails installed at a maximum of one meter (1m) above the deck level and continuous above the board or platform, and in accordance with manufacturer’s specifications. All required handrails for diving platforms/boards shall extend over to at least the edge of the pool wall. Diving equipment shall be permanently anchored to the pool deck. A sign stating “Only one user allowed on diving board, platform or ladder at any time” shall be posted at the base of access to the

diving board.

## **Part 21 Lighting**

a.) *Lighting required.* Artificial lighting shall be provided for all pools. Lighting shall be adequate to illuminate the entire swimming pool and enclosure without glare. Electrical wiring, fixtures, and installation shall conform to all applicable state, county and local building code requirements. Ground-fault interrupters must be provided. Light fixtures located within the pool area shall be protected by a shatter-resistant lens. Underwater lights with a colored lens or bulb are prohibited. Supplemental lighting, such as fiber optics, shall not be considered as the primary source for pool lighting.

b.) *Lighting requirements.* Lighting in dressing rooms, sanitary facilities, and equipment rooms shall comply with the local code requirements. Pool and deck areas shall be lighted in accordance with the following minimum requirements:

(1) *Underwater Lighting.* A minimum of 0.5 watts underwater lighting per square foot of pool surface area shall be provided. Underwater light fixtures shall be installed so as to effectively illuminate the entire pool.

(2) *Deck and Pool Lighting.* A minimum of twenty (20) foot candles at 30 inches (30") shall be maintained in service on all deck areas.

## **Part 22 Sanitary Facilities**

a.) *Sanitary facilities required.* Required sanitary facilities including toilets, urinals, lavatories and showers are to be enclosed in a bathhouse and are required at all new pools, except for those pools that meet the criteria stated in subsection (b) below. In determining the number of sanitary fixtures required, the minimum bathing load as determined by Appendix Figure #3. Each pool shall have the "Maximum Bather Load" determined at time of plan review. The bathing load composition shall be assumed to be one-half (½) men and one-half (½) women. The bathhouse and sanitary facilities shall be maintained in a clean and sanitary condition. A standard architectural drawing of the bathhouse showing the layout of the facility, the location of all fixtures, the flooring, including drainage and slopes, and any other pertinent information that the department deems necessary to ensure compliance with this article, shall be submitted for approval by the department prior to any work performed. Fixtures shall be installed in accordance with applicable plumbing codes and shall be properly protected to prevent cross-connections.

b.) *Sanitary facilities.* If all dwelling units have individual sanitary facilities and are located within three hundred feet 300' of the pool, as measured from the inside the nearest pool wall, no additional sanitary facilities will be required. If sanitary facilities are provided but not required for bathers, they shall meet all requirements of this article except for the number of

facilities required. If there is more than one pool at a single address or property and all units are within three hundred feet (300') in any direction from at least one of the pools, then no separate bathhouse is required. A shower meeting local plumbing code requirements and with hot and cold water through a mixing valve that does not exceed 120°F, shall be provided at each approved entrance into the pool area if no bathhouse is required. Footbaths are prohibited.

c.) *Facility size requirements.* Facilities shall be provided in proportion to the maximum bathing load (see Appendix – Figure #3) based on the number of dwelling/living units outside a three hundred foot (300') radius as measured in any direction from inside the nearest pool wall. Separate facilities shall be provided for men and women. Family or unisex facilities will be allowed only when the minimum number of required men and women's facilities is provided. In calculating facility size requirements, the number of required fixtures shall be rounded up to the next whole number if the fractional bather increment equals or exceeds one-half (1/2) the base number for the fixture (i.e. 150 men would require 2 toilets, 2 urinals, etc).

(1) *Toilets.* One (1) toilet shall be provided for each bather increment of one hundred (100) men or fifty (50) women.

(2) *Urinals.* One (1) urinal shall be provided for each one hundred (100) men. A toilet may be substituted for a urinal with department approval.

(3) *Lavatories.* One (1) lavatory, with hot and cold water through a mixing valve that does not exceed 120°F, shall be provided for each one hundred (100) men or women.

(4) *Showers.* One (1) shower, with hot and cold water through a mixing valve that does not exceed 120°F, shall be provided for each one hundred (100) men or women. Showers shall be an integral part of the interior of the bathhouse and located for bather use prior to entering the pool area. Shower floors shall slope one-quarter inch per foot ( $\frac{1}{4}'' / 1'$ ) to a drain and shall meet the same requirements for bathhouse floors as stated in subsection (e) below. An exterior shower shall not substitute for the minimum required number of interior showers.

d.) *Location.* The bathhouse to pool configuration shall be such that bathers must pass through or by the bathhouse as they enter into the pool enclosure. A minimum of five feet (5') of complying deck or walkway with unobstructed access shall be provided between the bathhouse/sanitary facilities and the edge of any pool within the pool enclosure. If all of the required minimum number of sanitary facilities or fixtures is not located within the pool bathhouse, then a minimum of fifty percent (50%) of the required sanitary facilities must be within the pool bathhouse with the remaining sanitary facilities located within three hundred feet (300') of the pool.

e.) *Floors.* Floors shall be smooth, impervious, light-colored, slip-resistant, easily cleanable, shall have a slope of one-quarter inch ( $\frac{1}{4}''$ ) per foot to drain(s), and shall be coved at the wall junction with ceramic tile or approved equivalent. A sufficient number and effective spacing



of floor drains shall be provided to ensure complete drainage. A maximum of ten percent (10%) of the total floor surface area may be any dark color. Any standing water in the floor shall not exceed a depth of one-eighth inches ( $\frac{1}{8}$ "), shall not exceed one square foot (1 s.f.) in area, and shall not remain on the floor more than ten (10) minutes. A sample of the proposed flooring material, other than concrete, shall be submitted to the department upon request for approval prior to installation.

