

# **ARKANSAS STATE BOARD OF HEALTH**

## **RULES AND REGULATIONS PERTAINING TO SWIMMING POOLS AND OTHER RELATED FACILITIES**



Promulgated Under Authority of Ark. Code Ann. § 20-7-109 and Ark. Code Ann. § 20-30-103 et. seq.

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**Environmental Health Protection  
Arkansas Department of Health  
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RULES AND REGULATIONS PERTAINING TO SWIMMING POOLS  
AND OTHER RELATED FACILITIES

**SECTION I. AUTHORITY.** The following Rules and Regulations Pertaining to Swimming Pools and Other Related Facilities are duly adopted and promulgated by the Arkansas State Board of Health Pursuant to the authority expressly conferred by the Laws of the State of Arkansas including without limitation, Act 96 of 1913, as amended (A.C.A. 20-7-109), and Act 623 of 1987, as amended (A.C.A. 20-30-103 et. seq.).

**SECTION II. PURPOSE.** To protect the health of the citizens of Arkansas by establishing criteria for the design, operation and maintenance of public swimming pools and other related facilities.

**SECTION III. DEFINITIONS.**

- **Abbreviations** (technical) include:
  - “**DE**” means diatomaceous earth
  - “**fps**” means feet per second
  - “**gpm**” means gallons per minute
  - “**ppm**” means parts per million
- **Alteration/Renovation** means replacement of any portion of the recirculation system including pool/spa plumbing or perimeter overflow/skimmer equipment, pumps, filters, or disinfection units, or modification of the physical structure of the pool or spa, or any change that would not conform to the original specifications. This does not include repair of small sections of pipes due to leaking, or maintenance activities such as painting, plastering or acid washing.
- **ANSI** means the American National Standard Institute, Incorporated.
- **Anti-entrapment Drain or Cover** means a drain with a raised cover or design which allows horizontal flow of water into the drain rather than a vertical flow. The purpose of the design is to prevent the dangerous suction effect on a body, limb, hair entanglement or physical object which may come in contact with the drain.
- **APSP** means Association of Pool and Spa Professionals
- **Automatic Controllers** means integrated electrical/electronic equipment, connected to chemical feed equipment which continuously monitors and controls the pH level and chorine/bromine residual of swimming pool water.
- **Backflow Preventer** means a device used to protect a water supply from contamination or pollution.
- **Backwash** means the process of thoroughly cleansing the filter media and/or elements and the contents of the filter vessel.
- **Barrier** means a wall, building, fence or any combination of these which control access to the pool area. This barrier shall be of such construction as to provide reasonable protection for the safety of the public.

- **Break Point Chlorination** means the process of adding enough free chlorine to chemically oxidize and remove combined chlorine (chloramines) from pool or spa water. Commonly referred to as “shocking” a pool. The additional free chlorine amount needed is typically calculated: ten (10) times the combined chlorine (CC) amount minus the existing free chlorine (FC) residual.  $(10 \times CC) - (FC) =$  amount of additional chlorine needed to shock the pool.
- **Cartridge Filter** means a filter that utilizes a porous material as its media.
- **CDC** means Center for Disease Control and Prevention
- **Chlorine Demand** means the materials in the water which use up chlorine such as bacteria, algae, dirt, leaves and swimmer wastes. The chlorine demand must be satisfied before a chlorine residual is available to disinfect the pool water.
- **Chlorine Residual** means the chlorine level in the water after the chlorine demand has been satisfied. The free chlorine residual is the true measure of potential chlorine disinfection and is the active chlorine that kills bacteria and algae. The active form of chlorine in water is known as Hypochlorous Acid.
- **Combined Chlorine** means the amount of chlorine that has reacted with the organic substances in the water, forming compounds known as chloramines.
- **Controlled Limited-Use Spa** means any spa where access to the spa unit is strictly controlled by the management by one or more of the following:
  1. Location of the unit, e.g., installed in individual rooms with sleeping accommodations or on decks for individual units such as cabins
  2. The number of patrons allowed to use the spa at any one time, e.g. in massage therapy, wellness centers or similar operations with supervised use
  3. Locked control panels where use of the spa must be scheduled through the management
  4. Limiting the hours of use, e.g., in retirement centers
- **Coping** means the covering which joins the top of the pool wall with the decking and is considered part of the deck.
- **Critical Item** as stated in Act 623 of 1987 as amended, means those aspects of operation or conditions of facilities or equipment, which, if in violation constitute the greatest hazards to health and safety, including imminent health hazard. Any pool may be subject to immediate closure whenever a critical item(s) are noted. These include:
  1. Restriction of employees with infection
  2. Approved water supply, hot and cold running water under pressure
  3. Sewage, liquid waste disposal
  4. No cross connection, back siphonage
  5. Safety
  6. Excessive turbidity
  7. Failure to maintain proper chemical levels
  8. Failure or lack of filtration, sanitizing and cleaning equipment and chemicals
  9. Absence or lack of required supervisory personnel
- **Cross Connection** means any physical arrangement connecting:
  1. A potable water system directly or indirectly, with anything other than another potable water system: or

2. Pool water to any potable or nonpotable water source capable of contaminating either the pool water, its components, or portable water source due to backflow.
- **Dead Spots** means places in the pool/spa where filtered/disinfected water does not reach because of poor circulation.
  - **Department** means the Arkansas Department of Health or, where required, employees authorized by the Department.
  - **Diatomaceous Earth (DE)** means the type of filter medium that is obtained from the fossil remains of microscopic marine organisms and that is used in a thin coating over the filter septa.
  - **Fill-and-Draw Pool or Spa** means a pool or spa which is drained, cleaned and refilled after each individual use.
  - **Filter** means a device that separates solid particles from pool water by recirculating through a porous substance (filter media or cartridge element).
  - **Filter Media** means the fine material which entraps suspended particles from the water. These include sand, DE and sand/DE substitutes.
  - **Filter Septa** means that part of the filter element consisting of cloth, wire, screen or other porous material on which DE or similar media are deposited.
  - **General Public** means all people without restriction.
  - **Hose Bibb** means a water faucet with male screw threads for attaching a hose.
  - **Hydrostatic Relief Valve** means a device used to relieve ground water pressure imposed on the outer shell of the pool. These are usually installed in the main drain(s).
  - **Imminent Health Hazard** means any condition, deficiency, or practice which, if not corrected, is very likely to result in illness, injury or loss of life to any person.
  - **Inlet** means the fitting or opening through which filtered water enters the pool.
  - **Lifeguard** means an individual who has demonstrated competency in water safety and lifesaving. The pool owner shall determine competency.
  - **Main Drain** means the outlet(s) at the bottom portion of the pool or spa. These outlets are suction outlets connected to the recirculation piping.
  - **Maximum Flow Rate** means the maximum filtration rate times the square footage of filter provided, i.e.,  $\text{GPM/sq. ft.} \times \text{sq. ft. of filter area} = \text{GPM}$ .
  - **Minimum Flow Rate** means the least flow of water measured in gpm through the water treatment system that must be maintained to provide adequate treatment. GPM is calculated by dividing the volume of the pool, in gallons, by the required turnover time, in minutes.
  - **NSF** means the National Sanitation Foundation.
  - **Overflow System** means perimeter type overflow, surface skimmers and surface water collection systems of various design and manufacture.



- **Perimeter Overflow** means a gutter or trough around the inside of the pool walls, with the overflow lip effecting a skimming action to clean the pool water surface.
- **Person** means any individual, partnership, firm, corporation, agency, municipality, state or political subdivision, or the federal government and its agencies and departments.
- **pH** means the measure of the degree of acid or alkaline qualities a solution possesses, as determined by its hydrogen ion content. A pH below 7.0 is considered acid; a pH of 7.0 is considered neutral; a pH above 7.0 is considered alkaline.
- **Pool Area** means the water surface and deck area.
- **Pool Deck** means the paved area around the pool including the coping.
- **Pool Operator** means the person or persons responsible for the daily maintenance and operation of the pool or other related facility.
- **Pool/Spa Depth** means the distance between the floor of the pool and the normal operating water level when the pool or spa is in use.
- **Precoat Pot** means a hopper with a valved connection to the suction side of the recirculation pump of pressure DE filter systems that are used for coating the filter media prior to filtering water through the system.
- **Public Swimming Pool** as stated in Act 623 of 1987, as amended, means a structure of all man-made materials, located either indoors or outdoors, used for bathing or swimming, together with buildings, appurtenances, and equipment used in connection therewith. Included are spa-type, wading, special purpose pools or water recreation attractions including but not limited to those operated at apartment buildings, municipalities, counties, institutions, schools, motels, hotels, and mobile home parks to which admission may be gained with or without payment of a fee. This definition shall not apply to private pools at single-family residences.

For the purposes of this regulation, public swimming pools have been categorized into the following classes:

- **Class A Pool** means any pool intended for, or used by, the general public for recreational use, owned and operated by any person, firm corporation, institution, association, club or any political subdivision of the State of Arkansas.
- **Class B Pool** means any pool not open to the general public, but open rather to a limited group, such as institutions, schools, child care facilities, resident subdivisions or similar developments, camps, day camps, recreational facilities, or pools of similar usage and type. Or any pool whose use is restricted to residents, members or registered guests, including but not limited to hotels, motels, apartments, trailer parks/mobile home parks, churches and condominiums. Also included are country clubs, YWCA or YMCA health or athletic clubs, and pools of similar type and usage.
- **Class C Special Purpose Pool** means any pool whose design and/or use is significantly different from a swimming pool. This includes, but is not limited to water recreation attractions, scuba pools, zero depth entry pools, instructional pools, water slides, spray grounds and spray pools. Or any pool intended for use for accredited competitive aquatic events such as Federation Internationale de Natation Amateur (FINA), U.S. Swimming, U.S. Diving, National Collegiate Athletic Association (NCAA), National Federation of State High School Associations (NFSHSA), etc. The pool may also be used for recreation.
- **Class D Wading Pool** means a small pool for non-swimming children with a maximum depth not greater than 24 inches.

- **Class E Therapy Pools/Spas** means any treatment spa/pool and special spas/pools for water therapy. Fill-and-drain water therapy spas used for treatment of athletes or other medical treatment purposes are exempt from these rules and regulations.
- **Class F Spas** means any commercial whirlpool, hot tub, or spa designed for recreation, or relaxation use, in combination with hydrojet circulation, air induction systems, or other circulation systems using hot, cold, or ambient water temperature. These facilities have a maximum water depth of four (4) feet and are not used for swimming or diving. This section does not apply to fill-and-draw spas, which are drained, cleaned and refilled after each individual use.

Spas operated in connection with Bed & Breakfast facilities with less than 6 sleeping rooms and/or less than 10 guests are exempt from these rules and regulations.

Controlled, limited use spas shall be considered Special Purpose spas and will be evaluated on a case-by-case basis.

- **Private Residential Pool** means any individually owned swimming pool which is built in connection with a single-family residence the use of which shall be confined to the family of the owner and his guests. This shall not include any type of cooperative housing or joint tenancy of two or more families, and shall be located within the same property boundary as the family dwelling building to which it serves.
- **Rate-of-Flow Indicator** means a device installed on the pool recirculation piping or backwash line to indicate recirculation flow of the pool or backwash flow in gallons per minute.
- **Readily Accessible** means an item or device that is capable of being reached and utilized quickly for operation, safety or inspection purposes without requiring those to whom use is essential to climb over, remove obstacles, and search for intended item/device, or anything else that requires undo time to utilize.
- **Scuba Pool** means a special purpose pool designed with the intent of training scuba divers.
- **Serious Injury** means any injury: Requiring emergency service response where a person needs medical treatment as determined by the emergency response personnel; and/or resulting in a person seeking medical attention at a hospital emergency room or admission to a hospital.
- **Spray pool/Spray ground** means an artificial pool for use by children into which water is sprayed but is not allowed to pond in the bottom of the pool.
- **Stabilizer (Cyanuric Acid)** means a chemical that helps prolong the useful life of chlorine in the water by slowing down chlorine loss due to sunlight.
- **Surface Skimmer** means a device used to remove surface debris from the pool over a self-adjusting weir.
- **Surge Tank** means a tank receiving the gravity flow water from the overflow gutter and main drain(s) from which the recirculation pump takes suction. This may also be referred to as a balance tank.
- **Turbidity** means a cloudy condition of the water due to the presence of extremely fine particulate materials in suspension that interfere with the passage of light.
- **Turnover** means the period of time (usually in hours) required to circulate a volume of water equal to the pool capacity. The turnover rate is the number of times a quantity of water equal to the pool capacity passes through the filters within a stated time (usually turnovers per day).
- **UL** means Underwriters Laboratory.

