

# The Water Recreation Facilities Ordinance

**Division of Environmental Health**

**Fairfax County Health Department**



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**Article 1.**  
**General Provisions.**

**Section 69.1-1-1. Title.**

This Ordinance shall be known and may be cited as the Water Recreation Facilities Ordinance of Fairfax County, Virginia.

**Section 69.1-1-2. Purpose.**

The purpose of this Ordinance is to:

- A. Ensure that all public pool facilities are constructed, operated, and maintained in a manner which does not adversely affect the public health or safety;
- B. Set forth the requirements necessary to secure a permit for construction, ownership, and operation of a water recreation facility.

**Section 69.1-1-3. Administration and Enforcement.**

The Director of Health Services shall administer and enforce this Ordinance.

**Section 69.1-1-4. Scope.**

This Ordinance shall apply to all water recreation facilities, intended for recreational use only and not for competitive swimming or competitive diving, as indicated and herein defined. Facilities constructed for competitive swimming or competitive diving shall meet the requirements set forth by this Ordinance and/or by the Director and/or the applicable FINA Standards. This Ordinance applies only to public pools and does not apply to residential pools serving a single family residence. Swimming pool facilities, spa pool facilities, and waterpark facilities, for which building permits are issued subsequent to the effective date of this Ordinance, shall be constructed in accordance with the provisions of the VUSBC, the National Electrical Code, OSHA, the Fairfax County electrical, fire prevention, plumbing, and zoning ordinances, and this Ordinance. Whenever any provision of any State Code, other County Code, manufacturer's specification or recommendation or industry standard imposes a greater requirement or a higher standard than is required under this ordinance, compliance with the provision of such State Code, other County Code, manufacturer's specification or recommendation or industry standards shall be required. Nothing in this Ordinance shall be held to preclude compliance with the applicable provisions of these codes, standards, specifications, and recommendations.



**Section 69.1-1-5. Definitions.**

For the purposes of this Ordinance, the following words and terms shall have the following meaning, unless the context clearly indicates otherwise.

**Above-Ground Pool** means any pool having the pool tank above ground level.

**Activity Pool** means a pool which features recreational water activities which may include, but is not limited to, one or more of the following; climbable bars, ropes, chutes, bubblers, fountains, anchored floating play components or other similar devices.

**ANSI** means American National Standards Institute.

**ASME** means the American Society of Mechanical Engineers.

**ASTM** means American Society for Testing and Materials.

**Attendant** means a person at a waterpark facility trained to operate an attraction and control the patrons in a safe and orderly manner.

**Attraction or Ride** means any of the specific types of features at waterpark facilities involving partial or total immersion of the patron.

**Backwashing** means the process of thoroughly cleaning the filter media or elements by reversing flow, dislodging the filter aid, and/or removing accumulated debris and discharging it to waste.

**Bathroom Facility** means the enclosed structure and related areas used by patrons of a water recreation facility prior to entering the pool(s), which contain the dressing rooms, showers, toilets, lavatories, saunas, steam rooms, and mop sinks.

**Breakpoint Chlorination** means the addition of a sufficient amount of chlorine to water to destroy the combined chlorine present. Breakpoint chlorination is approximated by the addition of chlorine sufficient to obtain total chlorine residual ten times the original combined chlorine residual.

**Center Line** means the path defined by geometric midpoints of a component or structure generally used for consideration of the slide path in flume rides and the separation of diving boards or platforms in a diving area.

**Children's Activity Pool** means an activity pool designed primarily for the use of children, having a maximum depth of 24 inches.

**Chute** means a structure which contains and directs the path of travel and rate of descent of a patron. A chute may be tubular, trough-like, curved or flat-bottomed. A chute generally uses water only as a lubricant.



**Combined Residual Disinfectant** means the amount of halogen or other approved disinfectant which has chemically combined with organic nitrogen compounds (e.g. combined chlorine).

**Competitive Diving Board** means any diving board recommended by the manufacturer for diving competition.

**Control Fence** means a woven steel wire, chain link, picket, solid board type fence, wall or equivalent barrier capable of directing bathers through the appropriate entry onto the pool deck or to a specific location within the pool facility's perimeter fence.

**Cross-Ventilation** means the movement of air from an outside source into and out of a filter/chemical storage room sufficient to prevent the accumulation of chemical vapors or dust. The cross-ventilation shall be provided by a mechanical exhaust fan.

**Deck** means the smooth, impervious, non-slip walking surface located within the perimeter enclosure and around the pool(s).

**Director** means the Director of Health Services or his/her designee.

**Disinfectant** means an agent that disinfects by destroying, neutralizing or inhibiting the growth of harmful organisms.

**Diving Area** means the minimum dimensions of an area within the pool necessary to provide safe entry from a diving board or platform.

**Diving Board** means the mechanism used for entering a swimming pool, consisting of a semi rigid board that derives its elasticity through the use of a fulcrum mounted below the board, and the stand that supports the semi rigid board.

**Diving Platform** means the raised rigid stage used for diving.

**Drop Slide** means a sloped chute or flume exiting the user above the pool operating water level into a receiving pool.

**Filter** means a device that separates solid particles from water by circulating water through a porous substance, the filter media or element.

**FINA** means the Federation Internationale de Natation Amateur.

**Flume** means a trough-like or tubular structure which uses a significant volume of water to transport the user.

**Free Available Residual Disinfectant** means the amount of disinfectant which is available to inactivate microorganisms and oxidize organic matter (e.g. free chlorine),



and which has not reacted with organic nitrogen compounds or any other material in pool water.

**Foothold** means areas that are greater than 1¾ inches, as measured horizontally that expose horizontal surfaces whose top planes are separated by a vertical distance that is less than 45 inches.

**GFCI** means Ground Fault Circuit Interrupter.

**Handhold** means the same as Foothold.

**Hard-Wired Telephone** means a telephone that has a direct wire handset and connection to the main telephone system.

**Hydrojet** means a fitting which blends air and water creating a high velocity, turbulent stream of air enriched water.

**Hydrostatic Pressure Relief Valve** means any valve which, when properly installed, will relieve underground water pressure caused by high water tables under the pool shell.

**Industry Standards** mean the American National Standard Institute (ANSI), National Spa and Pool Institute (NSPI) or similar standards.

**In-Ground Pool** means any pool constructed with the pool tank below ground level.

**Injury or Illness Report** means the written record of all facts regarding any death, near drowning, injury or illness associated with all regulated facilities.

**Inner-Tube Ride** means an attraction where users ride inner tube-like floatation devices through a series of chutes, channels, flumes, and/or pools.

**Interactive Water Feature Facility (IWF)** means a structure designed to allow for recreational activities with re-circulated, filtered, and treated water, but having minimal standing water. Water from the interactive fountain type features is collected by gravity below grade in a collector tank or sump. The water is filtered, disinfected, and then pumped to the feature spray discharge heads.

**Internal Communication System** means any combination of devices permitting the immediate passage or exchange of messages between the personnel within the water recreation facility.