f.) *Partition walls.* Partition walls shall terminate at least six inches (6") above the floor or shall be placed on a continuous raised masonry or concrete base at least four inches (4") high.

g.) *Hose bibs.* At least one (1) hose bib with backflow prevention shall be provided with a sufficient length of hose to service both the men and women's sections of the bathhouse.

h.) *Water fountain.* An approved, sanitary drinking fountain shall be conveniently accessible within the pool enclosure to all bathers.

i.) *Food.* Eating and drinking shall not be permitted within the swimming pool, but may be permitted on the deck area at a distance of at least ten feet (10') horizontally from the pool edge. Food and beverages shall only be served in non-breakable containers. Covered garbage containers shall be provided where food and/or beverages are available and allowed to be consumed.

j.) *Lighting.* The interior of the bathhouse, including the sanitary facility area, locker or dressing area, and hallway, shall be well-lighted with a minimum of thirty foot candles (30 f. c.), as measured at floor level, of incandescent light or equivalent for each square foot of floor area.

k.) *Solid waste disposal.* An adequately sized, covered and lined trash receptacle shall be provided in each men and women's sanitary facility area.

l.) *Bathhouse amenities.* At all times, an adequate supply of soap, toilet paper and paper towels shall be provided and stored in appropriate dispensers conveniently accessible to users. A minimum of one (1) diaper changing station for babies shall be provided in each men and women's section of the bathhouse. Bathhouse mirrors shall be unbreakable.

## **Part 23 Safety**

a.) *Pool barrier.* Each pool shall be completely enclosed by an effective barrier that shall conform to the code(s) of all authorities having jurisdiction.

b.) *Pool operator.* A pool operator shall be responsible for the operation of a pool. The pool operator shall be in full charge of all pool use and shall have authority to enforce all rules of safety and sanitation, and shall be responsible for the proper maintenance of the pool and all physical and mechanical equipment. The pool operator shall be trained in a pool operator's

course approved by the department. Additional personnel shall be provided as needed to supervise other pools and facilities and to ensure bather compliance with pool entry conditions. The provisions for training shall become effective two (2) years after date of enactment of this article for existing pools and shall become effective immediately for new pools.

c.) *Record keeping.* Each pool operator shall maintain a daily record of operating information, together with other data as may be required for each pool relative to the operation of the pool. The records shall include data on disinfectant levels, pH, maintenance procedures, together with such other data as may be required by the department relative to the maintenance of the pool. Daily records and other operational data shall be maintained onsite and shall be made available to representatives of the department upon request. The pool operator shall be responsible for closing the pool when necessary and excluding unauthorized persons from entering the pool area.

d.) *Lifesaving equipment.* Each pool shall be provided with a shepherd's hook attached to a non-telescoping pole, with a minimum length of fourteen feet (14'), and made with a blunt end. Each pool shall be provided with a United States Coast Guard approved lifesaving ring having an outside diameter of fifteen to twenty-four inches (15"-24"), firmly attached to a one-quarter inch to three-eighths inch ( $\frac{1}{4}$ "-  $\frac{3}{8}$ ") diameter throwing rope that is as long as one and one half ( $1\frac{1}{2}$ ) times the maximum width of the pool, or fifty feet (50'), whichever is less. Additional sets of lifesaving equipment are required for pools longer than fifty feet (50') and shall be provided for each fifty feet (50') of pool length or major fraction thereof. Lifesaving equipment shall be mounted in a conspicuous place within the pool enclosure and be readily available for use and in good condition.

e.) *Lifeguards.* Lifeguards, if provided, shall have current lifeguarding and CPR certification by the American Red Cross, the YMCA, National Pool and Waterpark Lifeguard Program, or comparable, nationally recognized certifying organization. Either the original certificates or photocopies thereof shall be maintained at the facility and shall be made available to representatives of the department upon request.

f.) *Lifeguard chairs.* If provided, lifeguard chairs shall be located to provide lifeguards a clear, unobstructed view of the entire pool, including the pool bottom at its deepest point. Lifeguard chairs shall only be occupied by a qualified lifeguard at all times the pool is open.

g.) *No lifeguard on duty.* Where no lifeguard is on duty, signs shall be posted in a conspicuous location at the entrance to the pool area and within the pool area stating, in clear legible letters at least four inches (4") high, "WARNING - NO LIFEGUARD ON DUTY."

h.) *Telephone.* An operable, hard-wired, weatherproof telephone, with direct 911 access or capability installed in a conspicuous location shall be readily available at all times within the pool enclosure. Directions to telephone locations must be conspicuously posted if the telephone is not readily visible in the pool area.

i.) *Emergency telephone numbers.* A sign stating "EMERGENCY 911" shall be posted at the

telephone. Alternatively, the telephone may be equipped with 911 speed dial access. The telephone number of the pool operator shall be posted at the telephone.

j.) *Electrical requirements.* All requirements for electrical compliance shall conform to code(s) of all authorities having jurisdiction. Electric boards, switches, wiring, or other electrical components shall not be accessible to bathers.

k.) *First aid kit.* Each pool shall be supplied with a readily available first aid kit. The container shall be durable and weather-resistant, and shall at all times be kept supplied and ready for use. The first aid kit shall be mounted in a conspicuous location in the pool area, or secured by pool personnel on site knowledgeable of its whereabouts. If the kit is not in the immediate pool area, then adequate signage shall be posted within the immediate pool area with a minimum one-inch (1") high letters that clearly states the location of the first aid kit.

l.) *Float line with floats.* A tightly stretched polypropylene or nylon rope or float line with plastic floats shall be installed across the pool along the slope-break in pools where the depths exceed five feet (5'). The floats shall be spaced no greater than seven feet (7') apart. The floats shall be secured so that they will not move. The float line shall be of sufficient size and strength to provide an adequate handhold and support loads imposed by all bathers. The float line shall be securely fastened to recessed wall anchors made of corrosion-resistant materials. A float line shall also be installed to separate swimming from other areas within the pool, such as sliding, diving, or from an amusement area in a multi-purpose pool. A four-inch (4") line of dark, slip-resistant tile shall be installed directly beneath and for the entire length of each float line, or where deemed necessary by the department.