- **Water Recreation Attraction** means a swimming facility open to the general public with design and operational features that provides patron recreational activity which is different from that associated with a conventional swimming pool in that the purpose fully involves immersion of the body partially or totally in the water. Water recreation attractions include, but are not limited to, water amusement lagoons, water slides and wave pools.
- **Water Slide** means a special purpose facility which consists of one or more flumes, a plunge pool, pump reservoir, filtration, disinfection and chemical treatment facilities.

**SECTION IV. COMPLIANCE.** Any person, firm, corporation, institution, association, club, or governmental agency operating, maintaining or constructing a swimming pool or related facility included herein shall be responsible for compliance with these regulations.

**SECTION V. PLAN REVIEW AND CONSTRUCTION.**

- A. **Plans Required.** Before work is commenced on any new construction, any alteration of any existing pool, spa or water recreation attraction, complete and detailed plans and specifications shall be submitted in triplicate to the Arkansas Department of Health. Specific plan requirements are available upon request. Plans for all Class A pools or other pools as determined by the Department shall be prepared by a professional engineer. All work shall be performed in compliance with the Arkansas State Licensing Law for Contractors and laws of the Arkansas Board of Registration for Professional Engineers. Preliminary plans shall be submitted for review and design evaluation on all Class C pools (special purpose pools).
- B. **Structural Design Not Reviewed.** The review of the plans and specifications does not include structural design or structural stability of any part of the pool construction.
- C. **Deviation From Plans.** No part of the work shall be undertaken until the Department has granted written approval of said plans. No deviations from the approved plans shall be made unless the proposed changes have been submitted to, and approved by, the Arkansas Department of Health.
- D. **Final Construction Inspection.** No newly constructed or renovated public pool or other related facility shall be placed into operation until a final inspection of the facility has been conducted and written authorization to operate is issued by the Department. Notification to the Department shall be made not less than ten (10) days prior to the need for a final construction inspection. In addition to the final inspection, the local Department representative shall be notified at the start of construction and shall be notified to inspect the piping in place prior to covering.

The final construction inspection shall be made by a Department representative(s) in the presence of the pool owner and/or pool builder or pool designer to ascertain that the pool was constructed in accordance with the approved plans.

- E. **Instructions For Operation.** Upon completion of the pool or other related facility, the builder shall provide the owner and/or his operator(s) with complete written and oral instructions on the operation of the pool and all equipment, on the chemistry of pool water, and on specific details concerning the maintenance of the equipment. The builder shall supply complete manufacturer's information on each of the component parts of the recirculation, filtration, and disinfection systems.

**SECTION VI. WATER.**

- A. **Water Supply.**

1. **General.** The water supply for all pools, bather preparation facilities, water recreation attractions and drinking water facilities included as adjuncts to the pool shall meet the Arkansas Department of Health Rules and Regulations Pertaining to Public Water Supplies.
2. **Drinking Fountains.** All drinking water shall be dispensed from angle jet fountains equipped with a protective mouth guard or from a single-service container. A suitable protective container must be provided for dispensing the cups.
3. **Cross-connections.** No piping arrangements shall exist which, under any conditions, will permit sewage or wastewater to enter the recirculation system or will permit water from the recirculation system or pool to enter the make-up water supply.

## **B. Pool Water Quality.**

1. **Clarity of Water (Excessive Turbidity).** The water must be sufficiently clear to plainly view the main drain(s) from the deck of the pool at all times when the pool is open. The viewer must be able to clearly distinguish the type, shape and number of gratings of the main drains when standing at the edge of the pool deck nearest that main drain.
2. **Pool/Spa Water Chemistry.** The water in all pools/spas shall meet the mandatory chemical parameters indicated in Appendix B for free and combined chlorine or bromine, pH, total alkalinity and, where stabilizer (cyanuric acid) is used.
3. **Bacteriological Water Quality.** The Department shall take samples for bacterial analysis for each pool whenever a suspected water borne illness is reported. Any such sample shall be analyzed for E. coli bacteria in accordance with approved drinking water standard methods. The presence of any E. coli bacteria will indicate unsatisfactory water quality and the pool or other related facility shall be closed until a satisfactory water sample can be obtained. Procedures for disinfection and management of fecal accidents are provided in Appendix D. Other samples may be collected based on recommendations of the CDC.
4. **Testing and Sampling of Pool Water.** Chemical water quality testing shall be conducted by the pool operator at such intervals as required by the Department. Water chemistry tests will also be made by an authorized employee of the Department at the time of inspection. This does not preclude a facility from utilizing testing facilities provided by a pool service company.

## **C. Make Up Water Facilities.** All water shall enter the pool through one of the following:

1. An over-the-rim fill spout with an air gap 2 ½ times the pipe diameter above the pool coping level. The fill spout shall be rigid and properly located or shielded so as not to create a safety hazard. The open end should have no sharp edges and should not extend more than two inches beyond the edge of the pool. The fill spout can be designed to be detachable and the plumbing plugged to prevent a trip hazard.
2. An automatic water fill control with a manual over-ride may be provided to maintain the water level in the pool/spa at the proper level. The water supply must be protected at all time from backflow. An approved backflow preventer installation consists of a reduced pressure zone (RPZ) backflow preventer which has been accepted by the Department and the State Board of Plumbing and which is installed where it is readily accessible for inspection and maintenance. The RPZ must be protected from freezing temperature wherever installed-under buildings, inside buildings, or in an insulated box manufactured for maintenance purposes for the RPZ-ample room is required for testing and/or maintenance. If installed out in the open, it shall be the responsibility of the plumbing contractor and/or the owner as the case may be, to provide proper freeze protection.
3. A hose bibb equipped with vacuum breaker.

If make-up water is added to the surge tank, through the pool/spa recirculation piping, or through a dedicated fill line which allows water to enter at the pool water level then the installation must comply with the above requirements for backflow prevention.

## **SECTION VII. Sewage.**

The sewer system for all pools/spas shall comply with the following:

- A. Capacity.** The sewer system shall have sufficient capacity to serve the facility, including bathhouse, locker rooms, toilets, and related accommodations.
- B. Connection.** There shall be no direct physical connection between the sewer system and any drain from the pool/spa or circulation system. Any pool/spa deck drain, backwash or overflow from the circulation system, when discharged to the sewer system, storm drain, or other approved natural drainage course, shall be discharged through a suitable air gap so as to preclude the possibility of backflow of sewage or waste water into the pool/spa or piping system.
- C. Individual Sewage Disposal Systems.** The sanitary sewer servicing the pool and auxiliary facilities shall discharge to a public sewer system wherever possible and in accordance with applicable requirements. Where no such sewer is available the connection shall be made to a suitable waste water treatment system which has been designed and constructed and is operated and maintained in accordance with all the current Arkansas Department of Health Rules and Regulations Pertaining To Individual Sewage Disposal Systems, Designated Representatives and Installers. An on-site sewage disposal system permit shall be approved before pool construction can begin. Filter backwash and pool drainage shall not be discharged into an onsite sewage disposal system.

## **SECTION VIII. POOL AND POOL AREA DESIGN/CONSTRUCTION DETAILS.**

**A. Location.** An outdoor pool location shall be evaluated during the design phase to reduce exposure to excessive pollution by dust, smoke, leaves or other potential sources of contamination. The pool/spa shall be located so that drainage from the surrounding area will not wash contamination into the pool/spa during rains. Gutters from buildings adjacent to the pool/spa area shall not discharge onto the pool deck.

### **B. Material.**

- 1. **General.** Pools, spas, and related facilities shall be constructed of concrete or other approved material, with a white or light colored finish. Materials shall be inert, non-toxic to man, impervious, permanent, and enduring. Materials must withstand the design stresses with an adequate factor of safety. Materials must provide a water-tight tank with a smooth and easy to clean surface or to which a smooth, easy to clean finish can be applied.
- 2. **Approved Pool Materials.** Approved pool materials include, but are not limited to: concrete, stainless steel wall with concrete bottom, or fiberglass wall with a concrete bottom. Concrete may be required behind the walls of fiberglass wall panel pools if the bracing system is determined to be inadequate for support. Vinyl on sand, earth, or material other than concrete shall not be permitted in pool, spas, or water recreational attractions. Vinyl liners may be installed over existing approved construction materials as a method of repair.
- 3. **Approved Spa Materials.** Approved spa materials include any of the approved pool materials or one-piece fiberglass or acrylic prefabricated units. Other materials will be evaluated on a case-by-case basis per Section XXV.
- 4. **Safety Ledges.** Safety ledges are not permitted in pools constructed after the effective date of these regulations or when the shell is remodeled after the effective date of these regulations.

### C. Shape, Design, and Slopes.

1. **Swimming Pools.** Pools shall be designed and constructed of such shape and contour so that efficient and safe control of the pool and bathers can be accomplished. The pool bottom shall have definite slopes to the outlet.

Minimum standard pool dimensions and slopes are defined in Figures 1, 2, 3, and Chart A in Appendix A. The minimum dimensions on “No Diving” pools may be reduced if adequate justification is provided on a detailed site plan during the plan review process. Whenever the size of the pool is reduced the Department may increase the turnover requirements to insure adequate recirculation/filtration/and disinfection and specify certain safety requirements such as adequate “No Diving” signage.

2. **Competition Pools.** These shall meet the design standards of the appropriate accreditation association and/or these rules and regulations as determined by the Department.

3. **Wading Pools, Spray Pools And Spas.** The bottom shall slope not less than three (3) inches in ten (10) feet toward the drains, nor more than six (6) inches in ten (10) feet toward the drain(s)

No obstructions such as excessively raised drains, steps or concrete appurtenances on which children may fall or become injured shall be placed in the wading pool or spray pool area. This does not preclude the installation of water features such as water spray devices. Design features shall be reviewed during preliminary review with the Department.

4. **Water Slides.** The minimum plunge pool operating water depth at the slide flume terminus shall be three (3) feet. This depth shall be maintained for a minimum distance of ten (10) feet in front the slide terminus from which point the plunge pool may have a constant upward slope to allow a minimum water depth of two (2) feet at the base of the steps. The floor slope shall not exceed one (1) foot in ten (10) feet. The slide flume shall terminate at or six (6) inches below normal water operating level. The slide flume shall be perpendicular to the plunge pool wall for a minimum length of ten (10) feet at the exit end of the flume(s). The minimum distance between any plunge poolside wall and the outer edge of any slide flume terminus shall be four (4) feet.

All sections of the flume shall be properly formed and sealed together so as to prevent possible abrasions or injuries.

5. **Water Recreation Attractions, Special Purpose Pools, Controlled, Limited Use Spas, Therapy Pools/Spas.** Special consultation with the Department is necessary in order that consideration can be given to concepts of design variations and to areas where potential problems may exist. Therefore, prior to preparation and submission of engineering plans and specifications, the design engineer shall consult with the Department to ensure the Department has a complete understanding and agrees to the design concepts of the project. Preliminary design plans shall be submitted for review.

### D. Walk Areas (Pool Deck)

1. **General.** Walk areas shall extend entirely around the perimeter of the pool. Walks shall be constructed of concrete or other approved material and kept in good repair. The walks shall be adequately drained by sloping at least one-fourth inch per foot away from the pool. New products used on or as pool decks shall be reviewed per Section XXV.
2. **Deck Drains.** Deck drains must be installed where necessary to prevent standing water on the deck. All deck drainage must be “to waste” and not be filtered or returned to the pool. The deck drain grates shall be removable to facilitate the cleaning of the drains.

3. **Use Of Carpet.** The use of carpet on indoor or outdoor pool/spa facilities is prohibited.
4. **Minimum Deck widths.** Poolside tables and chairs or other equipment should not obstruct the deck areas. The minimum widths for each type of pool are listed.

Pool Type	Walk Area Requirement
Outdoor pool.....	8 feet
Indoor pool.....	4 feet
Pool with diving board – water surface of 3,000 sq. ft. or less.....	4 feet behind board
Pool with diving board – water surface greater than 3000 square feet.....	8 feet behind board
Wading Pool or Spray pool.....	4 feet
Water Slide.....	4 feet except at exit side where the walk shall be a minimum of 10 feet
Spa.....	4 feet around 50% of the spa
Water Recreation Attractions.....	As determined by the Dept.
Special Purpose Pools.....	As determined by the Dept.

**E. Head Room.** There shall be a minimum of thirteen feet of unobstructed head room above the level of the diving board.

**F. Ventilation.** All indoor pool/spa enclosures must be properly ventilated to prevent the accumulation of moisture. Ventilation shall meet the requirements of the current Arkansas State Mechanical Code.