**Lifeguard** means an individual, 15 years of age or older, who is trained and certified in lifeguarding, first aid, and cardio-pulmonary resuscitation.

**Lifeguard Stand** means an elevated lifeguard station, which complies with OSHA standards for elevated platforms, and includes a seat and platform. An umbrella



emplacement sleeve or alternative shade producing structure is required for outdoor stands. The stand may be portable and shall be located to allow full visual coverage of the lifeguard's assigned area of responsibility.

**Lifeguard Station** means a lifeguard stand or other designated workstation of a lifeguard.

**Light Color** means any color which has a Munsell Value (V) notation of 6.5 or greater and a Munsell Chroma (C) notation of 7.0 or less.

**MSDS** means Material Safety Data Sheets.

**Make-Up Water** means potable water which is added to a pool to bring the water level up to the waterline.

**Maximum Facility Load** means the maximum number of patrons permitted in any water recreation facility at any one time. The maximum facility load is limited by the sum total of the maximum individual swimming pool and individual spa pool bather loads, bathhouse plumbing fixture restrictions or other restrictions imposed by the Director.

**Maximum Individual Swimming Pool Bather Load** means the maximum number of patrons permitted within the water of an individual pool at any one time.

**Maximum Individual Spa Pool Bather Load** means the maximum number of patrons permitted within the water of an individual spa pool at any one time.

**NSF** means NSF International.

**ORP** means Oxidation Reduction Potential.

**OSHA** means the Occupational Safety and Health Administration.

**Overflow Trough or Gutter** means the surface water collection system designed to remove surface water through pool overflow.

**Owner** means any person or legally authorized representative of any person who owns or leases a water recreation facility, and in whose name the owner's annual or seasonal permit is issued. The person in charge of the water recreation facility shall be deemed to be the designee of the owner.

**Person** means any and all entities, including individuals, firms, partnerships, associations, public or private institutions, municipalities or political subdivisions, governmental agencies or public or private corporations organized under the laws of this Commonwealth or any other state or country.

**Perimeter Fence** means a closed type vertical barrier which completely encloses and secures the pool area and prevents unauthorized entry.



**Pinch Hazard** means any configuration of components that could pinch or entrap the fingers, toes or any other part of the human body.

**Plummet** means a line that is perpendicular to the water surface and extends vertically through a point located at the front edge of a diving board and on the centerline.

**Pool** means any man-made structure, basin, chamber or tank located either indoor, outdoor or both, containing a body of water with sufficient depth for complete or partial immersion of the body. Residential pools serving a single family dwelling are not included in this definition.

**Pool Area** means a pool and all decks, grounds, and other areas located within the perimeter enclosure.

**Pool Facility** means any pool(s), together with the buildings, equipment, and appurtenances pertaining to such a body of water including, but not limited to, all areas located within the perimeter enclosure.

**Pool Management Company** means any person, firm, corporation or association contracting to manage or operate a water recreation facility.

**Pool Operator** means a person, 16 years of age or older trained to conduct the operation of a water recreation facility.

**Pool Operator's Certificate** means the document issued to a person who has successfully passed a pool operator's course and/or exam recognized by the Director.

**PPM** means parts per million.

**PSI** means pounds per square inch.

**Public Pool** means any pool other than a residential pool serving a single family dwelling, which is intended to be used collectively by a number of persons for swimming, recreation, fitness, relaxation or therapeutic purposes.

**Radius of Curvature** means the radius arc which denotes the curved surface from the point of departure from the vertical sidewall (springline) of the pool to the pool bottom (e.g. coving).

**Receiving Pool** means a pool located at the end of a water slide or drop slide that is designed to safely receive the rider of an attraction.

**Recessed Stairs** means a step or series of steps that do not protrude beyond the pool wall. Recessed stairs extend down from the deck with the bottom step terminating at the pool wall and bottom.



**Recreational Diving Board** means any diving board that is not recommended by the manufacturer for diving competition.

**Remodel** means to change, rearrange or modify a swimming pool or spa pool structure, circulation system and/or appurtenances, such that the design, configuration and/or operating characteristics are different from the original design, configuration, and/or operating characteristics. The term "remodel" does not include normal maintenance and repair.

**Repair** means the replacement of existing construction with equivalent materials for the purpose of maintenance and the replacement of a previously approved piece of equipment with an equivalent unit having the same specifications, operating characteristics, and certifications.

**Skimmer** means a mechanical device connected to the pool water recirculation piping which is used to drain the pool water surface and is equipped with a weir, a flow adjustment device, and a removable and cleanable basket designed to trap small solids.

**Slide** means a drop slide or waterslide as defined herein.

**Slow River** means a circuitous stream of pool water, moved by booster pumps or other means, providing a continuous current in which patrons are transported by flotation devices or other means.

**Spa Pool** means any pool intended to be used for recreational and therapeutic use which may include a water jet and/or aeration system, may be heated or cooled, and is not drained, cleaned or refilled after each individual use. The term includes, but is not limited to, units designed for hydrojet recirculation, hot water, cold water, mineral bath, air induction bubbles, or any combination thereof. Common terminology for a spa pool includes, but is not limited to, therapeutic pool, hydrotherapy pool, whirlpool, hot spa, and hot tub. The term spa pool excludes spa pools used by or under the direct supervision and control of licensed medical personnel located in a medical facility; spa pools located in the athletic department of schools, colleges, and universities; and spa pools owned and used by professional athletic teams.

**Springline** means the point from which the pool wall breaks from vertical and begins its arc in the radius of curvature to the pool bottom.

**Superchlorinate** means to achieve a rapid increase in the chlorine residual within the pool water to oxidize organic impurities, destroy algae and/or achieve breakpoint chlorination.

**Swimming Pool** means any pool intended to be used for public recreational swimming and/or public recreational diving, and means the same as public pool.



**Total Residual Disinfectant** means the arithmetic sum of free available residual disinfectant and combined residual disinfectant.

**Turnover Time or Period** means the time required to recirculate the equivalent of the total volume of pool water through the filter system.

**UL** means Underwriter's Laboratory.

**VUSBC** means the Virginia Uniform Statewide Building Code.

**Wading Pool** means a swimming pool designed primarily for use by small children which is separate from any other swimming pool within a pool area. A wading pool shall not exceed 18 inches in water depth.

**Waterline** means the midpoint of the operating range of the skimmers when there are no users in the pool. For overflow systems, the waterline is defined as the top of the overflow rim.

**Waterpark Facility** means a water contact facility with design and operational features which provide recreational activities that are different from those associated with a conventional swimming pool and purposefully involve the immersion of the body either partially or totally in the water. Such recreational activities include, but are not limited to, water chutes, water flumes, slow rivers, activity pools, receiving pools, sprinklers, fountains, decorative showers, and wave pools.

**Water Recreation Facility** means a pool facility including but not limited to, a swimming pool facility, spa pool facility, waterpark facility or any related facility.

**Water Slide** means a chute or flume that discharges the user at or below the pool operating water level.

**Wave Pool** means a pool producing waves which usually begin at the deep end and proceed toward and dissipate at the shallow end.