m.) *Swim diaper use.* Children who are not yet potty trained must wear snug fitting plastic pants or a water resistant swim diaper.

n.) *Communicable diseases.* No person knowingly suffering from a communicable disease that is transmissible by water shall use the pool.

n.) *Pool rules and posted bathing load.* Simply stated rules and safety guidelines for bathers, along with signage stating the maximum bathing load shall be conspicuously posted. The lettering shall be a minimum of three quarter inch (3/4").

o.) *Animals prohibited.* Except for service animals for the physically impaired, no animals shall be allowed within the pool enclosure.

p.) *Glass prohibited.* Glass of any type, unless specifically authorized by the department, shall not be allowed within the pool enclosure.

q.) *Accident reporting.* All drownings or injuries requiring hospitalization shall be reported in writing within twenty-four (24) hours of the occurrence to the department and shall fully describe the incident. A copy of the paramedic, EMT, medical examiner or police report, if any, shall also be forwarded to the department with the report.

## **Part 24 Wading Pools**

a.) *Application.* All sections of this article shall apply to wading pools in addition to the following provisions:

b.) *Construction.*

(1) *Location.* A wading pool must be located so that a lifeguard or operator may easily keep bathers under surveillance. A wading pool must be located adjacent to the shallow end of any other pool. If a separate barrier is installed for the wading pool area, then clear visibility through the wading pool barrier shall be provided.

(2) *Depth.* The depth of a wading pool shall not exceed eighteen inches (18").

(3) *Slope.* The bottom slope shall not be more than one foot (1') in twelve feet (12'). Wading pools shall be completely self-draining.

(4) *Walk areas and decks.* A minimum of ten feet (10') of complying deck surface shall separate a wading pool from any part of any other pool, as measured from the wading pool edge to another, nearest pool edge.

(5) *Lighting.* Underwater lighting is not required for wading pools, but other lighting requirements, as stated in the section "Lighting", shall be required.

c.) *Circulation system.*

(1) *Circulation.* The circulation equipment shall be operated continuously on a twenty-four (24) hour basis to achieve the minimum requirement of one turnover every two (2) hours. Fill and draw-type wading pools are prohibited from use.

(2) *Skimmers.* One skimmer shall be provided for each two hundred square feet (200 s.f.) of wading pool surface area or fraction thereof. Equalizer lines shall be installed at the lowest portion of the wall or in the floor, and be covered by a properly secured, approved grate.

(3) *Inlets.* A minimum of two (2) adjustable inlets shall be provided. The number of inlets shall be calculated based on one inlet per ten feet (10') or major fraction thereof of pool perimeter. Inlets shall be evenly spaced either along the pool perimeter or on the pool floor. Wall inlets shall be placed as close to the pool floor as possible.

(4) *Life-saving equipment.* Wading pools are exempt from Part 23 "Safety", d.) *Lifesaving equipment.*

## Part 25 Spray Pools

a.) *Application.* All sections of this article shall apply to spray pools with the following additional provisions:

(1) *Construction.* The bottom of a spray pool shall slope a maximum of one foot (1') in twelve feet (12') to an approved drain. The bottom of a spray pool shall be completely self-draining and allow for no standing water. A spray pool must be located adjacent to the shallow end of any other pool. Water attraction devices, if provided shall comply with the section in this article entitled "Interactive Play Devices." Depth markings and "No Diving" markings are not required.

(2) *Circulation.* The circulation equipment shall be operated continuously on a twenty-four (24) hour basis to obtain the minimum required number of one turnover every thirty (30) minutes. All circulated water from the pool shall be collected in an approved surge device.

(3) *Water source.* Spray heads shall be served by an approved water source that has approved backflow prevention. Spray heads and supply fixtures shall not constitute a tripping hazard. Spray heads shall be installed so as to eliminate any possibility of their submergence.

(4) *Location.* Spray pools must be located so that the lifeguard or operator may easily keep bathers under surveillance. Spray pools shall not be located near the deep end of any other pool.

(5) *Safety.* Spray pools are exempt from Part 23 "Safety", d.) *Lifesaving equipment.*

## Part 26 Whirlpools

a.) *Application.* All elements of this article for pools shall apply to whirlpools with the following additional provisions: Whirlpools that are emptied and cleaned after each single-bather use are exempt from this article.

(1) *Depths.* Water depth shall be no more than four feet (4'). No seat or bench shall be more than two feet (2') below the normal waterline.

(2) *Slopes.* Slope of the whirlpool floor shall not exceed one foot (1') in twelve feet (12'). The whirlpool floor, seat and steps shall be completely self-draining.

(3) *Walk areas and decks.* A walk area or deck no less than five feet (5') in width as measured from the inside wall of the whirlpool shall surround the whirlpool on at least one half ( $\frac{1}{2}$ ) of the perimeter of the whirlpool.

(4) *Thermometer.* All whirlpools shall have a non-mercury based, shatter-proof thermometer that is in close proximity to and can be viewed by bathers at all times.

b.) *Circulation system.*

(1) *Circulation.* The circulation equipment shall be operated continuously on a twenty-four (24) hour basis to obtain the minimum required rate of one turnover every thirty (30) minutes. A minimum of one (1) skimmer shall be provided and one (1) additional skimmer shall be provided for each one hundred square feet (100 s. f.) of whirlpool surface area or fraction thereof beyond the initial one hundred square feet (100 s. f.) of the whirlpool. Air intakes for therapy pumps shall be protected with an approved screen or grate, shall be located within the equipment room, and shall have the intake opening installed at least twelve inches (12") from the surface of the floor.