**G. Lighting.**

1. **Area Lighting.** The following requirements shall be met whenever the pool is in operation. Area lighting shall be provided at all pools/spas. A minimum of 5-foot candles per square foot of pool area shall be provided. Where underwater lighting is not used the area lighting shall provide not less than 10-foot candles per square foot of pool area. When the pool is not in operation, security lighting is recommended.
2. **Arrangement.** The arrangement and design of the area lighting shall be such that personnel may clearly observe every part of the pool, diving boards, and other walk areas. Lights shall be so installed as to create no hazards to bathers.
3. **Underwater lights.** Where underwater lights are used, not less than 0.5 watts per square foot of pool water surface area shall be provided.

**H. Hose Connections.** Sufficient hose connections of adequate size and water pressure and equipped with vacuum breakers shall be provided for cleaning all of the pool area.

**I. Steps, Benches and Ladders.**

1. **General.** Steps, benches and ladders shall be of an impervious material and of such design that they can be easily cleaned. They shall be so designed and constructed that no water is left on them when the water level in the pool is lower than the steps. The steps must have a non-skid surface. Permanent black or dark colored edge stripes or tiles must mark the steps. Handrails shall be provided for all steps. When figure 4 type handrails are used for spa steps, they may be mounted to the deck. The ladders must be readily removable. All pool benches or other underwater design features must be clearly marked on the vertical and horizontal faces or edges.

2. **Placement and Minimum Number.** One ladder shall be provided for each 75 feet of pool perimeter. On “No Diving” pools, with a maximum depth of 5 ½ feet, one ladder may be deleted provided that steps with handrails are installed in the shallow end of the pool or if the pool has zero depth entry. Pools with diving boards or wells shall have two ladders placed in the diving end.

**J. Sand Beaches or Landscape Area in Pool Enclosures.**

1. **Limited Access.** Sand beaches or landscape areas shall not be located inside of the pool enclosure unless an approved barrier to prevent access on the part of the bathers is provided. If access is allowed to such areas, satisfactory facilities shall be provided for the proper cleansing of bathers before they again enter the bathing areas. This may include the installation of foot showers.
2. **Preliminary Design Review.** Design of these facilities shall be submitted in the preliminary stages for consultation with the Department in order that consideration can be given to areas where potential maintenance or safety problems may exist.

**K. Foot Baths.** The use of footbaths is prohibited. This does not preclude the use of foot showers, provided the area is well drained away from the pool.

**SECTION IX. RECIRCULATION SYSTEMS AND EQUIPMENT.**

**A. General.** All pools, spas, or other related facilities shall be equipped with a circulation system consisting of at least a pump or pumps, hair and lint strainer(s), piping, a filter or filters, water treatment and disinfecting equipment and other accessory equipment. All system components shall meet the latest requirements of Standard 50 of the National Sanitation Foundation and shall bear their seal of approval. Pumps larger than those reviewed by NSF Testing Standards or Underwriters Laboratory (UL) shall be considered on a case-by-case basis.

**B. Turnover.** The capacity of the circulation system, when operating at the maximum allowable head loss on the filters, shall be sufficient to recirculate and disinfect the entire volume of the pool, spa, or other facility water as follows:

Swimming/Competition Pool.....	Existing Construction: 8 hours (pools built prior to 2003)
	New Construction: 6 hours (see Section XI.B.1)
Wading Pool.....	2hours
Water Slide or Therapy Pool.....	2 hours
Spa.....	30 minutes

Turnover rate for other water recreation attractions or special purpose pools shall be determined by the Department during the design review process.

**C. Separation.** Wading pool or spa water shall not be interconnected with any other pool and all wading pools/spas shall have a separate recirculating system consisting of a filter, pump, piping and disinfection equipment. Where multiple pools are designed with common recirculation equipment, i.e. water recreation attractions, the minimum turnover rate for the pools shall be determined during the preliminary review process.

**D. Therapy or Jet Systems.** The return lines of spa jet or spa/therapy systems shall be independent of the recirculation-filtration and heating system.

**E. Pumping Equipment.**

1. **Capacity.** A pump or pumps shall be provided with adequate capacity for the required number of turnovers of swimming pool/spa water as specified in Section IX B, and whenever possible shall be so



located as to eliminate the need for priming. If the pump or suction piping is located above the overflow level of the pool/spa, the pump shall be self-priming.

The pump shall be capable of providing a flow adequate for backwashing filters. Under normal conditions, the pump or pumps shall supply the required circulation rate of flow to obtain the turnover rate required at a total dynamic head of at least:

45 feet for all vacuum filters

40 feet for pressure type sand filters

50 feet for pressure type DE or cartridge filters

40 feet total head for vacuum type DE filters with 20 inches of vacuum on the suction side.

**Note:** When the recirculation equipment is installed below pool level, these head rates may be increased.

**2. Pump Strainer.** The circulation system shall include a strainer installed on the suction side of the pump to prevent hair, lint, and other debris from reaching the pump. Strainers shall be corrosion resistant with openings not more than ¼ inch in size, and shall provide a free flow area at least four times the cross-section area of the pump station line and be readily accessible for cleaning. A spare strainer basket should be provided.

**F. Piping System.** Piping shall be constructed of non-toxic material, shall be able to withstand the maximum internal and external operating temperatures and shall be designed to minimize friction loss. All plastic pipe used shall be NSF approved and shall be schedule 40 or greater. All valves and piping shall be appropriately labeled and identified as to its purpose.

Pool piping shall be supported to preclude possible settlement, which would provide either dirt traps or air pockets.

The flow velocity in the pressure piping shall not exceed ten (10) feet per second. The flow velocity in suction piping shall not exceed six (6) feet per second.

Design calculations shall be required for projects greater than 3000 square feet of water surface.

**G. Clean-outs.** Clean-outs should be provided at such points in the recirculation system so as to allow obstructions and/or accumulations to be readily removed.

#### **H. Main Drains.**

- 1. General.** All facilities shall be provided with a main outlet at the deepest point to permit the facility to be completely and easily drained. Openings must be covered by proper grating.
- 2. Main Drain Flow Rate.** The main drain(s) shall be designed for a flow rate based on a minimum 30% of the total flow in gpm, not to exceed the maximum allowable filtration rate and shall not exceed the drain cover flow rating.
- 3. Hydrostatic Relief Valves.** Each main drain shall be equipped with a hydrostatic relief valve except for spas/pools installed above ground level or if the spa/pool contains sidewall main drains. A sump pump or other approved method of removing ground water from under the pool shell shall be required on any below grade spa/pool that has sidewall main drains.

4. **Spa Suction Fittings.** On a spa, the main drain outlets shall be designed with dual suction fittings which have equal pipe diameter sizes. The system shall be designed so that neither of the main drain outlets can be cut out of the suction line by a valve or other means. The jet system for spas shall be equipped with two suction fittings of approved anti-entrapment design.
5. **Safety.** The combined areas of the openings of the grating shall be at least 4 times the area of the main outlet pipe and have sufficient area so that the maximum velocity of the water passing through the grate does not exceed 1 ½ ft. per second at maximum flow. The maximum width of grate openings shall be ¼ inch. Pools with a single main drain not meeting the above design shall have an anti-entrapment type cover. Dual main drains shall be required on all new construction or renovation of pool main drain plumbing. The dual main drains must have a minimum of three foot distance from center to center from each other.

All pool/spa outlet main drain grates, anti-entrapment covers and inlet fittings shall have tamper-proof screws that cannot be removed except with tools.

## I. Inlets.

1. **General.** Pool inlets shall be submerged and be located not less than six (6) inches or more than eighteen (18) inches below normal operating water level. Pool inlets shall be installed on a maximum of fifteen feet centers to produce a circulation of water throughout the pool without the existence of dead spots and to carry pool-bottom deposits to the outlets. Provisions shall be made for adjusting the volume of flow through each inlet.
2. **Directional Inlets.** Wall inlets shall be capable of adjusting the direction of flow and of producing sufficient velocity to impart a substantial circulatory movement to the pool water.
3. **Recessed Stair Inlets.** At least one inlet shall be located in **each** recessed stairwell or other space where water circulation might be impaired.
4. **Floor Inlets.** If inlets are to be placed on the bottom of the pool, the number of inlets shall be determined by dividing the perimeter of the pool (measured in feet), by 15. Any fraction thereof would require 1 additional inlet. Floor inlets shall be so designed as to not create a hazard.
5. **Special requirements.** Inlet requirements for special designs such as zero depth entry pools shall be evaluated on a case-by-case basis.
6. **Wading Pools and Spas.** Inlet requirements for wading pools and spas designed for six (6) or fewer bathers shall be one for every 50 square feet of water surface. Any additional fraction thereof would require one (1) additional inlet.

## J. Rate-of-Flow Indicators

1. **General.** All pools and other related facilities shall be provided with an operational rate-of-flow indicator that reads in gallons per minute (gpm). All rate-of-flow indicators shall be installed so as to meet manufacturers' installation requirements, such as upstream and downstream straight pipe lengths. Where the rate-of-flow indicator is installed between the pump and the filter, periodic cleaning shall be performed to insure accurate readings.
2. **Backwash Flow Indicator.** Where the piping arrangement is sufficient to meet the manufacturer's requirements for pipe lengths, a rate-of-flow indicator on the pump discharge, between the pump and filter(s), will be provided on pools with filters that require backwashing. The operator shall be responsible for ensuring that the rate-of-flow indicator is functioning properly.

## SECTION X. OVERFLOW SYSTEMS.

### A. General.

1. **Overflow System Required.** All pools/spas shall be provided with a surface overflow system which shall be an integral part of the circulation system and which shall consist of either built-in-place gutters, prefabricated gutters, and/or recessed automatic surface skimmers.
2. **Combination Gutter/Skimmer System.** Nothing in this section shall preclude use of a surface overflow system which combines both a gutter and a recessed automatic surface skimmer. All pools with a water surface greater than 3,000 square feet shall be equipped with gutters or a combination of gutters and skimmers.

### B. Perimeter Overflow (Gutters). Whenever a built-in-place perimeter overflow system or a prefabricated perimeter overflow system is provided, it shall be designed and installed such that:

1. **Capacity.** The system shall be capable of handling 100 percent of the circulation flow (based upon the required turnover rate) without the overflow troughs being flooded for any appreciable period of time.
2. **Surge Capacity.** A surge capacity shall be provided either in the system and/or by use of a surge tank. The total surge capacity shall be at least equal to one gallon/square foot of swimming pool water surface area.
3. **Water Level.** The water level of the swimming pool/spa shall be maintained at or slightly higher than the level of the overflow rim of the perimeter overflows, except for the time needed to transfer all of the water which may be in surge capacity back into the swimming pool after a period of use, provided that this transfer time shall not be greater than 20 minutes.
4. **Overflow Gutters.** Gutters shall extend entirely around the perimeter of the pool and have the necessary slope to prevent accumulations of debris, dirt, etc., be of ample size to carry off normal amounts of water introduced into them, and be easily accessible for cleaning. Drainage outlets shall be provided at least every 15 feet and shall be covered by removable grating.
5. **Overflow Rim.** When installed, the tolerance of the overflow rim shall not exceed  $\frac{1}{4}$  inch as measured between the highest point and the lowest point of the overflow rim.
6. **Automatic Skimming.** During non-use, the overflow system shall be capable of providing continuous and automatic skimming action to the water at the surface of pool.
7. **Overflow Troughs.** The overflow troughs shall be installed completely around the perimeter of the swimming pool, except at steps, recessed ladders and stairs.
  - a. **Hand Hold.** The exposed surfaces of the overflow trough shall be capable of providing a firm and safe handhold.
  - b. **Easily Cleaned.** The overflow trough shall be capable of being cleaned easily and shall be of such configuration as to minimize accidental injury and provide for adequate water depth marking.

### C. Recessed Automatic Surface Skimmers.

1. **NSF Approval Required.** Whenever a recessed automatic surface skimmer is installed it shall be designed and constructed in accordance with the current NSF standards pertaining to recessed automatic surface skimmers.
2. **Skimmer Design and Material.** The recessed skimmer shall be of a grade designed for commercial pools, be of substantial, durable, reasonably corrosion resistant material and equipped with an automatic skimmer weir and removable strainer basket and flat lid flush with deck and securely attached at all times.
3. **Skimmer Flow Rate.** The skimmer shall be designed for a flow rate based on a minimum 70% of the total flow, in gpm.
4. **Skimmer Flow Adjustment Valve.** All skimmers shall have an integral trimmer valve.