#### **Section 69.1-1-6. Permits for Construction and Remodeling.**

- A. Building and other applicable permits shall be obtained before any water recreation facility regulated under this Ordinance may be constructed. A building permit or other applicable permits may be required from the building official(s) before the remodeling of a water recreation facility regulated under this Ordinance. Plans and specifications shall have been approved by the Director prior to the issuance of such permits.
- B. If a building permit is not required, plans and specifications for the remodeling of a water recreation facility regulated under this Ordinance shall be submitted to the Director for review and approval. Duplicate copies of the plans and specifications shall be submitted to the Director unless additional sets are required.



- C. The approval of any plans or specifications shall not be viewed to be a determination that the said plans or specifications are free from error. The owner shall have final responsibility for the accuracy and completeness of the plans and specifications, as well as for subsequent construction and installation.
- D. A plan review fee shall be paid as established in § 69.1-1-21.
- E. The requirements of this Ordinance are in addition to the requirements of all other applicable ordinances and codes including, but not limited to, plumbing, building, electrical, mechanical, zoning, and fire.
- F. Plans found not in compliance with applicable codes will be rejected and returned for correction and re-submission. First time re-submitted plans will not be assessed an additional review fee. Plans requiring further re-submissions and reviews will be assessed a re-submission plan review fee as established in § 69.1-1-21 for each additional review.
- G. If an owner, contractor or agent of a water recreation facility requests an inspection prior to a final inspection, a preliminary inspection fee shall be assessed as established in § 69.1-1-21.

**Section 69.1-1-7. Owner’s Permit Required; Fee for Same.**

- A. No owner shall allow a water recreation facility to be operated unless the owner has secured an annual or seasonal permit from the Director. The permit shall be posted in a location conspicuous to the public on the premises of the facility. Prior to issuing the permit, the Director shall determine that the water recreation facility is in compliance with the requirements of this Ordinance, that all required fees in § 69.1-1-21 have been paid, and the water recreation facility has been approved by the electrical official. The permit shall be issued in the name of the owner for the calendar year or if a seasonal pool for the period during the calendar year the facility will be in operation. In the event the owner is operating a facility without the required annual or seasonal permit, the Director shall order the immediate closure of the facility. An order of closure shall be effective upon service of a written notice to the owner of the facility and remain in effect until such time as the owner secures the annual or seasonal permit.
- B. The fees for the permit required by § 69.1-1-7(A) are defined in § 69.1-1-21.
- C. The owner and the pool management company, if applicable, of any water recreation facility is responsible for the facility being operated, maintained, and managed in accordance with the requirements of this Ordinance.
- D. There shall be no fee assessed for a compliance inspection. In the event that a compliance inspection reveals conditions that require a re-inspection of the facility, a re-inspection fee, as established in § 69.1-1-21, shall be assessed to the owner.



- E. A permit to operate a water recreation facility will not be renewed for the following annual or seasonal period to any owner that has any outstanding fees assessed.

**Section 69.1-1-8. Facility Closure and Suspension of the Owner's Permit.**

- A. The Director shall order the immediate closure and permit suspension of any water recreation facility upon finding that a substantial hazard exists to the health or safety of those who utilize the facility. No person shall operate any water recreation facility subject to an order of facility closure and permit suspension.
- B. An order of facility closure and permit suspension shall be effective upon service of a written notice to the permit holder or his/her designee. The order shall remain in effect until such time as the Director determines that the hazard no longer exists.
- C. The holder of a permit for a facility subject to an order of facility closure and permit suspension, may request a hearing as described in § 69.1-1-12.
- D. Prior to a suspended permit being re-instated, the owner must schedule a compliance inspection and will be assessed the required permit re-instatement fee established in § 69.1-1-21.

**Section 69.1-1-9. Revocation of an Owner's Permit.**

The Director may revoke an owner's permit upon the finding of serious, repeated or flagrant violations of any of the requirements of this Ordinance or interference with the performance of the Director's duties. No person shall operate any water recreation facility subject to an order of permit revocation. An owner's permit may not be revoked unless the permit holder has been served with written notice of the Director's intent to revoke the permit, stating the reason the permit is subject to revocation and informing the permit holder of the opportunity for a hearing before the Director. The holder of an owner's permit, subject to an order of permit revocation, may request a hearing as described in § 69.1-1-12.

**Section 69.1-1-10. Pool Operator Requirements.**

- A. It shall be unlawful to operate a water recreation facility, unless it is under the immediate control of a person trained in the basics of swimming pool operation and who possesses a valid pool operator's certificate accepted by the Director, with valid photo identification and that person is on the premises during operation of the water recreation facility.
- B. A spa pool shall not be in violation of this Subsection if it is under the control of a person who possesses a valid pool operator's certificate accepted by the Director, with valid photo identification. That person need not be on the premises during the operation of



the spa provided that he/she is available on-call and the on-call telephone number is posted in view of the patrons.

- C. The pool operator shall have a clear copy of the original pool operator's certificate, with valid photo identification available for inspection during the operation of the water recreation facility.
- D. A pool operator shall be at least 16 years of age and have successfully passed either an approved course of instruction administered or sanctioned by a nationally recognized swimming pool operators training organization, whose course and examination is accepted by the Director or has received unrecognized training in swimming pool operation and has successfully passed a standardized examination, accepted by the Director that has been developed in accordance with the American Psychological Association Standards for Educational and Psychological Testing.
- E. A pool operator's certificate shall be issued only to the person who has passed the operator's certification examination, not be assignable or transferable, and be valid only for a period not to exceed three years from the date of issuance. Expired certificates must be reissued in accordance with Section 69.1-1-10(D).
- F. Swimming pools operating without a trained pool operator on the premises or with an operator unable to satisfactorily demonstrate basic knowledge of swimming pool operation or operating the facility in a manner that adversely impacts the public health and safety are subject to immediate closure and permit suspension.

**Section 69.1-1-11. Service of Notices.**

A notice of owner's permit suspension or revocation required by this Ordinance is properly served when it is delivered to the owner or when it is sent by registered or certified mail, return receipt requested, to the last known address of the owner's permit. A copy of the notice shall be filed with the records of the Health Department.

**Section 69.1-1-12. Hearings.**

Any owner who has been denied an owner's permit or any holder of an owner's permit who has received an order of suspension or revocation, may request a hearing by filing a written request in the office of the Director within ten business days of the service of the order of permit denial, suspension or revocation. The Director shall conduct a hearing within ten business days of receipt of a hearing request. If a written request for a hearing is not filed within the time permitted, the order is sustained.

**Section 69.1-1-13. Variances.**

The Director may grant a variance to the requirements of this Ordinance.



- A. Request for a variance. Any owner who seeks a variance shall apply, in writing, to the Director. The application shall include:
  - 1. The citation of the Ordinance section to which the variance is requested.
  - 2. A statement as to why the owner is unable to comply with the Ordinance section to which the variance is requested.
  - 3. The nature and duration of the variance requested.
  - 4. A statement of reasons why the public health or safety would not be jeopardized, if the variance was granted.
  