(2) *Inlets.* A minimum of two (2) inlets shall be provided. The number of inlets shall be calculated based upon one inlet per ten feet (10') or major fraction thereof of whirlpool perimeter. Inlets shall be located as close to the floor as possible or in the floor. No inlet shall be less than eighteen inches (18") below the normal water level. Hydrotherapy inlets shall be installed flush with the pool wall or floor.

(3) *Suction outlets.* Source water for hydrotherapy systems shall be through the main drains, a surge chamber, or other approved device. Sufficient flow area shall be provided so that the combined or separate circulation and hydrotherapy full-flow velocity through the main drain grates or suction outlets does not exceed one and one-half feet per second (1½ f.p.s.). A minimum of two (2) main drains or suction outlets for each circulation system or hydrotherapy system suction line shall be provided and spaced evenly and as far apart as possible in the deepest portion of the whirlpool floor; or, located on two (2) different whirlpool surface planes, i.e., one (1) on the bottom and one (1) on the opposite vertical wall at the lowest point.

c.) *Safety equipment.* Whirlpools with surface areas less than two hundred and fifty square feet (250 s. f.) are exempt from the safety equipment requirements stated in Part 23, "Safety",

d.) *Lifesaving equipment.* All whirlpools shall have the following equipment:

(1) A clock, with a minimum twelve-inch (12") face, shall be provided and mounted vertically so as to be clearly seen by all bathers in the whirlpool.

(2) A therapy or booster pump timer shall be mounted on a wall at normal switch height above the floor, at least four feet (4') away from the pool edge, equipped with a maximum timer limit of fifteen (15) minutes.

## Part 27 Waterslides / Splash Pools

a.) *Application.* All elements of this article for swimming pools shall apply to any pool used in whole or part as a splash pool for a waterslide(s) with the following additional provisions:

b.) *Construction.*

(1) *Design, construction and maintenance.* All slides and slide components shall be constructed and maintained in accordance with the manufacturer's specifications and this article so that they will not constitute a safety, physical or health hazard given its normal intended use and purpose. Design and materials used in construction shall be in accordance with proper structural engineering practice for providing a sound, durable structure.

(2) *Flume clearances.* The distance between the side of a flume exit and a pool side wall shall be at least five (5') feet and the distance between sides of adjacent flume exits shall be at least six (6') feet, or in accordance with the slide manufacturer's recommendations, whichever is the greater distance. The distance between flume exits and the opposite side of the pool or end of a run out, excluding steps and handrails, shall be at least twenty feet (20') or, in accordance with the slide manufacturer's recommendations, whichever is the greater distance. If more than one waterslide or flume is present, then both flume terminals shall be constructed parallel to each other or to any pool or run out sidewall or other pool structure.

(3) *High-speed slides.* Special provisions, approved by the department, shall be made in flume exit design, pool depth and pool width as measured from the flume exit, to safely accommodate high-speed slides in accordance with the slide manufacturer's instructions.

(4) *Flume terminus.* The flume shall terminate in accordance with the slide manufacturer's recommendations. The flume terminus shall be parallel with the vertical pool wall, or in accordance with the manufacturer's instructions.

(5) *Splash pool depths.* The operating water depth of the splash pool at the end of a flume shall be three feet (3') or in accordance with the manufacturer's instructions, whichever is the greater depth. This depth shall be maintained in front of the flume for a distance of at least twenty feet (20').

(6) *Run outs.* If permitted, run outs shall be constructed in accordance with the slide manufacturer's recommendations.

(7) *Access to slide.* A surfaced walkway, steps or stairway shall be provided between the pool and the top of the flume. The access to the top of the slide shall be slip resistant and not allow for standing water, be separated from the flume by a physical barrier, set back far enough from the operating flume such that it cannot be contacted by users on the way down the slide. A minimum five foot (5') wide, unobstructed

deck shall be provided from the base of the access to the slide to the edge of the deck away from the slide.

(8) *Lighting.* For an outdoor water-slide used at night or for an indoor waterslide, adequate lighting shall be provided for all areas of the flume, in accordance with the Section, "Lighting."

(9) *Volume of pump reservoirs.* The pump reservoirs shall have sufficient volume, in accordance with the manufacturer's instructions, to contain enough water to insure that the lower splash pool will maintain a constant water depth. An approved, automatic make-up water device, with backflow prevention, shall be provided for each reservoir.

c.) *Circulation system.* A water circulation system consisting of pumps, piping, filters, water conditioning, and disinfection equipment and other accessory equipment shall be provided in order to clarify, condition and disinfect the splash pool volume of water or water circulated through a run out, and all water used for the slide. The equipment shall be operated on a twenty-four (24) hour basis to obtain the minimum one (1) turnover every hour.

d.) *Suction outlets and fittings.* If suction outlets and fittings separate from the circulation system's main drains are used for make-up water for the slide, they shall be located at the lowest portion of the splash pool; or may be installed in the lowest portion of the splash pool wall opposite from the flume terminus; or, if used, at the lowest portion of the run out opposite of the flume terminus. Suction outlets and fittings shall comply with the requirements for main drains in Part 11, "Circulation Systems" and Part 12, "Piping and Hydraulics" of this article. The circulation system main drains shall be located at the lowest portion of the splash pool.

e.) *Bathing load.* The bathing load shall be calculated on the basis of one (1) person in the minimum required splash pool surface area, and a maximum of one (1) person for every thirty square feet (30 s. f.) of pool surface area in those areas of the splash pool that exceed the minimum required splash pool area. If the slide is a component of a pool other than a dedicated splash pool, then the bathing load is one (1) person in the minimum required splash pool area, and the remaining pool area shall comply with Part 9, "Construction", c.), *Size*.

f.) *Safety.* At least one person responsible for the operation of the slide shall monitor and be stationed at the bottom of the slide at all times the slide is open for use. If that person's view of the slide's entry is obscured at any point, then a second slide operator shall monitor and be stationed at the slide's entry point, or if the length of the slide or flume exceeds thirty feet (30') in length. Approved signage shall be posted that states; that at any time, only one (1) bather, or device with bathers such as a raft, shall be allowed on the slide after the previous user or raft has exited the splash pool or run-out; only one bather or device with bathers, such as a raft, shall be allowed on the platform to the slide; and only one bather or device with bathers such as a raft shall be allowed in the splash pool. Slide monitors shall enforce these rules. A key-operated, properly grounded switch to operate the pump supplying water to the slide shall be installed on the deck near the slide. An emergency cut-off switch for the slide



shall be readily accessible to the slide monitor.