5. **Skimmer Minimum Required.**

	Quantity	Minimum Number
Swimming Pool	1 per 500 sq. ft.	4*
Wading Pool	1 per 500 sq. ft.	1
Water Slide	1 per 500 sq. ft.	2 Skimmers – Plunge Pool; 1 Skimmer – Pump Reservoir
Therapy Pool/ Swim Spas/Spas	1 per 500 sq. ft.	1

Skimmer quantity for other water recreation attractions or special purpose pools shall be as determined by the Department during the design review process.

**\*Note:** Minimum number of skimmers may be reduced as determined by the Department.

6. **Skimmer Location.** On outdoor pools/spas the recessed automatic surface skimmer or skimmers shall be so located as to take into consideration the direction of prevailing winds.
7. **Skimmer Recessed.** A recessed automatic skimmer shall not protrude into the pool.
8. **Skimmer Weir.** The weir in the skimmer shall adjust automatically and operate freely to variations in water level over a minimum range flow of four inches. The floating basket design is approved in lieu of weirs.
9. **Equalizer.** Equalizer piping for skimmers is not allowed.

**SECTION XI. FILTRATION SYSTEMS AND EQUIPMENT.**

**A. General.**

1. **Filter Required.** All pools/spas shall be equipped with a filtration system for the purpose of clarifying the water. The filtration system shall be an integral part of the circulation system and shall consist of sand-type filters, DE type filters, or cartridge filters.
2. **Design.** All filter units shall be designed and constructed in accordance with applicable NSF/ANSI standards pertaining to swimming pool/spa filters. The filter system shall be designed and installed with all the necessary valves and piping which may be needed to isolate, backwash or drain an individual filter unit for maintenance and/or repair.
3. **System Capacity.** The filtration system shall have the capacity to meet the flow rate required for the prescribed number of turnovers without exceeding the maximum allowable filtration rate.

4. **Rate of Flow Control.** All filter installations shall be equipped with a rate of flow control valve (ball, gate and other control valve types) on the discharge side of the pump.
5. **Accessibility.** All filters shall be designed and installed so as to provide easy accessibility for cleaning, operating, maintaining and servicing.
6. **Gauges.** Filters shall be equipped with an approved pressure gauge or gauges. Vacuum filters shall be equipped with a vacuum gauge(s).
7. **Drainage.** All filters shall be designed and installed with all the valves and piping needed to drain the filters completely for servicing or winterizing.
8. **Bypass.** Provisions shall be made to bypass the filter and empty the pool water to waste.
9. **Air Relief.** All pressure filters shall be designed and installed with an air relief valve or valves which shall be located at or near the high point of the filters and be capable of being operated manually. Automatic air-relief valves on top of the filters with manual air-relief capabilities are acceptable.
10. **Filter Backwash.** Backwash from the filter(s) shall be piped to a sanitary sewer or other disposal method approved by the Department. If required, a permit for the discharge shall be obtained from the Department of Environmental Quality. In all cases of filter backwash discharge, an air-gap shall be provided with a minimum of six (6) inches between the discharge pipe and top of the sump or sewer piping. Both the sump and the exit pipe shall be sized to accommodate the backwash flow. A sight glass or other means for viewing the clarity of the backwash shall be provided. A provision to filter to waste shall be provided.

## **B. Sand Filters.**

1. **General.** When a sand-type filter(s) is installed, it may be either a gravity or a pressure, or a vacuum, sand-type filter. Options include:
  - (a) rapid-rate sand-type filter, which shall be designed for filtration rates not in excess of 3gpm/square foot of sand bed area, or
  - (b) high rate sand-type filter, which shall be designed: with filtration rates not in excess of 7.5 gpm/square foot of sand bed area on existing pools using an 8 hour turnover rate or with filtration rates not in excess of 15 gpm/square foot of sand bed area on newly constructed pools using a 6 hour turnover rate. All other pool/spas may utilize the 15gpm/square foot of sand bed area rate (see Section IX.B for turnover rates).
2. **Single Filter Flow Control.** If a single filter unit is provided on pools designed and constructed prior to December 2003, the pump shall be sized at 15 gpm/square foot of filter area to provide the necessary backwash flows. A valve to control flow shall be provided to limit the normal filtration rate to 7.5 gallons per minute per square foot of filter area. Flow control valves shall be required on existing facilities utilizing single sand filters on a 7.5 GPM/sq. ft. rate. Any filter renovation of pools prior to 2003 will require preliminary review to determine existing piping size and design considerations.
3. **Multiple Filters.** If two or more filters are used to achieve the required filter area, they must be of the same size.
4. **Inspection Port.** Internal components of the filter shall be accessible through an inspection port as required by NSF.
5. **Backwash.** When a sand-type filter is installed it shall be designed and installed such that it may be backwashed at a rate of no less than 15 gpm/square foot of filter bed area.

6. **Filter Media.** Filter sand shall be hard filter silicon material free of carbonates or other foreign material, with an effective particle size of between 0.4 and .55 mm and a uniformity coefficient not exceeding 1.75. Depth of filter sand shall be adequate for the function intended. In no case shall it be less than 20 inches for rapid-type filters and 12 inches for high-rate type filters.
7. **Freeboard.** A freeboard between the top of the filter media and the lowest draw off point of the upper distribution system shall be provided and be of sufficient height so no media is lost during backwash.

### C. Diatomaceous Earth Filters.

1. **Filter Type.** When a DE type filter is installed, it may be either a pressure or a vacuum type and it may be designed to operate either with or without continuous slurry feed. A DE filter with a continuous slurry feed shall be used for filtration rates not in excess of 2.5 gpm/ square foot filter area. A DE filter which operates without continuous slurry feed shall be used for filtration rates not in excess of 2 gpm/square foot of filter area.
2. **Cleaning.** When a DE filter is installed it shall be designed and installed with provisions for cleaning by one or more of the following methods.
  - a) Backwashing
  - b) Spray Wash (Either mechanical or manual)
  - c) Agitation

The water used in cleaning a DE filter shall be discharged to waste or other approved means.

3. **Precoat.** Precoating of the septa shall be in accordance with manufacturer's recommendations to insure adequate coating of DE prior to filtering water through the system. A precoat pot may be installed on the suction side of the pump to insure adequate coating of the filter septa. No additional precoat equipment is needed on vacuum systems since the DE can be placed directly in the filter tank.
4. **Filter Piping.** The system piping shall be such that during precoat procedures the filtered effluent shall be refiltered or wasted without passing into the pool until the effluent is clear of suspended matter.
5. **DE Substitutes.** Synthetic substitutes such as cellulose products manufactured as DE replacements may be utilized.

### D. Cartridge Filters.

1. **General.** Cartridge type filters are permitted for use on Class E Spas or Class F Spas. Approval of cartridge filters for use on all other classes of pools shall be on a case-by-case basis.
2. **Number.** One extra complete set of cartridges per filter shall be kept on the premises at all times. Replacement of cartridge elements shall be done whenever the requirements of Section VI B cannot be maintained.
3. **Cleaning.** Cartridge filters must be cleaned by soaking in an approved cleaning solution and/or by pressure spraying.
4. **Filter Rate.** Cartridge filters must filter at a rate not in excess of .375 gpm per square foot.

- E. **Other Filters.** Any filters other than those described above must be approved by the NSF and the Department as set forth in Section XXV before they can be considered for use in the recirculation system for public swimming pools/spas.

## **SECTION XII. Disinfection Equipment.**

- A. General.** Every pool/spa shall be equipped with a disinfectant feeder(s) as required to maintain the microbiological, chemical and physical characteristics of the pool/spa water within the required limits as listed in Appendix B. The disinfectant shall provide a residual in the pool/spa water so that it can be monitored.
- B. Types of Feeders.** Disinfectant feeders for use on public pools and spas may be the hypochlorinator type that feeds as a liquid by positive displacement or by a feeder that uses controlled erosion or dissolving of a chemical by the flow through process. Feeders shall maintain a dosage proportional to the flow. Because of serious safety considerations the use of gas chlorine is not recommended and may not be approved. When used, the operation must be in compliance with all state and federal safety requirements.
- C. Disinfectants Other Than Chlorine or Bromine.** Disinfectants other than chlorine or bromine require special approval and are not to be used without prior written permission from the Department.
- D. Approval of Disinfectant Feeders and Chemical Feeders.** All disinfectant feeders and all chemical feeders which are installed on pools/spas shall be designed and constructed in accordance with applicable NSF or UL standards pertaining to disinfectant and chemical feeding equipment for use on swimming pools and spas.
- E. Alternate Disinfection Devices.** Any disinfection device such as chlorine generators (salt systems), ultraviolet light, ozonators, copper/silver ionizers, etc. must be reviewed and approved for use per Section XXV.
- F. Feed Rate.** Disinfection feeders shall have the capacity to feed 5 ppm to the 24 hour recirculation flow of the filtration system. All other disinfectants shall feed at rates as determined by the Department.
- G. Minimum standards for Gas Chlorine Feeders on Existing Pools.**
- 1. Design.** Feeders shall be of such design and construction as will withstand wear, corrosion, or attack by chlorine gas, chlorine vapors or chlorine solutions and will not be adversely affected by repeated regular adjustments or other conditions anticipated in the normal use of the device.
  - 2. Easily Cleanable.** Feeders shall be capable of being easily disassembled for cleaning and maintenance and being easily reassembled.
  - 3. Non-clog Design.** Feeders shall be of such design and construction as to preclude stoppage from materials which may be contained in the compressed gas.
  - 4. Fail Safe.** Feeders shall incorporate failure-proof features so that the chlorine gas cannot feed directly into the swimming pool, the pool piping system, water supply system or the swimming pool enclosure under any type of failure or interruption of operation of the equipment.
  - 5. Solution Feed Type.** Feeders shall be a solution feed type, capable of delivering a chlorine solution at its maximum rate without releasing chlorine gas into the atmosphere.
  - 6. Accidental Failure.** Feeders shall be of such design so that during accidental failure or interruptions of water supply to the chlorinator, any leaking gas will be safely conducted to the outdoors, not onto the pool deck or any populated area.
  - 7. Chlorine Compartment.** Where gaseous chlorine equipment is provided, the mechanical proportioning device and cylinders of chlorine shall be housed in a reasonably gas tight, corrosion-resistant and mechanically vented enclosure with a shatter-proof gas tight inspection window. Venting shall be to

atmosphere in an unrestricted area and shall have a motor-driven exhaust fan capable of producing at least one air exchange per minute. Properly designed automatic louvers are required near the top of the enclosure for admitting fresh air. Electrical switches for the control of artificial lighting and ventilation shall be on the outside of the enclosure adjacent to the door.

The floor area of the enclosure shall be of adequate size to house the chlorinator, fan, scales, and one extra chlorine cylinder. Cylinders must be anchored to provide proper storage. Ammonia, stored outside the chlorine room, must be available to detect any possible chlorine leaks.

- 8. SCBA Required.** A self-contained breathing apparatus (SCBA) shall be provided and shall be readily accessible in a secured location outside the chlorine room.

#### **H. Hypochlorinators and Chemical Feeders.**

- 1. Positive Feed Required.** Feed shall be positive and constant under all conditions of pressure in the circulating system.
- 2. Back Flow Prevention.** Positive features to prevent back-flow from the circulation system to the solution container shall be provided.

#### **I. Flow Through or Controlled Erosion Feeders.**

- Flow through or controlled erosion feeders shall be used in conjunction with a chemical feeder to maintain pH when used for feeding a hypochlorite non-stabilized compound.
- The feeder shall have an adjustable rate of flow through the feeder.
- The feeder shall have a positive flow indicator.
- The feeder shall be so constructed and installed so that no chemical shall be fed when the circulating system has been shut down.

- J. Chemical Training.** Any facility utilizing chlorine gas shall be required to have operators complete a certified training course which should include topics such as: handling, storage, hazard response and planning. Similar training is also recommended for facilities utilizing sodium hypochlorite.

### **SECTION XIII. CHEMICAL FEEDERS.**

- A. General.** A chemical feeder must be used in conjunction with a hypochlorinator feeding non-stabilized chlorine or gas chlorinators in order to maintain pH of pool/spa water. It shall be a positive displacement type feeder.
- B. Feed Rate.** Equipment shall be sufficient to supply at least 2 pounds of soda ash per 15,000 gallons of pool/spa water per 24-hour period and shall have a minimum feed capacity of 2 ½ gallons per hour. This same type feeder can also be used to feed acid and granular chlorine for super-chlorination

**SECTION XIV. POOL/SPA HEATERS.** All gas-fired heaters for pools or spas shall meet the requirements of the current Arkansas Gas Code.

**SECTION XV. CONTROLLED LIMITED-USE SPAS.** Controlled limited use spas as defined in Section III shall meet all the applicable requirements of these Regulations with the following variances:

- A. A minimum of 50 square feet of NSF approved cartridge filter for units 500 gallons or less. The filtration may be located below the skimmer unit or within an equipment system. Larger units shall be evaluated on a case-by-case basis.