- B. Evaluation of a variance application. The Director shall act upon any variance request within 60 calendar days from the receipt of the written application. In evaluating the variance application, the Director shall consider the following factors:
  - 1. Any unusual circumstances unique to the applicant's facility.
  - 2. Any hardship to the applicant that would result, if the variance was denied.
  - 3. Any effects that such a variance would have on the health and safety of the public at the water recreation facility.
  - 4. Any other health or safety factors as determined by the Director.
  
- C. Disposition of a variance request.
  - 1. If the Director or his/her agent approves a variance request, the applicant shall be notified, in writing, of the decision. Such notice shall identify the water recreation facility and its location, the nature of the variance, and the period of time for which the variance will be effective, and any conditions attached to the variance. Failure to comply with the specified conditions will result in the immediate revocation of the variance. The effective date of the variance shall be upon receipt by the applicant or other designated date acceptable to the applicant and the Director.
  - 2. The Director or his/her designated agent may reject any application for a variance by sending a written rejection notice to the applicant. The applicant may petition the Director for a hearing within 30 calendar days from receipt of the rejection notice to challenge the rejection.
  - 3. No permit holder or applicant may challenge the terms or conditions set forth in the variance after 30 calendar days have elapsed from the date of issuance.
  
- D. Each variance shall be posted in a conspicuous place for the public to view. Each variance is revoked, when the permit attached to it is revoked. A variance is not transferable unless otherwise provided, in writing, at the time the variance is granted.

**Section 69.1-1-14. Condition of Equipment and Premises.**

All equipment shall be maintained in satisfactory condition during the operation of any water recreation facility. In addition, the premises, including the pool(s) and deck(s), of any water recreation facility shall be maintained in a clean and sanitary condition and be kept in good repair.



**Section 69.1-1-15. Animals.**

No animal shall be permitted within any water recreation facility however, this section does not apply to support animals that provide assistance to the physically challenged. Support animals that provide such assistance shall not enter the pool water.

**Section 69.1-1-16. Water Supply.**

A public water supply shall be used at all water recreation facilities unless other sources of water are approved by the Director.

**Section 69.1-1-17. Sewage Disposal.**

All sewage generated from the plumbing fixtures within a water recreation facility shall be discharged into an approved sewage treatment works or, in the absence thereof, into an approved individual sewage disposal system.

**Section 69.1-1-18. Inspections.**

- A. Upon presentation of the appropriate credentials, the Director shall have the power to enter, at reasonable times, any private or public property for the purpose of inspecting and investigating conditions relating to the enforcement of this Ordinance.
- B. There shall be no fee assessed for an inspection. In the event that an inspection reveals conditions that require a re-inspection of the facility, the required re-inspection fee in § 69.1-1-21 shall be assessed to the owner prior to the re-inspection being performed.

**Section 69.1-1-19. Emergency Order.**

If an emergency exists the Director may issue an emergency order necessary for the preservation of public health and safety or for the protection of patrons and personnel using any water recreation facility. The emergency order shall state the reasons and precise factual basis upon which it is issued, the actions which an owner or pool operator is required to take, and the time period for which it is effective. A copy of the emergency order shall be served to the owner of the facility or his/her designee and may be publicized in any manner deemed appropriate by the Director.

**Section 69.1-1-20. Grandfather Clause.**

- A. Except as provided in this Section, the design and construction requirements of this Ordinance shall not apply to any water recreation facility that was constructed prior to the effective date of this Ordinance, in accordance with the design and construction requirements of the Ordinance in effect at the time construction was completed (hereinafter referred to as an "existing facility") and that continues to meet those requirements.



- B. The design and construction requirements of this Ordinance shall apply to the remodeling of an existing facility unless the Director determines, in writing, that alternate requirements, including, but not limited to, the design and construction requirements in effect at the time of construction apply to the remodeling of the existing facility.
- C. The Director shall order reasonable modifications to the design or construction of an existing facility, if any condition exists which endangers the health or safety of the facility's patrons or personnel.

**Section 69.1-1-21. Fee Schedule.**

The following fees shall be paid annually by December 31<sup>st</sup> for facilities operating 12 months a year or prior to the issuance of the owner's permit for facilities operating on a seasonal schedule:

A. Swimming Pools and Waterpark Facilities:

1. Base Fee (square footage of the main pool at each facility, except for waterparks):

Pool Category	Area in Square Feet	Fee
Seasonal	0 to 2,000	\$290
Seasonal	2,001 to 10,000	\$360
Seasonal	Greater than 10,000	\$430
Year-Round	0 to 2,000	\$360
Year-Round	2,001 to 10,000	\$430
Year-Round	Greater than 10,000	\$505
Interactive Water Feature	0 to 2,000	\$250
Interactive Water Feature	2,001 to 10,000	\$315
Interactive Water Feature	Greater than 10,000	\$375
Waterpark	Not Applicable	\$865

2. The following fees shall apply in addition to the base fee:

- (a) Each Additional Pool (other than a spa pool) in a Multi-Pool Facility\* ..... \$220
- (b) Each Therapeutic or Spa Pool ..... \$65

\* One wading pool at a multi-pool facility shall be exempt from this fee.

B. Facilities with Therapeutic or Spa Pool Only ..... \$285

C. Plan Review, Each Submission ..... \$250



D. Plan Review, Re-Submission Review .....	\$50
E. Preliminary Inspection .....	\$100
F. Re-inspection.....	\$100
G. Permit Re-Instatement.....	\$200

**Section 69.1-1-22. Penalties.**

Any person or owner who fails to comply with any applicable provision shall be in violation of this Ordinance. Each violation of this Ordinance is punishable as a Class 1 misdemeanor in accordance with Virginia law. Each day a violation of this Ordinance continues shall constitute a separate offense. The criminal penalty provided in this Section shall be in addition to the administrative remedies set forth elsewhere in this Ordinance.

**Article 2.  
Swimming Pools; Design and Construction.**

**Section 69.1-2-1. Location.**

The location of a swimming pool shall in no way hinder the operations for which it is designed nor adversely affect patron safety or water quality. Public pools shall not be located in areas subject to flooding or inundation by ground water drainage.

**Section 69.1-2-2. Access.**

- A. Outdoor pools. Direct and unobstructed access to any swimming pool area shall be provided for the admission of emergency and service vehicles, equipment, and personnel. An emergency access lane providing direct access for emergency vehicles shall terminate at each pool facility's emergency gate required in § 69.1-2-24. Emergency access lanes shall be kept clear and unobstructed.
- B. Indoor pools. Emergency access to indoor or elevated swimming pools shall be provided at the entrance nearest the pool or the elevator or stairway leading to the pool. Permanent and conspicuous signs shall be posted indicating the most direct route to an indoor or elevated pool. An emergency access lane providing direct access for emergency vehicles shall terminate at the entrance nearest the indoor or elevated swimming pool, or the elevator or stairway leading to the indoor or elevated swimming pool. Emergency access lanes shall be kept clear and unobstructed.