## **Part 28 Zero-Depth Entry Pools**

a.) *Application.* All elements of this article for swimming pools shall apply to zero-depth entry pools with the following additional provisions:

b.) *Construction.* A zero-depth entry pool shall be designed and constructed so that the pool and the deck surface meet at a maximum slope of one foot in twelve feet (1':12'), continuing to the deepest portion of the pool or slope break. Where the water depth in these pools is less than one and one-half feet (1½'), floor inlets shall be provided and spaced uniformly at a distance no greater than twenty feet (20') apart and located not further than twenty feet (20') from the point where the pool bottom intersects the deck, and not more than twenty feet (20') from any wall. A grated gutter, as described in Part 17, "Skimmers and Overflow Gutters", or other suitable, approved skimming system, shall be installed along the entire zero-depth entry at the normal water level, and shall be designed and constructed to accommodate variations in the normal water level.

## **Part 29 Indoor-Outdoor Pools**

a.) *Application.* All elements of this article for swimming pools shall apply to indoor-outdoor pools with the following additional provisions:

b.) *Construction.*

(1) *Separations.* Removable, underwater separations between indoor-outdoor pools shall be constructed of a clearly marked, solid barrier made of inert material approved by the department. The barrier shall be smooth, unbreakable, and shall not have any openings.

(2) *Connecting Channels.* The connecting channel at the separation or barrier for bathers to swim through shall be a minimum of three feet (3') in depth and three feet (3') in height, as measured from the pool water's normal level, and a minimum of four feet (4') in width as measured at the normal water level. The edges of the opening for bathers to swim through shall be smooth and rounded, or have an approved, permanently installed protective sleeve along the entire edge. If the separation between the indoor-outdoor pools extends below the normal water level, then an approved, protective sleeve shall completely encase the entire edge of the separation at a minimum height of twelve inches (12"). The protective sleeve and the separation or barrier combined shall extend below the normal water level less than twelve inches (12").

(3) *Separate pools.* If each pool is designed to be physically separated, then each portion of an indoor-outdoor pool shall be considered as a separate pool, and each portion or pool shall be designed and constructed with its own, separate circulation system, appurtenances, decking, safety equipment, and other required equipment in accordance with this article.

(4) *Ingress and Egress.* The pools, deck and the physical separation between the two pools shall be designed and constructed to enable ready access and egress

### **Part 30 Infinity / Vanishing Edge Pools**

a.) *Construction.* In addition to the standards within this section, infinity/vanishing edge pools shall comply with all other applicable standards in this code. The length of an infinity/vanishing edge shall not exceed thirty-five percent (35%) of the total pool perimeter or fifty percent (50%) of the total whirlpool perimeter. A deck, meeting the requirements of Part 9, "Construction," h.) *Deck,* shall completely surround the entire pool including the infinity/vanishing edge portion of the pool. The maximum external wall descent elevation shall not exceed twelve inches (12") as measured from the top of the edge to the surface of deck. The top surface of the edge must be level, smooth, non-abrasive, and have a minimum radius of one inch (1"). An adequately-sized water collection device or trough, protected by an approved grating or other approved cover, shall be installed at the bottom of the exterior edge wall and return pool water to the pool's circulation system by gravity flow.

### **Part 31 Interactive Play Devices**

a.) *Construction.* The interactive play device's design and construction shall provide for a safe and sanitary recreational environment for its users. All interactive play equipment shall conform to standards set forth by the most recent edition of the U.S. Consumer Product Safety Commission, "Handbook for Public Playground Safety," which the department adopts herein by this reference, or the most recent edition of the American Society for Testing Materials, "Standard Consumer Safety Performance Specification for Playground Equipment for Public Use," which the department also adopts herein by this reference, and in accordance with the manufacturer's instructions for installation and operation, and approved by the department. Interactive play devices shall be designed, installed, and maintained so that the surfaces are smooth, self-draining, non-toxic and easily cleanable. The devices shall not pose a health or safety hazard to users or bathers, and shall not interfere with the circulation or disinfection of the water.

b.) *Circulation.* Any apparatus, device or equipment that discharges water into the pool or that uses the pool as a source of water for the operation of the device shall either use only water that has been filtered and disinfected prior to being discharged into a pool, or shall have a separate disinfection system for the device approved by the department. If water for the device is not taken directly from the pool, then the water for the device shall be circulated through a separate system consisting of pump(s), filter(s), disinfection equipment, and other

appurtenances, as required by the department and this article. This includes, but is not limited to, spray guns, mushrooms, buckets, water wheels, and other similar devices. Any water being discharged into pool water, or that makes contact with users or bathers, shall have the same minimum level of disinfectant that is required for the type of pool that the device is installed within, as required in Part 18, “Disinfection and Chemical Feeders.”