- B. An NSF approved continuous disinfection (chlorine or bromine) unit shall be required. Other similar dispensing devices maybe approved on a case by case basis. Location of facility, patron use, and supervision shall be considered when determining equipment need. The unit shall be sized in accordance with Section XII E.
- C. One skimmer with weir and a minimum of 2 side/bottom suction fittings with anti-entrapment covers shall be provided per pump.
- D. An alternate disinfection unit (i.e. ozonator, UV, etc.) is recommended and only in conjunction with an approved primary disinfection unit. If installed it shall be installed per manufacturers' requirements.
- E. All safety and signage requirements for spas shall be met.

**NOTE:** The recirculation/filtration/disinfection system shall operate 24 hours continuously.

**SECTION XVI. TESTING EQUIPMENT.**

All pools/spas shall have a functional and accurate test kit or equipment for measuring free and combined chlorine or bromine concentration, pH, total alkalinity and cyanuric acid (if stabilizer is used in pool/spa water).

Other test kits may be required when deemed necessary by the Department. The use of orthotolodine (OTO) tests for chlorine is prohibited. N,N-diethyl-p-phenylenediamine (DPD) test kits shall be provided and capable of measuring the minimum and maximum allowable ranges for chemical operational parameters in Appendix B.

**SECTION XVII. POOL CLEANING EQUIPMENT.**

**A. Suction Cleaner or Cleaning Equipment.**

- 1. **General.** Equipment shall be provided to remove sediment, sludge and other accumulations from all areas of the pool/spa bottom and walls.
- 2. **Minimum Requirements.** The minimum equipment required for pool/spa cleaning includes:
  - one (1) vacuum head and hose or portable vacuum
  - one (1) wall brush suitable for use on pool/spa material
  - one (1) leaf net
  - one (1) telescoping pole
- 3. **Use of Common Cleaning Equipment.** Multiple facility operations may use common cleaning equipment. To prevent cross contamination, caution must be taken to clean and disinfect vacuum equipment following fecal accidents or suspected waterborne disease outbreaks.

**SECTION XVIII. EQUIPMENT ROOMS.**

- A. Access to Equipment.** The equipment room shall be evaluated during the plan review process to determine if adequate space is provided for equipment to be serviced. Filters and other equipment shall be easily accessible for service. Equipment shall be safeguarded to prevent unauthorized tampering. The equipment room shall be adequately drained and ventilated. The room(s) and equipment shall be maintained clean and in good repair.
- B. Gas Chlorine Storage.** Where gas chlorine is used on existing facilities, the chlorine room shall meet the minimum standards as described in Section XII G 7.

**C. Ventilation for Equipment Rooms.** Where the equipment room is provided below grade, stairway access and suitable drainage shall be provided. Enclosed stairways shall have louvered vents on three sides of the room and an exhaust fan.

All other equipment and chemical storage rooms shall be ventilated through a louvered door and an opening, louvered vent on at least one other side. In order to achieve adequate ventilation, an exhaust fan may be necessary. Chemical rooms must be vented away from the walk area.

**D. Chemical Storage.** Adequate space shall be provided for off-floor storage of chemicals, separate from the operating equipment. In rooms or areas with fixed ceilings, the minimum height shall be 6.5 feet.

**E. Lighting.** All equipment and chemical storage rooms shall be equipped with at least of one (1) watt of artificial light per square foot of floor area with a minimum of 100 watts provided.

**SECTION XIX. BATHER PREPARATION FACILITIES.**

**A. General.** All Class “A” pools and spas open to the general public shall provide adequate bather preparation facilities. Whenever any pool other than Class “A” pools are opened to the general public, a minimum of one restroom and shower facility for each gender shall be provided. Pools not open to the general public shall provide bather preparation facilities whenever suitable facilities are not available within a reasonable distance of the pool. In these instances the Department shall determine reasonable distance. Lavatories, showers and water closets shall be provided for each gender based on the maximum bather load and as listed below or as required by the current Arkansas State Plumbing Code, whichever is most stringent. Certain pools having a high rate of swimmer change out, such as a school’s pool used for classes, may be required to provide additional facilities.

<b>FIXTURE</b>	<b>MEN</b>	<b>WOMEN</b>
Lavatories	1 per 100	2 per 100
Water Closets	1 per 100	2 per 100
Urinals	1 per 100	
Showers	1 per 40	1 per 40

**B. Dressing Rooms.** A dressing room shall be provided for each gender. The dressing rooms shall be satisfactorily located, constructed, equipped, lighted and ventilated. Floor finish shall be non-skid cement, tile, or other impervious material. Indoor-outdoor carpet is not approved. Non-skid mats may be installed but shall be removable for cleaning. Walls and partitions shall be constructed of smooth, impervious material.

**C. Light and Ventilation.** All bather preparation areas shall be adequately ventilated and lighted. A minimum of one (1) watt of light for each square foot of floor area is recommended.

**D. Hot and Cold Running Water Shall Be Provided.** Dispensers for providing either liquid or powdered soap shall be provided for lavatories and showers. Adequate hand drying facilities, either single service paper towels or blower type hand dryers, must be provided.

**E. Maintenance.** All bather preparation facilities shall be maintained in a clean condition and in good repair.

**SECTION XX. SAFETY.**

**A. Operation and Management.** The pool or other related facility shall be maintained under the supervision and direction of a properly trained operator on staff, or on call, who shall be responsible for promoting good sanitation and safety, the proper maintenance of the facility and all physical and mechanical equipment and records.

It is recommended that the operator shall have successfully completed a swimming pool operator course and have current certification recognized by the Department.

### **Recommended Courses include:**

1. National Swimming Pool Foundation Certified Pool Operator (CPO) Course
2. Association of Pool and Spa Professionals (APSP) pool certification courses
3. National Recreation and Park Association (NRPA) pool certification courses
4. Other courses or curriculum (evaluated on a case by case basis) which provide technical training in pool/spa water chemistry, maintenance, and safety

### **B. Lifeguards.**

1. **Lifeguards.** Shall be present in accordance with the following: All Class A pools and any pool that is opened to the general public.
2. **Number of Lifeguards.** A minimum of one lifeguard shall be provided for each 2000 square feet of water surface. One additional lifeguard shall be provided for each additional 2000 square feet of water surface, or fraction thereof equal to or greater than 1000 square feet.
3. **Lifeguard Chairs.** One lifeguard chair shall be provided for each lifeguard as required by these regulations. Lifeguard chair(s) shall be elevated and strategically located to provide adequate coverage of all areas of the pool. This does not preclude the use of a lifeguard to walk the pool area or be stationed in the shallow areas of the pool.

- C. General Safety.** No broken bottles, cans, glass, sharp objects or any other debris, which might cause injury or accidents, shall be in the pool. Glass bottles are prohibited in the pool area. No operational activities or conditions of facilities which are likely to cause illness or injury shall be allowed to exist. Food and/or drinks are prohibited in the pool/spa water. Steps, benches and ladders as specified in Section VIII I shall be provided.

Area lighting as specified in sections VIII G, XVIII E, and XIX C shall be provided

A recommended list of pool rules is located in Appendix C.

No diving board, tower, or platform greater than ten (10) feet above the water level shall be permitted in any public pool, except by express permission of the Department Director.

Main drain grates, anti-entrapment covers and vacuum-fitting covers shall be in place and in good condition whenever the pool/spa is in use. Missing or damaged covers shall constitute grounds for immediate closure.

### **D. Prevention of Unauthorized Entry.**

1. **General.** Provisions must be made to exclude unauthorized entry to the facility. The barrier may be any fence, wall or structure which prevents entry except through self-closing, self-latching and lockable gates or doors. The barrier shall surround all four sides of the pool/spa and not prevent visual observation of the pool. In any new construction of an outside pool or spa, an adjacent building (clubhouse, locker room, etc.) may only serve as one barrier side. In existing construction, each entry from any adjacent building to the pool area must contain either an alarm on the door, cardkey access to pool deck, install fencing between building structure and pool or other means which may be reviewed on a case by case basis. Shrubbery shall not constitute an acceptable barrier.
2. **Barrier Design.** The barrier shall not be less than four feet in height. The topography outside the barrier shall be considered during the construction phase to insure the barrier will provide a minimum four (4) foot barrier. Barriers shall not have open spaces greater than four (4) inches horizontally. There shall not be more than four (4) inches of space between the bottom of the barrier and the ground's surface or the pool deck. Any new fence/barrier construction or renovation shall comply with the design criteria set forth in this Section.

- 3. Multiple Facilities.** Where a pool and a wading pool are located within a common pool area, separate fencing, which meets the above criteria, is required for the wading pool. Where other multiple facilities are located within a common pool area (i.e., pool and spa) provisions shall be made to prevent access to any pool or spa, which is closed for maintenance, repair or as the result of non-compliance. Locking spa covers and portable fencing which meet the above criteria are acceptable options for closure. Floating spa covers are not acceptable. Signs shall be posted indicating which facility is closed. The need for separate fencing for water recreation attractions, such as water theme parks, shall be evaluated on a case-by-case basis.
- 4. Indoor Pools/Spas.** The area must be secured by self-closing doors for dedicated pool/spa rooms or by barriers as required above, wherever the pool/spa are located where guest rooms or lobbies open onto the pool area. Some means of access control (such as room key or card) should be provided to prevent entry by unattended children.
- 5. Water Slides.** The entire water slide area including the plunge pool, pool deck, the slide, and the walk area to the slide, shall be fenced to prevent access when the slide is not in operation.

The Department may approve alternative enclosure materials and methods when such materials and methods are found to be equivalent those described above.

- E. Chemical Storage and Handling.** Chemicals shall be kept in the original containers and shall be used and stored in accordance with label instructions. All rooms used for storage of pool chemicals shall be plainly marked by any combination of words, pictures or symbols.
- F. Emergency Communications.** All pools shall have a suitable means of communication for emergency services conveniently available on the premises capable of reaching 911 dispatch services.
- G. Accident Report.** The operator of any pool or other related facility shall report any drowning, other death or serious injury occurring on the premises within 72 hours of the occurrence. A written report shall be submitted to the Department on forms provided by the Department.
- H. Life Saving and Safety Equipment.**

- 1. Required Equipment.** Readily accessible and conspicuously mounted lifesaving equipment shall be provided at all swimming pools. One unit of lifesaving equipment shall consist of the following:
  - a) One shepherd's crook and pole (recommended by the Department) and
  - b) One ring buoy or similar flotation device such as an American Red Cross approved rescue tube

One unit of life saving equipment shall be required for each 2,000 square feet of water surface or fraction thereof. A minimum of one ring buoy or similar flotation device shall be provided for spas. For multiple facilities, common equipment may be used in quantity based on the square footage requirement for total water surface area of the facilities. It is recommended that instructions for proper usage of life saving equipment be posted.

- 2. Lifeline.** All pools in which the maximum pool depth exceeds five (5) feet six (6) inches, shall install a lifeline located at or before the five (5) feet depth area(s) separating the shallow area(s) and the deep area(s). "Wave" type pools shall be exempt from this requirement.

Pools which provide lane swimming, may remove a lifeline during periods of lap swimming or routine maintenance. The lifeline shall be replaced following any maintenance activities or lap swimming to insure safety for recreational swimming. The lifeline shall be maintained in good condition. Connections for lifeline shall be recessed in the walls at appropriate locations, and in a manner which presents no hazard to swimmers.