### **Section 69.1-2-3. Construction Materials and Components.**

Swimming pools shall be constructed of materials which are rigid, inert, impervious, and non-toxic to humans. The materials for components and accessories to be used in and around swimming pools shall be such that the operational strength of the assembly will not be adversely affected by the exposure to external conditions or normal temperature extremes, and be chemically compatible with the materials used in the operation and maintenance of the swimming pool. In addition, construction materials shall provide a tight tank to which a smooth, easily cleanable surface can be applied. The swimming pool surface shall be composed of an impervious material which will retain a smooth, slip resistant, easily cleanable finish without surface cracks or open joints, and be finished in a white or light color. Sand or earth bottoms shall not be permitted. Materials other than those described in this Section may be approved by the Director.

### **Section 69.1-2-4. Design.**

Swimming pools may be of any dimension or shape provided that the satisfactory recirculation of pool water can be obtained and no undue hazards to patrons are created by the dimensions or shape of the pool.

### **Section 69.1-2-5. Hydrostatic Pressure Relief Valve.**

In all in-ground swimming pools with water depths exceeding 18 inches, one or more hydrostatic pressure relief valve(s) or other hydrostatic relief system as approved by the Director, shall be installed.

### **Section 69.1-2-6. Slope of Bottom.**

In water depths of less than five feet, the maximum slope of any swimming pool, other than a wading pool, shall not exceed 1:12. In depths greater than five feet, the slope shall not exceed 1:3.

### **Section 69.1-2-7. Vertical Walls and Coving.**

- A. All corners formed by the intersection of pool walls, floors or other pool walls shall be coved.
- B. Vertical walls shall not be greater than 11 degrees from plumb.

### **Section 69.1-2-8. Diving Area, Diving Boards, and Diving Platforms; Minimum Requirements.**

- A. Diving boards and diving platforms may be installed in a diving area, alone or in combination, provided that the minimum requirements set forth in this Section are met.



- B. Side rails, including safety netting or other safety restraints, may be required by the Director for diving boards one meter in height or greater.
- C. At least 16 feet 5 inches of free and unobstructed head room shall be provided above every diving board and diving platform.
- D. When a recreational diving board is installed in a diving area, the minimum dimensions and water depths within the diving area shall meet the requirements specified in Tables I and II. Diving board height measurements falling in between two categories of Tables I and II shall comply with the more stringent requirement.
- E. When a diving platform or competitive diving board is installed in a diving area, the minimum dimensions and water depths in the diving area shall meet the applicable FINA Standards and/or the standards require by the Director.
- F. When a diving board is installed in combination with a diving platform, the minimum distance between the center line of the diving board or edge of the diving platform and the center line of an adjacent diving board, the edge of an adjacent diving platform, and/or the pool sidewall edge shall meet the applicable FINA Standards or the requirements specified in Table I, whichever is more stringent.

Table I. Diving Board Height and Separation Distance Requirements.

Height of Diving Board Above the Water Line	Minimum Distance, in feet, of Board Center Line to Adjacent Board Center Line of Equal or Lesser Height	Minimum Distance, in feet, from Board Center Line to Pool Sidewall
0 to 0.61 meter	10	10
0.62 to 0.77 meter	11	11
0.78 to 1.00 meter	11	11
1.01 to 2.0 meters	12	12
2.01 to 3.0 meters	12	12
> 3.0 meters	*	*

\* As required by the Director and/or the applicable FINA Standard.



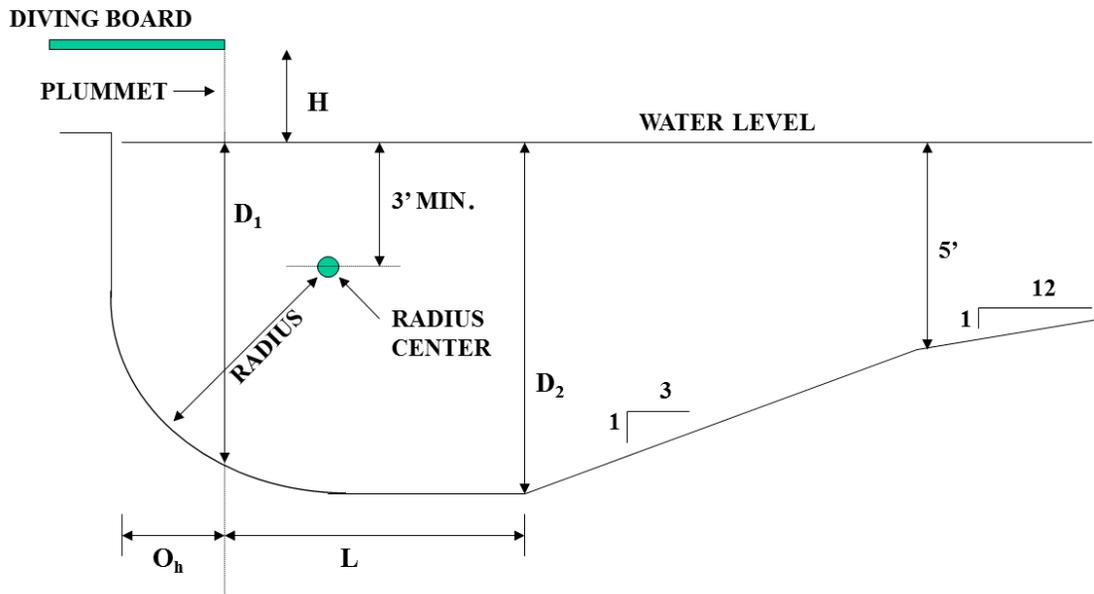
Table II. Minimum Dimensions and Depths Relative to Board Height.

Height of Diving Board Above the Water Line	Minimum Depth of Water at Plummet	Minimum Distance Ahead of Plummet	Minimum Depth of Water at Distance L From Plummet	Minimum Overhang of Diving Board Beyond Pool Edge
H	D <sub>1</sub>	L	D <sub>2</sub>	O <sub>n</sub>
0 to 0.61 meter	8' 6"	11' 0"	8' 6"	3' 0"
0.62 to 0.77 meter	9' 0"	11' 6"	8' 10"	4' 0"
0.78 to 1.00 meter	11' 0"	12' 0"	10' 9"	5' 0"
1.01 to 2.0 meters	12' 0"	16' 5"	11' 10"	6' 1"
2.01 to 3.0 meters	12' 6"	19' 9"	12' 2"	6' 1"
> 3.0 meters	*	*	*	*

\* As required by the Director and/or the applicable FINA Standard.



**Figure I. Cross-Sectional Diagram of Swimming Pool Illustrating Distances Referenced in Table III.**



**Section 69.1-2-9. Handholds.**

Swimming pools shall be provided with suitable handholds around their perimeter. Handholds may consist of any one or a combination of the following:

- Coping, gutter ledges or flanges, or decks which have a top edge that provides a suitable slip resistant handhold located not more than 12 inches above the water level
- Ladders, steps or hand rails
- Other methods approved by the Director

**Section 69.1-2-10. Stairs, Steps, Ladders, and Bench Seats.**

A. Egress. A minimum of two means of egress shall be provided for swimming pools with a perimeter of 100 feet or less. One additional means of egress shall be provided for each additional 200 feet of pool perimeter or fraction thereof. Additional means of egress may be required as determined by the Director. The location of the means of egress shall be consistent with the design of the swimming pool. A means of egress shall be provided at both sides of the diving area.