## **Part 32 Special Purpose Pools**

a.) *Application.* All elements of this article for swimming pools shall apply to special purpose pools with the following additional provisions:

b.) *Construction.* The design and construction of these special purpose pools shall be based on their intended purpose and use and upon sound public health and engineering principles, and shall not pose a health or safety hazard to the users. Special purpose pools shall be reviewed by the department on an individual basis for intended use and construction. Therefore, unique or special features may be permitted, such as a ramp to allow bathers access and egress from the pool in lieu of steps or a ladder. The bathing load may be limited and shall be determined by the department, based on the purpose or intended use of the pool. The purpose of the pool shall be clearly stated on the plans when submitted to the department. A sign, with minimum one inch (1”) high, black letters on a white background, stating the purpose of the pool and the bathing load, shall be conspicuously posted at the entrance to the pool area.

c.) *Operation.* Special purpose pools are prohibited for general recreational use, without prior written approval from the department.

## **Part 33 Multi-Purpose Pools**

a.) *Application.* All elements of this article that apply to swimming pools shall apply to multi-purpose pools with the following additional provisions:

(1) *Design, Construction and Operation.* The design, construction and operation of each portion of a multi-purpose pool shall comply with the pertinent section(s) of this article.

(2) *Circulation.* The turnover rate for multi-purpose pools shall be a minimum of four (4) hours.

## **Part 34 Wave Pools**

a.) *Application.* All elements of this article that apply to swimming pools shall apply to wave pools with the following provisions:

(1) *Operation.* The generation of waves more than three feet (3') in height above the normal, calm water level, regardless of the depth of the pool, shall not continue for more than fifteen (15) minutes at a time, with a minimum of three (3) minutes of calm water or no waves between each fifteen (15) minute period.

(2) *Circulation.* The turnover rate for wave pools shall be a minimum of three (3) hours.

(3) *Access.* Bathers must gain access to a wave pool only at the shallow end. The sides of the pool must be guarded from unauthorized entry into the pool by an approved barrier.

(4) *Handholds.* Each wave pool must be provided with approved handholds at the static water level. Handholds must be self-draining and must be installed so that their outer edge is flush with the pool wall. The design of handholds must ensure that body extremities will not become entangled.

(5) *Life jackets.* Life jackets must be provided free for use by bathers upon request.

(6) *Lifeguard.* Qualified lifeguard(s) shall be stationed at the wave pool during operation per American Red Cross Guidelines.

(7) *Shut-off switch.* A clearly labeled emergency shut-off switch for control of wave action shall be installed and readily accessible to each of the required lifeguard(s) on duty.

(8) *Warning system.* An audible and visible warning system must be provided at the wave pool area to alert users of the beginning of wave generation and to provide sufficient time for bathers to exit the pool before the beginning of wave generation.

(9) *Stepholes and handrails.* Stepholes and handrails must be provided at one or more locations along the wall of the wave pool and in accordance with Part 9, "Construction", f.) "*Steps and ladders*". The stepholes and handrails must extend down the pool wall so they will be accessible during wave generation at the lowest water level. The distance between the outside part of the handrail and the pool wall must not exceed six inches (6").

## **Part 35 Watercourse Pools**

a.) *Application.* All elements of this article that apply to swimming pools shall apply to water course pools with the following provisions:

(1) *Handrails, steps, stairs, booster inlets.* Handrails, steps, stairs, and booster inlets for watercourse pools must not protrude into the watercourse.

(2) *Shape.* The watercourse must not be narrower than eight feet (8') and not deeper than three and one half feet (3½') at any point.

(3) *Egress.* An approved method of exiting the watercourse must be provided at least every two hundred feet (200') along the watercourse.

(4) *Deck.* An approved deck must be provided along at least one side of the entire watercourse according to the Construction, Decking section.

(5) *Circulation.* The turnover rate for watercourse pools shall be a minimum of four (4) hours.

(6) *Velocity.* The design velocity of the water in the watercourse must not exceed two miles per hour (2 m.p.h.).

## **Part 36 Artificial Swimming Lagoons**

a.) *Application.* All elements of this article that apply to swimming pools shall apply to artificial swimming lagoons with the following provisions:

(1) *Construction.* Effective upon the adoption date of these rules, the Department will no longer accept applications for Pool Construction Permits for Artificial Swimming Lagoons. Any properly permitted Artificial Swimming Lagoon existing prior to the adoption date of these rules shall be deemed grandfathered subject and pursuant to Part 40 of these regulations.

(2) *Clarity and Signage.* Signs shall be posted in a conspicuous location at the primary entrance(s) to the facility and at the shallow and deep ends of the artificial swimming lagoon stating, in clear legible letters in the minimum stated dimensions:

**“WARNING” (in minimum four inch (4”) high text) – “(insert name of facility in all capital letters) IS A NON-TRADITIONAL POOL WITH A SAND BOTTOM IN THE DEEP END. THE WATER CLARITY IN THE DEEP END MAY VARY DURING OPERATION AND LIMIT BATHER VISIBILITY TO LIFEGUARDS. PLEASE EXERCISE ADDITIONAL CAUTION WHEN SWIMMING IN THIS AREA OF THE POOL.” (in minimum two and one half inch (2-1/2”) high text)**

## **Part 37 Natural Bathing Places**

a.) *Permit.* A permit to operate a natural bathing place must be obtained from the department.

b.) *Plans.* Site plans prepared by a registered engineer shall display the anticipated bathing load, location, topography of the bathing area and surrounding land area, and appurtenances such as the bathhouse, lifeguard stations, and other related structures. Plans shall be submitted to the department for review and must receive final approval prior to any development.

c.) *Facilities.* Adequate facilities shall be provided and appropriate precautions shall be taken to control bathers' use of natural bathing places to insure their health and well being.