- I. First Aid Equipment.** Each pool and other related facility shall have basic first aid equipment available to care for minor injuries.
- J. Electrical Requirements.** Wiring and grounding for lights and all electrical power for pool equipment must conform to the codes of the current edition of the National Fire Protection Association National Electric Code. Ground fault protection shall be provided on all electrical circuits within the pool area. Junction boxes must be above the pool water level and not be a trip hazard.
- K. Spa Timers and Emergency Shut-Off Switch.** A maximum setting of 15 minutes for the timer to activate the jet system shall be installed on all new or remodeled spa installations and shall be located at a distance that would require the bather to exit the spa to restart. An emergency shut-off switch shall also be required for all new or renovated spas and shall be conspicuously placed and accessible.
- L. Signs and Safety Markings.** All signs and depth markers must be clearly readable at all times.
- 1. No Diving.** This sign shall be displayed in conspicuous locations at all pools not meeting the minimum requirements for diving i.e., less than 5 ½ feet deep. The sign shall read “NO DIVING” with minimum three (3) inch lettering. “NO DIVING” tiles placed conspicuously on the deck shall meet this requirement.
  - 2. Warning – No Lifeguard On Duty.** This sign shall be posted at pools and other related facilities where lifeguard service is not required and not provided. The sign shall be in clearly legible letters at least three (3) inches high. The sign shall also state children should not use the pool without an adult in attendance.
  - 3. Spa Warning Sign.** On a warning sign, precautions for spa patrons shall be posted. The following language is recommended:

**CAUTION**

- Elderly persons and those suffering from heart disease, diabetes, or high blood pressure should consult a physician before using the spa pool.
  - No person suffering from a communicable disease, transmissible via water, shall use the spa pool.
  - Persons using prescription medications should consult a physician before using the spa pool.
  - Individuals under the influence of alcohol should not use the spa pool.
  - No person shall use the spa pool alone.
  - Pregnant women should not use the spa pool without consulting their physicians.
  - Persons should spend no more than 15 minutes in the spa at any one session.
  - All children under 14 years of age shall be accompanied by a responsible adult observer.
  - No person shall run or engage in horseplay in or around the spa pool.
  - Patrons should shower before and after using the spa pool.
- 4. Water Slides Safety Signs.** The following warnings must be posted at all slides:
- Always slide feet first and only after previous slider has cleared the area.
  - No jumping or diving from slide.

- Only one person at a time allowed on the slide.
- No play equipment on slide.

**5. Maximum Bather Load.** The maximum bather load as determined by Section XXI of the regulation shall be conspicuously posted at the entrance of the pool/spa.

**6. Pool Depth Markers.** Depth markings shall:

- Plainly mark the water depth in a unit of measurement, i.e. feet, inches or meters, on the vertical wall at or above the water level and on the horizontal surface of the coping or deck edge
- Be located on the vertical pool wall to be read from the waterside. Where markings cannot be placed above the water level, markings shall be placed in other areas and plainly visible to users in the pool
- Be located on the coping or deck within eighteen inches of the water edge and readable while standing on the deck facing the water
- Be slip resistant
- Be placed at the maximum and minimum water depths and at all points of slope change
- Meet the above requirements on irregularly shaped pools and designate the depths at all major deviations in shape
- Be three-inch minimum height on the deck and a two-inch minimum height on the vertical pool wall
- Be applied in a contrasting color
- Additional markers may be required based on pool design

**7. Spa or Wading Pool Depth Markers.** A spa or wading pool shall have a minimum of two (2) three inch depth markers indicating depth on the deck and/or posted on a sign or wall.

**8. Step and Bench Edges.** These shall be marked in a contrasting color or contrasting slip resistant tile. The vertical and horizontal faces on bench edges shall be marked. All steps shall have horizontal edges marked.

**9. Spa Water Temperature.** The maximum water temperature for a spa or therapy/spa pool shall be 104°F and this temperature shall be posted at the spa in three (3) inch letters. A non-breakable thermometer shall be provided for use in the spa

**10. Oils, Body Lotions and Minerals.** Oils, body lotions, minerals or other materials not associated with chemicals used for water chemistry balance and disinfection of the water are prohibited in the spa, and this information shall be posted.

**M. Animals Prohibited in Pool/Spa Area.** Except for service animals for the physically impaired, animals are not allowed in the enclosure.

## **SECTION XXI. BATHER LOAD.**

The maximum number of bathers in the pool at any one time shall not exceed a number determined by the following formula:

**SWIMMING POOL MAXIMUM BATHING LOAD  
(SPMBL)**

$$\text{SPMBL} = \frac{A - S}{(30)} + \frac{S}{(15)} \quad (\text{For outdoor pools})$$

$$\text{SPMBL} = \frac{A - S}{(30)} + \frac{S}{(25)} \quad (\text{For indoor pools})$$

Where

A = Total area of water surface in square feet.

S = Area of pool less than 5.5 feet deep in square feet.

\*Note: This formula will be used in determining certain features of pools as noted elsewhere in these Rules and Regulation.

Bather load requirements shall not apply to Class D Wading pools, Class C Special Purpose pools or Class E Therapy pools/Spas.

Bather load requirements for Class C, Special Purpose pools, shall be determined on a case-by-case basis by the Department.

Bather load requirements for Class F spas shall be based on one (1) bather for every 10 square feet of water surface.

When applicable the maximum bather load shall be conspicuously posted at the entrance of the facility and shall not be exceeded.

**SECTION XXII. OPERATION AND MAINTENANCE.**

- A. Cleanliness of Pool/Spa.** Floating scum, sputum or debris shall not be allowed to accumulate in the pool. Water levels in pools shall be maintained and operated to remove such material continuously. The bottom and sides of the pool shall be cleaned as often as necessary to maintain a condition of cleanliness. The sides and bottom of pools, decks and other surfaces shall be kept free of slime and algae. Procedures for disinfection and management of fecal accidents are located in Appendix D.
- B. Cleaning and Maintenance of Pool/Spa and the Facility.** All parts of the pool/spa and related pool/spa facilities and equipment shall be maintained in good repair. Floors shall be kept free from cracks and other defects. Walls, ceilings, partitions, doors, lockers and similar surfaces and equipment shall be refinished as often as necessary to be kept in a state of good repair. Pool/spa surfaces including but not limited to tile, plaster and/or paint shall be maintained in good repair.
- C. Operational Records.** Operational records shall be kept on forms provided by the Department. Records shall be retained by the pool owner/manager for review upon request by the Department. Such mandatory records include but not limited to: Swimming Pool Operational Records and Report of Accident or Drowning at Pools, Spas, etc. Recommended documentation includes: Record of Pool Contamination Incident, Employee MSDS Training. (see Appendix for form copies)
- D. Inspections.** At all reasonable times, representatives of the Department shall have access to, and are hereby empowered to enter the premises of any public pool or other related facility and to make inspections to determine whether the provisions of these Rules and Regulations of the Department are being complied with.

Results of inspections shall be recorded on Department forms which summarize the requirements of these Rules and Regulations. The completed inspection report shall specify a reasonable period of time for correction of any violation found.

All violations of critical items shall be corrected within 10 days following the inspection. A follow-up inspection will be conducted to insure compliance.

All other items should be corrected as soon as possible, but in any event by the time of the next routine inspection unless the violation involves construction as addressed in Section XXIV, Existing pools/Spas.

#### **E. Pool/Spa Closure.**

Any public pool is to be closed by the owner whenever the following conditions exist:

1. The pool is being operated without a valid permit from the Department
2. Any critical item is noted on the inspection report
3. Any required safety equipment is missing or any violation Section XX
4. The mandatory chemical operation parameters are not in compliance as indicated in Appendix B
5. An imminent health hazard as determined by the Department
6. A suspected water-borne outbreak is reported to the Department
7. When the time limits have been exceeded for the correction, repair, or replacement of defective, missing or unapproved equipment.

In the case of voluntary pool closure, one or more signs shall be posted conspicuously stating "Pool Closed" or "No Swimming" or similar language.

When the owner fails to close a facility, the Department shall close the facility and post "CLOSED" sign(s). When closed by the Department, the facility shall not reopen until an inspection has been conducted by the Department indicating compliance.

**F. Communicable Disease.** No person suffering from an open cut, rash, skin lesion, or any skin disease or any possible communicable disease transmitted via water shall be permitted to patronize the pool. No person having a communicable disease shall work at any pool in a function in which there is a likelihood that they will transmit the disease to any other person.

**G. Bather Clothing.** Only clothing designed for use in swimming shall be allowed in the pool. Cutoffs shall not be worn in the pool unless hemmed. Street shoes are not allowed in the water. Children should not be allowed in the pool or wading pool with disposable diapers unless covered with plastic pants.

**H. Facility Closure or Abandonment.** A pool or other related facility for which no operation permit is in effect and which is not in use for two (2) weeks or longer shall be covered, drained, or maintained by the owner in a condition which prevents creating a hazard to health or safety. If drained, care should be taken to ensure that the facility is not damaged by subsurface hydro-static pressure and that access by animals and humans is restricted.

If a public swimming pool/spa is to be permanently closed, the pool/spa shall be filled in or removed and the water and drainage connections removed. Written notification must be made to the Department. Any public swimming pool/spa left in a state of disrepair or out of service for more than one (1) swimming season shall be drained and secured so as to not create an imminent health hazard or nuisance.



- I. Food Service Operations.** Any food service operations conducted at the pool facility shall meet the current Arkansas Department of Health Rules and Regulations Pertaining to Retail Food Establishments.
- J. Winterizing.** All equipment shall be properly winterized, if and when the pool/spa is closed for operation at the end of the season. When the pool/spa is closed all gates shall be locked. A means to completely drain all piping and equipment shall be provided.
- K. Transfer of Ownership.** Each holder of a permit for operation shall notify the Department in writing upon sale, lease, or other transfer of responsibility for the facility and shall supply the Department with the name and address of the new owner/operator.

### **SECTION XXIII. ANNUAL PERMIT FOR OPERATION.**

- A. Annual Permit for Operation Required.** No municipality, person, firm, corporation, association, organization, or institution shall operate, maintain or allow the use of any public swimming pool or other water related facilities without a written permit from the State Health Officer or authorized representative.
- B. Opening of a Pool.** Prior to approval of the application for permit, whether existing or new construction, the Department shall inspect the facility to determine compliance with these rules and regulations. The department shall issue a permit to the applicant if the inspection reveals that the facility is in compliance with the requirements of the rules and regulations. Each permit shall expire December 31 following the date of issue.

Applications for renewal of permits for existing public swimming pools will be mailed to the operator prior to January 1 of each year.

The annual permit fee to operate a public swimming pool shall be twenty-five dollars (\$25.00), due and payable January 1 and each January 1 thereafter.

If a public swimming pool and a food service establishment are owned and operated at the same location by a common individual, corporation, firm or other entity, the annual swimming pool permit fee shall be ten dollars (\$10.00), due and payable January 1.

The permit fee shall be paid to the Department before the permit is issued. The permit shall be kept and displayed in a conspicuous manner, properly framed, at the pool for which it is issued.

- C. Suspension and Revocation of Permit.** Failure to comply with these regulations or failure to maintain equipment and facilities in good condition will be cause to immediately suspend this permit until such time the condition, which caused the suspension, has been corrected. Continuing violations of these regulations will be cause for the permit to be revoked by the State Health Officer or his authorized representative after a legal hearing as provided for in the Administrative Procedures Act. Ark. Code annotated 25-15-201, et.seq.

**SECTION XXIV. EXISTING POOLS/SPAS.** All existing pools/spas which are not in compliance with these regulations at the effective date shall be exempt from compliance with those construction provisions which do not pertain directly to health and safety of the patrons. All pools/spas, when remodeled, shall comply with all applicable provisions of these regulations pertinent to the renovation, unless a variance is granted by the Department. Any variance shall be granted in writing for a specific time period.

### **SECTION XXV. NEW PRODUCT APPROVAL AND ACCEPTANCE.**

- A. Submission of Technical Data.** The manufacturer or other sponsor proposing an alternative equipment, product, or material for use in pools/spas shall make a written request to the Department for acceptance of the equipment, product or material by the Department. Technical information as required by the Department to complete its review shall be submitted. Such information is typically as follows:

1. **Equipment and Material Items.** Technical documents, including approval or acceptance by other states, NSF approval information describing the proposed product and including catalog cut sheets, drawings, specifications, and promotional literature shall be submitted.
2. **Chemical Products.** Technical documents including information on chemical formulation, toxicity and efficacy studies and date. EPA registration manufacturer's proposed use and directions for and promotional literature shall be submitted.

## **SECTION XXVI. OTHER RELATED REGULATIONS.**

All pools and other related facilities shall comply with all appropriate State Laws and Rules Regulations, including but not limited to the following:

- ARKANSAS DEPARTMENT OF HEALTH RULES AND REGULATIONS PERTAINING TO GENERAL SANITATION.
- ACT 402 OF 1977 AND ARKANSAS DEPARTMENT OF HEALTH RULES AND REGULATIONS PERTAINING TO ONSITE WASTEWATER SYSTEMS.
- ARKANSAS DEPARTMENT OF HEALTH RULES AND REGULATIONS PERTAINING TO PUBLIC WATER SYSTEM.
- ARKANSAS DEPARTMENT OF HEALTH RULES AND REGULATIONS PERTAINING TO RETAIL FOOD ESTABLISHMENTS.
- ARKANSAS PLUMBING CODE.
- ARKANSAS GAS CODE
- ARKANSAS STATE MECHANICAL CODE
- ARKANSAS STATE LICENSING LAW FOR CONTRACTORS (ACT 50, AS AMENDED)
- ANY FEDERAL REGULATIONS PERTAINING TO POOLS AND SPAS
- VIRGINIA GRAEME BAKER POOL AND SPA SAFETY ACT (VGB—ENFORCED BY CONSUMER PRODUCT SAFETY COMMISSION
- AMERICANS WITH DISABILITIES ACT (ADA—ENFORCED BY DEPARTMENT OF JUSTICE)

**SECTION XXVII. SEVERABILITY.** If any provisions of these Rules and Regulations, or the application thereof to any person or circumstances, is held invalid, such invalidity shall not affect other provisions or applications of these Rules applications, and to this end the provisions hereto are declared to be severable.