- B. The design and construction of swimming pool stairs, ladders, and bench seats shall conform to the following:
  - 1. Treads of all stairs, ladders, and step holes are of non-slip construction.
  - 2. Stairs or bench seats are recessed into the pool deck, and conform to the VUSBC.
  - 3. Top and leading edge of all stair treads and bench seats are marked by a permanent, non-slip band of contrasting color that is a minimum of one inch in width and located within two inches of the step or bench edge.
  - 4. Recessed step holes do not protrude into the pool and have a minimum tread width of six inches, a minimum tread length of 12 inches, a minimum height of five inches, and drain into the pool to prevent the accumulation of dirt. Handrails on both sides of recessed step holes that fully service all treads and risers are provided.
  - 5. Clearance of not more than six inches below the water level or less than three inches between any ladder tread edge measured from the pool wall side of the tread and the pool wall.

**Section 69.1-2-11. Recirculation System.**

- A. All swimming pools shall be equipped with a recirculation system which, at a minimum, consists of a pump, filter, connecting piping, fittings, valves, disinfecting equipment, necessary pipe connections to the inlets and outlets, a skimmer and/or overflow gutter and main drains. A separate recirculation system shall be provided for each swimming pool.
- B. The recirculation system shall be designed to accommodate the following required maximum turnover time:
  - 1. Wading pool, two hours.
  - 2. Any other swimming pool, six hours.
- C. Adequate provisions shall be made for backwashing and/or cleaning of all filters.

**Section 69.1-2-12. Filter Room.**

- A. Swimming pool facilities shall have a room(s) or structure which encloses the filtration equipment, pumps, electrical equipment, chemical feed equipment, and other recirculation and filtration system appurtenances. The room(s) or structure shall provide working area and access above and around all equipment no less than that specified by the manufacturer and sufficient to permit routine maintenance. The room(s) or structure shall be provided with a lockable door(s) of sufficient width to permit the removal of equipment. The entrance to the filter room(s) shall be easily accessible from the deck so the pool operator can enter the room(s) without having to exit the enclosed pool area. The room(s) or structure shall be impervious to water and resistant to the chemicals necessary for the operation of the facility.



- B. The floor of the filter room(s) or structure shall be designed to provide adequate drainage with a minimum floor slope of 1:48 and a maximum floor slope of 1:24 to a floor drain and be kept dry at all times, particularly in the vicinity of electrical panels. Discharging filter backwash water onto the floor is prohibited.
- C. The filter room(s) shall be provided with mechanical cross-ventilation.
- D. Illumination of at least 30 foot-candles, measured 24 inches above the floor, shall be provided above equipment and working areas. A minimum of two light fixtures shall be installed and all light fixtures shielded.

**Section 69.1-2-13. Filters and Gauges.**

- A. The recirculation system shall be equipped with a filtration system that is NSF International listed or the equivalent, and will filter the entire water volume of the swimming pool within the required turnover time specified in § 69.1-2-11(B). Filtration equipment shall be operated continuously, 24 hours per day. Valves shall be provided at appropriate locations to allow the isolation and maintenance of equipment. Filter components which require servicing shall be accessible for inspection, repair, and installed according to the manufacturer's specifications and recommendations. All pressure systems shall be provided with a manual or automatic means to permit the release of air which may accumulate within the filter tank. Design criteria for the indicated type of filters shall be as follows:
  - 1. High-rate filter. A filter utilizing a media capable of filtration at a high rate of flow not be less than five gallons per minute per square foot of filter surface area nor be greater than 20 gallons per minute per square foot of filter surface area. The backwash rate of flow is specified by the manufacturer.
  - 2. Diatomaceous earth filter. A filter utilizing diatomaceous earth as a filter media.
    - (a) Pressure or vacuum type. A diatomaceous earth filter through which the rate of flow does not exceed two gallons per minute per square foot of filter surface area.
    - (b) Pressure or vacuum with slurry feeder. A filter that is equipped with a feeder that continuously feeds a diatomaceous earth suspension and has a rate of flow not exceeding three gallons per minute per square foot of filter surface area.
    - (c) Separation tanks or a sump pit with a stand pipe to be used to collect and dispose of spent diatomaceous earth in an approved manner. Alternative methods for diatomaceous earth collection may be approved by the Director. If separation tanks are used, a means of release or a lid which provides a slow and safe release of pressure, and have a readily visible precautionary statement affixed that warns the user that the air release must be opened before opening the separation tank is required.
    - (d) Piping and valves shall be provided for all diatomaceous earth filters to allow for a pre-coat cycle that re-circulates water directly from the outlet to the inlet of the filter without returning to the swimming pool.
  - 3. Rapid sand filters. A filter utilizing sand as the filter media, with a filtration flow rate not exceeding three gallons per minute per square foot of filter area. The backwash rate of flow is to be four times the filtration rate.



4. Other filtration systems, whose performance equals or exceeds those described above, may be used in a pool recirculation system with the approval of the Director.
  5. Filter cartridges. The flow rate through a filter cartridge shall not exceed the design rate or a maximum of 0.375 gallon per minute per square foot of filter surface area. Cleaning of filter cartridges must be in accordance with the manufacturer's recommendations. One complete extra set of filter cartridges shall be available at all times to facilitate cleaning.
- B. Gauges and flow meters. The filter system shall be provided with a minimum of one influent pressure gauge for each filter and one effluent pressure gauge following the filter system. Recirculation system pumps shall be fit with a vacuum and pressure gauge installed as near as practical to the pump suction and discharge pipe connections. All pressure gauges shall measure pressure directly in pounds per square inch. Vacuum gauges shall measure in inches of mercury. The system shall have a flow meter on the return line to measure the flow of filtered water being returned to the swimming pool. The flow meter shall be of fixed calibration, measure in gallons per minute, and be properly sized to indicate the design rate of flow at approximately mid-scale. Gauges and flow meters shall be readily accessible and clearly visible, in good repair, and located and installed according to the manufacturer's specifications and recommendations.

#### **Section 69.1-2-14. Pumps and Strainers.**

- A. Pump. A removable and re-installable pump(s) shall be installed with adequate capacity for the required turnover time specified in § 69.1-2-11(B). Whenever possible, pump(s) shall be so located as to eliminate the need for priming. If the pump(s) or suction piping is located above the overflow level of the swimming pool, the pump(s) shall be self-priming. The pump(s) shall be capable of providing a flow adequate for the backwashing of filters. Pumps shall be securely supported.
- B. Hair and lint strainer. All pressure filter systems shall have a hair and lint strainer. The hair and lint strainer baskets shall be corrosion resistant with openings not exceeding 1/8 inch in size, which provide a free flow area of at least four times the area of the pump suction line at the strainer connection, and be accessible for frequent cleaning. An extra hair and lint strainer basket shall be provided for each hair and lint strainer.