d.) *Design.* For water depths up to five feet (5') the floor of the body of water shall consist of stabilized sand or other department approved material and the bottom slope shall not exceed one foot (1') in twelve feet (12'). The slope shall be smooth and constant without any sudden changes or drop-offs. The outer boundary of the bathing area shall be marked by visible poles spaced not more than two hundred feet (200') apart mounted to the bottom. The outer boundary shall also be clearly visible and posted to prevent unauthorized boats and ski traffic from entering the bathing area. Poles shall be connected by a sturdy line with buoys not over twenty feet (20') apart. Depth markers shall be installed on each pole. Areas of excessive depths, projections, steep banks, or other areas which might be considered a potential hazard to the bather must be adequately marked with buoys, poles or other markers so as to warn bathers. Beach, deck, or adjacent recreational areas shall have a total area equivalent to the designed total bathing area.

e.) *Survey.* A sanitary survey shall be conducted prior to permitting of a natural bathing place and annually to record characteristics of the water source, possible sources of sewage contamination, industrial wastes, potential hazards, and site suitability. A report of this survey shall be submitted to the department prior to opening for the season.

f.) *Bacterial quality.* Bacteriological analyses for fecal coliform shall be made of the water and the results shall be included in the sanitary survey. Resurvey and analyses may be required as often as is deemed necessary by the department. At least four (4) bacteriological samples shall be collected from the proposed bathing area. Each sample shall be collected at least twenty four (24) hours apart, weekly for three (3) consecutive weeks prior to the opening date. The water quality shall meet the current standards for recreational waters as specified by the current rules and regulations of the Georgia Environmental Protection Division for Water Use Classification and Water Quality Standards.

g.) *Routine sampling.* No less than four (4) bacteriological samples at intervals not less than 24 hours shall be collected from the bathing area for each thirty (30) day interval between the opening date and the final day of operation for the season. The initial sampling date shall establish the sampling cycle wherein samples may be collected. The water quality shall meet the current standards for recreational waters as specified by the current rules and regulations of the Georgia Environmental Protection Division. A copy of the laboratory report(s) for each testing interval shall be submitted to the department.

h.) *Sanitary facilities.* Sanitary facilities shall meet the requirements as specified in Part 22, "Sanitary Facilities."

i.) *Safety.* A United States Coast Guard approved lifesaving ring having an outside diameter of fifteen to twenty-four inches (15"-24"), firmly attached to a one-quarter inch to three-eighths inch ( $\frac{1}{4}$ " -  $\frac{3}{8}$ ") diameter throwing rope that is at least 100 feet (100') in length shall be provided and hung in a conspicuous location. An operable, hard-wired, weatherproof telephone, with direct 911 access or capability installed in a conspicuous location shall be readily available to bathers at all times. Directions to the telephone location must be conspicuously posted if the telephone is not readily visible to bathers.

j.) *Signage.* A sign with simply stated rules and safety guidelines for bathers shall be conspicuously posted. The lettering shall be a minimum of three quarter inch ( $\frac{3}{4}$ "). A sign stating "EMERGENCY 911" shall be posted at the telephone. Alternatively, the telephone may be equipped with 911 speed dial access. Where no lifeguard is on duty, signs shall be posted in a conspicuous location at the entrance(s) to the natural bathing area and within the natural bathing area stating, in clear legible letters at least four inches (4") high, "WARNING - NO LIFEGUARD ON DUTY."

k.) *Solid waste disposal.* Adequately sized, covered and lined trash receptacle(s) shall be provided within the natural bathing area. The container(s) shall be emptied when necessary and maintained in a sanitary condition.

k.) *Prohibited bathing.* Bathing shall not be allowed if the water is excessively turbid, contains harmful contaminants, or during electrical storms. Night swimming is prohibited.

## **Part 38 New Equipment, Construction and Materials**

The department may allow test grants, conditional construction permits or conditional permits for new designs, new equipment, new materials, or new processes proposed for use or installation in new or existing pools, if satisfactory proof is submitted to the department that sound engineering and public health principles are complied with as determined by the department. Performance guarantees shall be required. Conditional permits shall require satisfactory performance in the field for a defined time to be established by the department before a final permit is issued. The department reserves the right to revoke any temporary permit if satisfactory performance cannot be demonstrated in accordance with the current policy and procedures addressing new products and processes and this article.

## **Part 39 Right of Refusal**

Because of the infinite variations in the design, installation and operational conditions of all pools, health officials must look beyond this article to uncover any special problems which may be unique to the particular facility being evaluated. Where adequate standards do not exist and this article does not provide sufficient direction for consideration of innovation in

design, construction and operation of proposed pools and recreational water facilities, the department will establish requirements necessary to protect the public's health and safety. The department reserves the right to evaluate and deny any proposal or request not specifically addressed or identified under this article based on sound engineering and public health principles.

#### **Part 40 Grandfathering and Upgrade Provisions**

Swimming pools, natural bathing places, artificial swimming lagoons, and associated bathhouse facilities constructed or renovated prior to the date of adoption of this article, shall not be required to comply with new design and construction requirements other than requirements related to the abatement of suction hazards. New design and construction requirements of this article shall be implemented if any major modification of the pool, natural bathing place, artificial swimming lagoon, or bathhouse facility is undertaken, or shall be implemented if a particular item or piece of equipment is in need of repair. Swimming pools, natural bathing places, artificial swimming lagoons, and associated bathhouse facilities constructed or renovated prior to the adoption date of this article shall comply with all other rules of this article.

#### **Part 41 Procedural Due Process Rights**

As required by O.C.G.A. § 31-5-3, any person substantially affected by any final order of the Board of Health denying, suspending, revoking or refusing to grant any permit provided under this article may secure review by appeal to the department in accordance with the hearing requirements of O.C.G.A. § 31-5-2 et seq., and as may be hereafter be amended, and any applicable rules and regulations of the department.

#### **Part 42 Violations**

It shall be unlawful for any person, firm, or entity to violate any of the provisions of this article.