**SECTION XXVIII. REPEAL.** All Regulations and parts of Regulations in conflict herewith are hereby repealed.

**SECTION XXIX. PENALTY CLAUSE.** Any person operating a public swimming pool who fails or refuses to comply with any of the provisions of these rules and Regulations or otherwise operates a swimming pool in violation of this Act or Rules and Regulations shall be guilty of a misdemeanor and upon conviction shall be fined not less than fifty dollars (\$50.00) and not more than five hundred dollars (\$500.00) for each offense and each day after sufficient notice has been given shall constitute a separate offense.

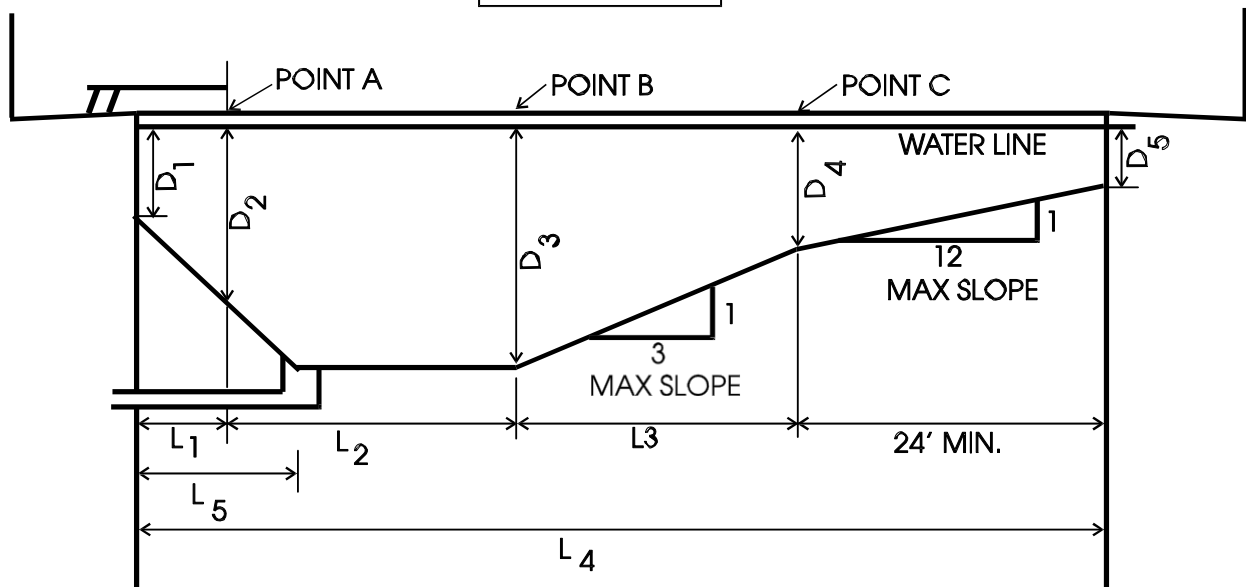
## CERTIFICATION

This will certify that the foregoing Rules and Regulations Pertaining to Swimming Pools and Other Related Facilities were adopted by the Arkansas Department of Health at the regular session of the Board of Health held in Little Rock, Arkansas on the 26th day of April, 2012.



| Paul Halverson, DrPH, FACHE  
Director and State Health Officer  
Arkansas Department of Health

**APPENDIX A**



**FIG. 1 Pool Profile Showing Minimum Dimensions NO SCALE**

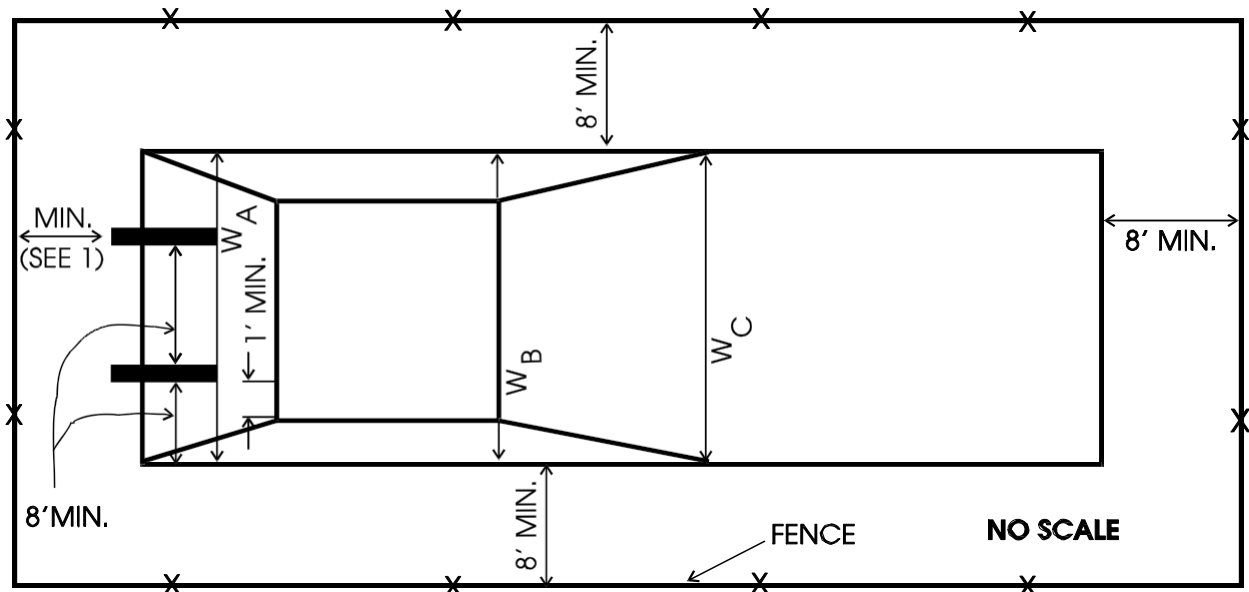
**CHART A. MINIMUM AND MAXIMUM POOL DIMENSIONS**

DIVING EQUIPMENT		DEPTHS (ft.)					LENGTHS (ft.)					WIDTHS (ft.) (3)		
		D <sub>1</sub>	D <sub>2</sub>	D <sub>3</sub>	D <sub>4</sub>	D <sub>5</sub>	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	L <sub>4</sub>	L <sub>5</sub>	W <sub>A</sub>	W <sub>B</sub>	W <sub>C</sub>
NO DIVING	MIN	2	NA	NA	NA	2	---	(1)	---	36 <sup>(4)</sup>	NA	NA	18	18
	MAX				5.5						NA			
DECK LEVEL (2)	MIN	5	7	8.5	4	2	2.5	8	10.5	45	6	18	20	20
	MAX				5.5		4				10			
ONE METER	MIN	5	8.5	10	4	2	4	10	15	53	6	20	22	22
	MAX				5.5		6				10			
THREE METER	MIN	5	11	12	4	2	6	10.5	21	61.5	6	22	24	24
	MAX				5.5		8				10			

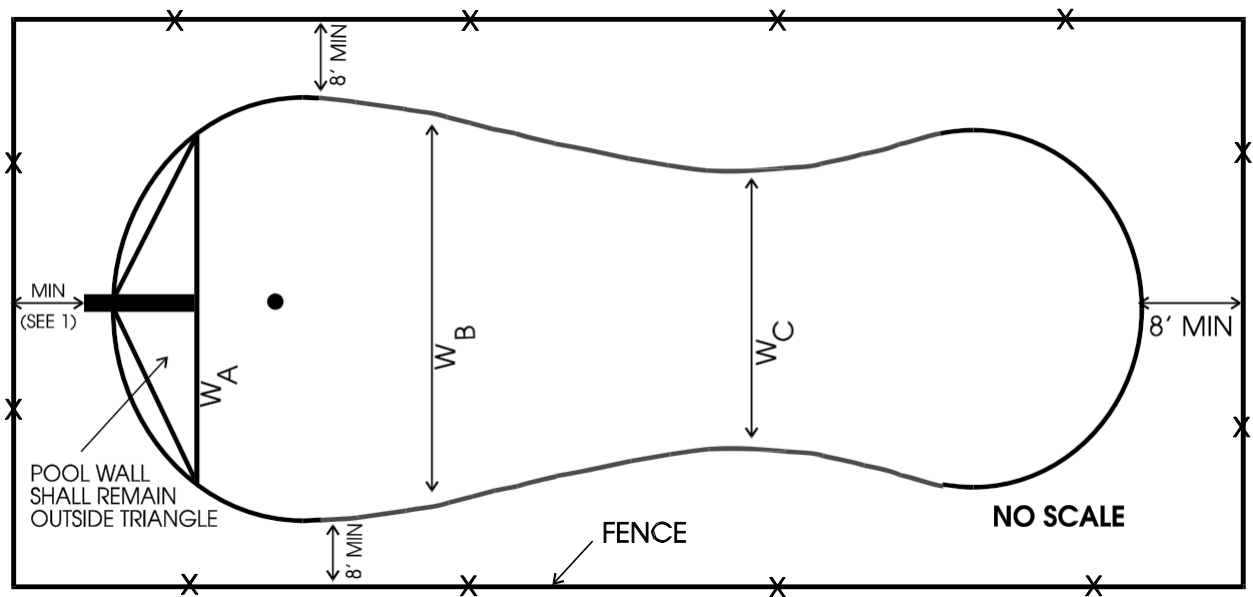
- 1) L<sub>1</sub>, L<sub>2</sub> & L<sub>3</sub> MAY VARY BUT MUST TOTAL 12 FEET.
- 2) DECK LEVEL - MAX. HEIGHT ABOVE WATER LEVEL IS 24 INCHES.
- 3) W<sub>A</sub>, W<sub>B</sub> & W<sub>C</sub> INDICATE WIDTHS AT POINTS A, B & C.
- 4) MINIMUM LENGTH AND WIDTH ON "NO DIVING" POOLS MAY BE REDUCED IF ADEQUATE JUSTIFICATION IS PROVIDED. THE FLOOR SLOPE MAXIMUM REMAINS 1 IN 12.

**NOTE:** PLACEMENT OF BOARDS SHALL OBSERVE THE FOLLOWING MINIMUM DIMENSIONS. WITH MULTIPLE BOARD INSTALLATIONS MINIMUM POOL WIDTHS MUST BE INCREASED ACCORDINGLY.

DECK LEVEL BOARD TO POOL SIDE	8 FEET
1 METER BOARD TO POOL SIDE	10 FEET
3 METER BOARD TO POOL SIDE	11 FEET
1 METER OR DECK LEVEL BOARD TO 3 METER BOARD	10 FEET
1 METER OR DECK LEVEL BOARD TO ANOTHER 1 METER OR DECK LEVEL BOARD	8 FEET
3 METER TO ANOTHER 3 METER BOARD	10 FEET



**FIG. 2** POOL PLAN (RECTANGULAR) SHOWING MINIMUM DIMENSIONS.  
 1. 4 FEET MINIMUM FOR POOLS 3000 SQ. FT. OR LESS.  
 8 FEET MINIMUM FOR POOLS GREATER THAN 3000 SQ. FT.  
 2. FOR PROFILE, SEE FIG. 1.



**FIG. 3** POOL PLAN (FREE FORM) SHOWING MINIMUM DIMENSIONS  
 1. 4 FEET MINIMUM FOR POOLS 3000 SQ. FT. OR LESS.  
 8 FEET MINIMUM FOR POOLS GREATER THAN 3000 SQ. FT.  
 2. FOR PROFILE, SEE FIG. 1.