#### **Section 69.1-2-15. Piping System.**

- A. The piping system for swimming pools shall be composed of NSF International listed materials or their equivalent designed for the following operations:
- filling the swimming pool
  - re-circulating the pool water through the treatment equipment
  - backwashing or washing each filter to waste
  - operating a suction cleaner (if provided)
  - emptying the pool
  - draining the system



In addition, the piping system of any swimming pool containing a hydro-jet system or water conditioning system shall be composed of NSF International listed materials or equivalent, which are capable of supporting such systems.

- B. There shall be no direct connections between the swimming pool recirculation system and the sewer or potable water supply. Fill spouts, when installed, shall be located under diving boards, under guard chairs, adjacent to pool ladder handrails or otherwise protected to preclude a tripping hazard and be properly supported if not inherently self-supporting. Fill spouts shall not project into the space above the pool water surface by more than two inches beyond the edge of the pool. Other means of filling the pool shall comply with the VUSBC and be approved by the Director. Cross-connections shall be prevented by providing an air gap between the highest possible flood level of the pool and the pool fill spout. The air gap shall not be less than two fill spout pipe diameters or less than six inches. An approved backflow preventer may substitute for the air gap.
  
- C. The system shall have a means of discharging filter backwash or other pool water to waste as follows:
  - 1. Waste from backwashing or draining of a pool shall be discharged in a manner approved by the Director. When only a sanitary sewer is available to a swimming pool, the rate of discharge is subject to the approval of the appropriate authority for sanitary sewers and treatment facilities.
  - 2. An air gap or air break to prevent a cross-connection between waste discharge piping and recirculation piping shall be provided.
  - 3. Discharge receptor and piping of sufficient size to accept backwash water and prevent backflooding.
  - 4. A sight glass in the backwash discharge line in a readily observable location.
  - 5. In the event the backwash waste pipe will not accommodate the backwash flow, the design and installation of a holding tank shall be required. The holding tank shall be sized to contain 110 percent of the volume of water required to adequately clean the filter(s) at the backwash flow rate and length of time specified by the filter manufacturer.
  
- D. The visible piping system shall be securely anchored, supported or braced, unless inherently self-supporting, and marked with permanent tags, labels or markings to clearly identify the direction of flow and shall be color-coded as follows:
  - Freshwater.....blue (to check valve)
  - Backwash .....black
  - Influent .....yellow
  - Effluent.....white
  - Suction cleaner.....orange (to control valve)
  - Recirculation .....green (Auxiliary recirculation not part of the filtration system; such as, but not limited to, water features, jets, fountains, water falls, aeration systems or similar features)
  - Heater piping .....red (to nearest isolation valves)
  
- E. All piping shall be designed to minimize friction losses and carry the required quantity of water at a velocity not to exceed eight feet per second for copper discharge piping, and



10 feet per second for discharge piping other than copper. Suction velocity for all piping shall not exceed six feet per second. Pipe suction velocity may also be limited by the maximum flow rate specified by the manufacturer of the suction outlet covers installed in the swimming pool.

- F. All piping and appurtenances included in the recirculation and filtration system shall be inspected and approved by the Director prior to covering. All piping shall be tested at the time of inspection to at least 25 pounds per square inch of pressure. All subsurface pool piping shall be imbedded in and covered with sand or an approved equivalent.
- G. All valves shall be clearly identified with permanent markings or tags which are referenced by a pool water recirculation system operation manual and/or placard.

**Section 69.1-2-16. Main Drain Outlets.**

- A. All swimming pools shall have a minimum of two interconnected main drain outlets that cannot be isolated by valves or other means for each recirculation pump system. Main drain outlets shall be located in the deepest part of the pool. All piping associated with the main drain outlets shall be of equal diameter, and each main drain shall be of equal size. Main drain outlets and associated piping shall be hydraulically designed to provide equal flow through each main drain outlet. A main drain outlet shall be no less than three feet and no more than 20 feet from another main drain outlet, and no more than 15 feet from a pool side wall.
- B. A main drain outlet opening shall be covered with a protective grate or anti-vortex cover which is not hazardous to patrons, is anchored in accordance with the manufacturer's specifications and recommendations, and is designed to prevent body entrapment or injury. Main drain grates or covers shall be secured so that their removal requires the use of tools. Main drain covers shall be manufactured and installed according to the specifications set forth by the ASME/ANSI and NSF International standards for suction fittings. The cover, frame, and all components shall be corrosion resistant and shall be designed to withstand the maximum anticipated forces generated by active use. The total water velocity through main drain outlets shall not exceed 1½ feet per second for water depths eight feet and greater or 1 foot per second for depths less than eight feet, and not exceed the maximum flow rate specified by the manufacturer of the main drain cover.
- C. Other methods that prevent suction outlet body entrapment and injury may be approved by the Director.



### **Section 69.1-2-17. Inlets.**

All inlets located in pool walls shall be spaced not more than 20 feet on center around the pool perimeter. When inlets are located in the pool bottom, the number of inlets and their location shall be designed to insure the proper distribution of filtered water. The minimum number of bottom inlets shall be determined by dividing the perimeter of the pool, in feet, by 20. All wall inlets, except makeup water inlets and wading pool inlets shall be at least 15 inches below the operating water level of the pool, except for prefabricated gutters with 45 degree angle inlets in the bottom. Each inlet shall be provided with a means of adjusting flow through a range of at least 50 percent of its design capacity. Inlet flow controls shall be readily accessible.

### **Section 69.1-2-18. Pool Suction Cleaner.**

A suction cleaner shall be provided. Where a suction cleaner is operated by the re-circulating pump, a device or devices shall be provided for regulating the flow(s) from the pool outlets. The suction cleaner line shall be connected through a hair and lint strainer. Portable electric suction cleaners shall be UL rated and connected to a GFCI protected electrical outlet. Waste from a portable suction cleaner shall be disposed of as solid waste. Hydraulic jet-type suction cleaners shall be permitted in lieu of other suction cleaners, if the fresh water pressure is 30 pounds per square inch or greater and the water service line is provided with an approved backflow preventer.

### **Section 69.1-2-19. Overflow Gutters and Skimmers.**

Overflow gutters or skimmers shall be provided on the vertical wall(s) of all swimming pools, and designed to adequately skim the pool surface. The overflow gutter or skimming system shall be capable of continuously removing 80 percent or more of the re-circulated water and returning it to the filter.