#### **Part 43 Administration and Enforcement**

a.) This article shall be administered by the department, which shall have the authority to grant a variance from the requirements of this article as follows:

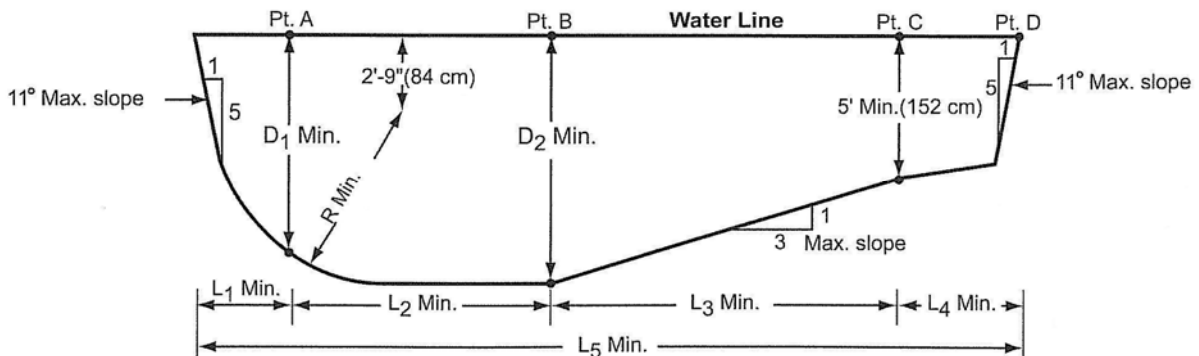
- (1) Where it is demonstrated to the satisfaction of the department that strict compliance with the standards would result in extreme difficulty or undue hardship upon the permit holder due to special conditions or cause; and



- (2) Where the public or private interest in the granting of the variance is found by the department to clearly outweigh the interest of the application of uniform rules; and
- (3) Where such alternative measures are provided which, in the opinion of the department, will provide adequate public health and safety protection.
- b.) The provisions of this article shall apply to all matters affecting or related to the regulation of swimming pools in Cobb County. Where, in any specific case, different sections of this article specify different materials, methods of construction, or other requirements, the most restrictive requirement shall govern. Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall govern.
- c.) The administration and enforcement of this article shall be prescribed in the Official Code of Georgia Annotated Chapter 31-5.
- d.) This ordinance shall become effective thirty (30) days after adoption by the Cobb County Board of Health.
- e.) Should any section or provision of this article be declared by a court of competent jurisdiction to be invalid or unconstitutional, such decision shall not affect the validity of the article as a whole nor any part thereof other than the part so declared to be invalid or unconstitutional. All rules and regulations, or parts thereof, which conflict with this article, are repealed.
- f.) Should any part of this article become outdated, through research in the field or by changes in technology, and fail to provide adequate protection to public health and safety, the department may use official research recommendations, governmental standards, or other official standards as guidelines when enforcing the provisions of the regulations.

## APPENDIX

**Figure #1**



**Figure #2**

RELATED DIVING EQUIPMENT		MINIMUM DIMENSIONS								MINIMUM WIDTH OF POOL AT:		
MAX. DIVING BOARD LENGTH	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" (2/3 Meter)	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"

## APPENDIX

### Figure #3

#### DWELLING/LIVING UNITS VS MINIMUM BATHING LOAD REQUIRED

##### Swimming Pools with Transient Bathers<sup>1</sup>

<u>No. of Units<sup>3</sup></u>	<u>Bathers/Unit</u>
0 - 100	0.60
101 - 250	0.40
251 - 500	0.10
501+	0.05

##### Swimming Pools with Non-Transient Bathers<sup>2</sup>

<u>No. of Units<sup>3</sup></u>	<u>Bathers/Unit</u>
0 - 100	0.75
101 - 200	0.60
201 - 300	0.40
301 - 500	0.15
501+	0.10

<sup>1</sup> Motels, hotels and health clubs or other non residential.

<sup>2</sup> Apartment complexes, condominiums, subdivisions or other residential.

<sup>3</sup> Use of table in calculating the bathing load shall be cumulative.

#### **Example:**

For a 360 unit apartment complex:

$$.75 \times 100 = 75$$

$$.60 \times 100 = 60$$

$$.40 \times 100 = 40$$

$$.15 \times 60 = 9$$

$$\text{Bathing load} = 184$$

## APPENDIX


**Figure #4**

### **Pool Chemical Parameters**

<b>Parameter</b>	<b>Min.</b>	<b>Ideal</b>	<b>Max.</b>
<b>Free Chlorine: Unstabilized (ppm)</b>	1.5	3.0 – 5.0	10.0
<b>Free Chlorine: Stabilized (ppm)</b>	3.0	3.0 – 5.0	10.0
<b>Total Bromine (ppm)</b>	2.0	4.0 – 6.0	10.0
<b>pH</b>	7.2	7.4 – 7.6	7.8
<b>Total Alkalinity (ppm)</b>	60	80 – 100* 100 – 120**	180
<b>Total Dissolved Solids</b>	NA	NA	1,500 over start-up
<b>Calcium Hardness: Pools (ppm)</b>	150	200 – 400	1,000
<b>Calcium Hardness: Spas (ppm)</b>	100	150 – 250	800
<b>Cyanuric Acid (ppm)</b>	0	30-50	100
<b>Temperature: (°F)</b>	NA	Personal Preference	104 °F
<b>Visible Algae</b>	None	None	None

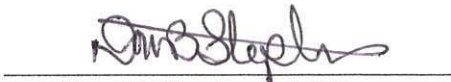
**\* For calcium hypochlorite, lithium hypochlorite, or sodium hypochlorite**

**\*\* For sodium dichlor, trichlor, chlorine gas, or BCDMH**



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John D. Kennedy, M.D.  
Executive Officer  
Cobb County Board of Health



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Dan B. Stephens, M.D.  
Chairman  
Cobb County Board of Health

Date Approved By Board of Health: October 20, 2011

These Rules and Regulations to become effective thirty (30) days after date of approval by the Cobb County Board of Health.