**THE PRECEDING MINIMUM DIVING POOL DIMENSIONS WERE ADAPTED FROM:**

**STANDARD FOR PUBLIC SWIMMING POOLS, FEBRUARY 18, 1991  
 AMERICAN NATIONAL STANDARDS INSTITUTE, INC.  
 SPONSOR: NATIONAL SPA AND POOL INSTITUTE  
 2111 EISENHOWER AVENUE  
 ALEXANDRIA, VA 22314**

**APPENDIX B**

**ARKANSAS POOL CHEMICAL OPERATIONAL PARAMETERS**

Below are operation parameters for the proper chemical treatment and maintenance of pool/spa water. Chemical treatment alone will not produce sanitary pool water. A filtration system in proper operational condition is also required to attain sparkling clear, polished, sanitary water. **\*Mandatory tests for compliance**

<b>Disinfectant Levels*</b> Free chlorine, ppm	<i>Min</i>	<i>Ideal</i>	<i>Max</i>	<b>Comments</b>	<b>Testing Interval</b>
Pool	1.0	1.0 – 3.0	5.0	Hot weather/heavy use may require operation at or near maximum level. Regular Superchlorination is recommended.	Daily
Spa	2.0	3.0 – 5.0	5.0		
When stabilizer is used	1.5		5.0		
<b>Disinfectant Levels*</b> Combined chlorine, ppm**	<i>Min</i>	<i>Ideal</i>	<i>Max</i>	<b>Comments</b>	<b>Testing Interval</b>
Pool	None	None	0.2	High combined results in reduced chemical efficacy. Take remedial action to establish break point chlorination.	Daily
Spa	None	None	0.2	Other signs of combined chlorine: Sharp chlorine odor, Eye irritation, Algae growth	
<b>Disinfectant Levels*</b> Bromine, ppm	<i>Min</i>	<i>Ideal</i>	<i>Max</i>	<b>Comments</b>	<b>Testing Interval</b>
Pool	2.25	2.25 – 4.0	4.0		Daily
Spa	2.25	3.0 – 5.0	5.0		
<b>Disinfectant Levels*</b> Iodine, ppm	<i>Min</i>	<i>Ideal</i>	<i>Max</i>	<b>Comments</b>	<b>Testing Interval</b>
	---	---	---	Levels not established <b>Note:</b> Local Health Department officials must be consulted before use.	
<b>Temperature</b>			<i>Max</i>	<b>Comments</b>	<b>Check</b>
Spa			104°F	For 15 minute intervals on a timer	Daily
<b>Oxidation Reduction Potential</b>	<i>Min</i>	<i>Ideal</i>	<i>Max</i>	<b>Comments</b>	<b>Testing Interval</b>
ORP	650	---	---	When chlorine or bromine is used as the primary disinfectant, ORP can be used as a supplemental measurement of proper sanitizer activity. The use of ORP testing does not eliminate or supersede the need for testing the sanitizer level with standard test kits. An ORP reading may be affected by a number of factors including (1) pH, (2) probe film, (3) cyanuric acid, and (4) other. Follow manufacturer's recommendations.	Daily

**NOTE: The number of "Daily" testing intervals will vary based on type of facility, hours of operation, & bather load.**

**APPENDIX B (CONTINUED)**

**ARKANSAS POOL CHEMICAL OPERATIONAL PARAMETERS**

Below are operation parameters for the proper chemical treatment and maintenance of pool/spa water. Chemical treatment alone will not produce sanitary pool water. A filtration system in proper operational condition is also required to attain sparkling clear, polished, sanitary water. **\*Mandatory tests for compliance**

<b>Chemical Values</b>	<i>Min</i>	<i>Ideal</i>	<i>Max</i>	<b>Comments</b>	<b>Testing Interval</b>
<b>pH*</b>	7.0	7.4 – 7.6	7.8	If pH is: <b>Too high:</b> Low chlorine efficiency, Scale formation, Cloudy water, Eye discomfort <b>Too low:</b> Rapid dissipation of disinfectant, Plaster and concrete etching, Eye discomfort, Corrosion of metals, Vinyl liner damage	Daily
<b>Total Alkalinity*</b> (buffering) as CaCO <sub>3</sub> chlorite (ppm)	60	80 – 100 calcium, lithium, sodium hypochlorites 100-120 sodium dichlor, trichlor, chlorine gas, bromine compounds	180	If total alkalinity is: <b>Too Low:</b> pH bounce, Corrosion tendency <b>Too High:</b> Cloudy water, Increased scaling potential, and pH tends to be too high	Weekly
<b>Cyanuric acid*</b> (ppm)	None	25-40	90	If stabilizer is: <b>Too Low:</b> Chlorine residual rapidly destroyed by sunlight <b>Too High:</b> May reduce chlorine efficacy <b>Note:</b> Stabilizer is not needed in indoor or brominated pools.	Weekly
<b>Total dissolved solids</b>	300	1000-2000	3000	These values are offered as ppm guidelines rather than absolute values to indicate concern for accumulation of impurities in the course of operation. Excessively high TDS may lead to hazy water, corrosion of fixtures, etc., and can be reduced by partial draining with addition of fresh water. High initial TDS may indicate poor water quality due to corrosive mineral salts, humus, or organic matter. <b>Consult local water authority.</b>	Monthly or Suspect
<b>Calcium hardness</b> (ppm)	150	200-400	500-1000	Operation of pools at maximum hardness will depend on alkalinity (buffering) requirements of the sanitizer used. Minimum alkalinity and lower pH must be used with maximum hardness (Over 50ppm)	Monthly or Suspect
<b>Heavy metals</b>				If heavy metals, such as copper, iron, manganese, are present: Staining may occur, Water may discolor, Chlorine dissipates rapidly, Filter may plug, May indicate pH too low, corrosion, etc.	Suspect

**NOTE: The number of “Daily” testing intervals will vary based on type of facility, hours of operation, & bather load.**

## APPENDIX C

### LIST OF RECOMMENDED RULES FOR ALL POOL AND OTHER RELATED FACILITIES

These rules may be conveyed by any combination of words, pictures, or symbols. Those rules noted by \* are addressed within the Rules and Regulations.

1. All persons should take a shower before entering the water.
2. Running or boisterous play is not allowed on the deck.
3. \* Glass articles, sharp metal objects, and other hazardous objects are not allowed in the enclosure.
4. \* Pets or any animals are not allowed in the enclosure except for service animals for the physically impaired.
5. \* Persons with contagious or infectious health conditions are not permitted to patronize the pool.
6. Games, tubes, and other water play equipment can be allowed with permission of the management and if properly supervised.
7. \* An adult must accompany minors under the age of 12.
8. Children under the age of 7 shall require the presence of a parent or guardian. Non swimmers of any age must not enter the deep area.
9. \* Location of nearest telephone for emergency use or emergency notification procedure.
10. Pool hours are \_\_\_\_\_ to \_\_\_\_\_. (Set by owner and posted)
11. \* A first aid kit is located \_\_\_\_\_.
12. \* Street clothes and shoes are not allowed in the water. Children should not be allowed in the pool or wading pool with disposable diapers unless covered with plastic pants.
13. \* Food or drink is prohibited in the pool water.
14. Gum and tobacco are not allowed on the wet deck area.
15. Use of the pool by persons under the influence of alcohol or drugs is prohibited.
16. The management has the right to ask any patron to leave for non-compliance with the above rules.



## APPENDIX D

### PROCEDURES FOR DISINFECTION AND MANAGEMENT OF FECAL ACCIDENTS IN POOL AND OTHER RELATED FACILITIES \*

In the event of fecal contamination, the following procedures shall be followed:

#### **Formed stool(solid, non-liquid)**

- Direct everyone to leave all pools into which water containing the feces is circulated. Do not allow anyone to enter the contaminated pool(s)—if multiple pools use the same filter-- until all decontamination procedures are completed.
- Remove as much of the fecal matter as possible using a net or scoop and dispose of it in a sanitary manner. Clean and disinfect the net or scoop. Vacuuming stool from pool is not recommended.
- Raise the free available chlorine concentration to a minimum of 2 ppm (if less than 2ppm), and ensure the water's pH is between 7.2-7.5 and temperature is about 77°F. Test free chlorine residual at 3 widely spaced locations. Pool closure time will be approximately 30 minutes.
- Ensure that the filtration system is operating while the pool reaches and maintains the proper free available chlorine concentration during the disinfection process.
- Fill out Record of Pool Contamination Incident form found in the Appendix.

#### **Diarrhea(liquid stool)**

- Direct everyone to leave the pool(s) into which water containing the feces is circulated. Do not allow anyone to enter the contaminated pool(s)—if multiple pools use the same filter-- until all decontamination procedures are completed.
- Remove as much of the fecal matter as possible using a net or scoop and dispose of it in a sanitary manner. Clean and disinfect the net or scoop. Vacuuming stool from the pool is not recommended.
- Raise the free available chlorine concentration to 20 ppm and ensure the water's pH is between 7.2-7.5 and temperature is about 77°F. This chlorine level and the recommended pH level should be sufficient to inactivate *Cryptosporidium* and should be maintained for at least 12.75 hours.
- Backwash the filter thoroughly and discharge to waste.
- Swimmers may be allowed into the pool after the free available chlorine level and other chemical parameters have been returned to the normal operating range allowed by the Arkansas Pool Parameters found in the Appendix.
- Fill out Record of Pool Contamination Incident form found in the Appendix.

\* The information above was obtained from the Centers for Disease Control and Prevention.

**APPENDIX E**

**Employee MSDS Training**

Date \_\_\_\_\_

Trainer/Instructor \_\_\_\_\_

Topics:

- 1. Special handling procedures for swimming pool chemicals
- 2. Storage practices for swimming pool chemicals
- 3. Potential health related hazards
- 4. Swimming pool chemical interactions
  - Common swimming pool chemicals:
    - i. Sodium Hypochlorite
    - ii. Calcium Hypochlorite
    - iii. Bromine
    - iv. Muriatic Acid
    - v. Sodium Bisulfate
    - vi. Sodium Bicarbonate
    - vii. Test Kit reagents
- 5. General Protection Practices
- 6. Emergency Care

Employees present for training session:

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Training verified by: \_\_\_\_\_ Date: \_\_\_\_\_

\_\_\_\_\_  
Title





**APPENDIX H**

**ARKANSAS DEPARTMENT OF HEALTH  
ENVIRONMENTAL HEALTH PROTECTION  
ENVIRONMENTAL HEALTH SERVICES  
REPORT OF ACCIDENT OR DROWNING AT POOLS, SPAS  
OR OTHER RELATED FACILITIES**

**GENERAL INFORMATION**

Name of Facility: \_\_\_\_\_ Address: \_\_\_\_\_ City: \_\_\_\_\_

Name of Victim: \_\_\_\_\_ Address: \_\_\_\_\_ City: \_\_\_\_\_

Date of Incident: \_\_\_\_\_ Time: \_\_\_\_\_ am/pm Accident  Drowning  Fatality

Description of water and weather conditions at time of the incident: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Name of employees involved in rescue attempt or treatment of injury:  
\_\_\_\_\_  
\_\_\_\_\_

Facility open at time of incident Yes  No  Lifeguard on duty Yes  No  Bather load: \_\_\_\_\_

VICTIM: Male  Female  Age: \_\_\_\_\_ Non-Swimmer Yes  No

FACILITY: Indoor  Outdoor  Spa  Pool  Water Slide  Other  (Specify): \_\_\_\_\_

Emergency telephone provided: Yes No

Type of lifesaving/first aid training of employees involved: \_\_\_\_\_  
\_\_\_\_\_

TYPE OF INJURY: Abrasion or contusion  Concussion  Fracture  Laceration  Strain or Sprain

Other  (Specify): \_\_\_\_\_

AREA OF BODY INJURED: Head  Trunk  Arm, hand or finger  Leg, foot or toe

Other  (Specify): \_\_\_\_\_

DESCRIPTION OF INJURY: \_\_\_\_\_  
\_\_\_\_\_

**FACTORS WHICH MAY HAVE CONTRIBUTED TO ACCIDENT**

Slippery Surface: Surrounding pool  Bottom of pool  Steps

Other  (Specify): \_\_\_\_\_

Deck Equipment: Ladders or handrails  Lifeguard equipment

Other  (Specify): \_\_\_\_\_

Pool Enclosure: Inadequate  Gate unlatched  Horseplay involved

Other  (Specify): \_\_\_\_\_

Recirculation/Filtration Equip.: Mechanical  Electrical  Missing/broken equipment

Other  (Specify): \_\_\_\_\_

Diving, Jumping or Sliding: From board  From poolside  From slide

Other  (Specify): \_\_\_\_\_

Other: Swimming miscalculation  Natural causes  Use of alcohol

Chemical or chemical related accident: Yes  No

If Yes, chemicals involved: \_\_\_\_\_

Brief description of accident: \_\_\_\_\_

\_\_\_\_\_

Were police, rescue unit or other emergency personnel called: Yes  No

If Yes, list: \_\_\_\_\_

Brief description of emergency action taken on site: \_\_\_\_\_

\_\_\_\_\_

Degree of treatment required: None  CPR  First aid  Emergency room  Hospital admission

If necessary, make a sketch of the pool/spa area involved in the injury or accident

Additional remarks relevant to this accident: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Signature

Title

Date