- A. Where overflow gutters are used, they shall extend completely around the swimming pool except at steps, recessed ladders, ramps, and stairs. The overflow gutter shall be designed to serve as a handhold. Overflow gutters having a surge capacity less than 1 cubic foot per linear foot of pool perimeter shall be indirectly connected to the re-circulating system through a properly sized and designed surge tank/balancing tank with a minimum surge capacity of one gallon per square foot of water surface area. Overflow gutters having a surge capacity of one cubic foot or greater per linear foot of pool perimeter shall be connected to a properly sized and designed balancing tank. The gutter, drains, and piping draining to the surge tank/balancing tank shall be designed to rapidly remove overflow water caused by recirculation, displacement, wave action or other causes produced during the maximum swimming pool load. The opening into the gutter beneath the coping shall not be less than four inches, and the interior width of the gutter shall not be less than three inches. Where gutters are used they shall be



designed to prevent patron entrapment or injury. The overflow edge or lip shall be rounded and not greater than 2½ half inches thick for the top two inches. The overflow outlets shall be provided with outlet pipes at least two inches in diameter. The outlet fittings shall have a clear opening in the grating at least equal to 1½ times the cross-sectional area of the outlet pipe.

- B. Where skimmers are used they shall be provided at the rate of 1 per 40 feet of pool perimeter or fraction thereof, or 1 per 400 square feet of pool water surface area or fraction thereof, whichever is greater. They shall be spaced to provide maximum skimming action of the pool surface.
  - 1. Skimmer throats shall be no greater than the width required for ten inch weirs.
  - 2. Skimmer weirs shall be automatically adjustable to variations in water level over a minimum range of four inches.
  - 3. A removable basket or screen to entrap large matter shall be provided in each skimmer.
  - 4. The flow rate through the skimmer shall not be less than 20 gallons per minute, nor greater than 35 gallons per minute. Each skimmer shall be provided with a means of adjusting the flow through the skimmer.
  - 5. Skimmer systems shall be designed so that all skimmers are interconnected.
  - 6. Skimmer lids shall be securely in place at all times.

**Section 69.1-2-20. Decks.**

- A. All swimming pools shall have a continuous deck at least five feet wide, including the width of the coping, extending around the entire perimeter of the pool. In addition, there shall be at least three feet of clear, unobstructed deck behind any diving stand, guard stand or other deck mounted equipment. All decks shall be constructed of continuous poured concrete or other approved impervious materials which have a smooth, non-slip finish. All decks shall have a slope of not less than 1:48 or more than 1:24 and be designed to conduct drainage away from the swimming pool in a manner that will not create a slip hazard or contribute to the ponding of water. Roof run-off or other drainage shall not be wasted onto the deck. All areas surrounding the deck shall have surface drainage directed away from the pool deck area or be served by a drainage system approved by the Director.
- B. Deck risers and steps shall comply with the VUSBC.

**Section 69.1-2-21. Lighting.**

- A. An indoor swimming pool or an outdoor swimming pool used after dark shall be equipped with lighting fixtures to light all parts of the pool, the pool water, and the swimming pool area. A sufficient number of light fixtures shall be installed to supply a minimum of 10 foot candles for the pool surface area and 30 foot candles for the pool deck area measured 6 inches above the pool deck and water surface. The lighting fixtures shall be designed and installed so that the lifeguard(s) and patrons can clearly see every part of the swimming pool, including decks, diving boards, and other appurtenances, without interference from glare. Lighting fixtures shall be installed in a



manner which creates no hazard to patrons or employees. All lighting fixtures shall be prohibited directly above the water surface area or within three feet horizontally of the pool rim except as permitted by the National Electrical Code. All light fixtures shall be shielded.

- B. Underwater pool lighting, when installed, shall provide at least one watt per square foot of water surface area, or the equivalent, and be equipped with GFCI(s) as required by the National Electrical Code.

### **Section 69.1-2-22. Safety Requirements.**

- A. Swimming pools equipped with pool water heaters shall have a fixed thermometer installed in the main return line. The thermometer shall be located sufficiently downstream from where the water heater effluent pipe connects to the main return line to allow the mixing of the heated and unheated water. The thermometer shall be designed and located so that it may be easily read.
- B. A separate room shall be provided for the care and isolation of victims of injury, illness or accident which is directly accessible from the pool deck. The room shall be well lighted and ventilated, and be large enough to permit unrestricted movement of both the victim and first aid providers.
- C. A direct dial, hard wired telephone that is fully operational shall be provided within the swimming pool area. The phone shall be immediately accessible from the pool deck. The phone shall be located so a clear and unobstructed view of the pool(s) is provided. Emergency telephone numbers and the facility's name and address shall be posted by the telephone.
- D. The depth of water in swimming pools shall be marked at every one foot increment of depth and at least every 20 feet of swimming pool perimeter on both the horizontal surface of the deck and the vertical surface of the pool wall. Horizontal depth markings shall be positioned to be read while standing on the deck facing the water. Depth markings on deck surfaces shall be non-slip. All numbers and letters shall be at least five inches in height and of contrasting color with the pool walls and deck. Depth markings are not required for wading pools.
- E. Fixed, floating or moveable platforms in swimming pools shall be constructed with an air space of at least 18 inches between the water surface and the underside of the platform or be provided with a barrier system at the perimeter of the device to prevent access under the device.
- F. There shall be a minimum of one lifeguard stand provided for every 2,000 square feet of water surface area within the pool enclosure. Additional lifeguard stands may be required where, due to the configuration of the pool, full visibility is not provided from the installed lifeguard stand.
- G. A transition line on the bottom of the pool and a floating lifeline shall be provided at the



five feet water depth between the shallow and deep portions of the swimming pool. The transition line shall be constructed of tile that is of dark and high contrasting color. The lifeline and transition line shall be located within six inches on either side of the break in slope to water greater than five feet in depth. The lifeline shall have clearly visible floats set at not greater than five foot intervals. The transition line shall be a minimum of two inches wide. The lifeline shall be securely fastened to recessed wall anchors of corrosion resistant materials and have no projections into the pool. The line shall be of sufficient size and strength to offer a good handhold and support loads normally imposed by swimmers.

- H. There shall be no protrusions, extensions, means of entanglement or obstructions which can cause entrapment or injury.

### **Section 69.1-2-23. Disinfection Equipment.**

- A. All swimming pools shall be provided with approved mechanically operated, positive displacement disinfectant feeding equipment or other disinfection equipment approved by the Director, which shall:
  - 1. Be capable of providing a continuous and effective residual of disinfectant within the swimming pool water 24 hours per day
  - 2. Have a design feed rate which will provide effective disinfection levels, when the swimming pool is in peak demand conditions
  - 3. Be capable of applying a dose the equivalent to maintain a concentration of at least one part per million free chlorine throughout the swimming pool at all times of operation
- B. The use of chlorine gas as a disinfectant shall not adversely affect the safety and health of patrons, pool personnel or the public, and comply with OSHA, Fairfax County Fire and Rescue Department requirements, and the following:
  - 1. Chlorine gas feeding equipment and chlorine gas cylinders are installed in a room separate from the filter room(s) and electrical panels and be equipped with a lockable door. The gas chlorinator room is equipped with a forced draft fan exhausting to the outside from the floor level. The exhaust fan provides a minimum of 60 air changes per hour. A fresh air inlet is provided near the ceiling. The gas chlorinator room is located above ground level and below the deck level of all pools. The chlorine gas tanks are protected from direct sunlight and securely fastened in place during storage and use, and mounted on a scale when in use. A self-contained gas mask for chlorine or a gas mask with a supply of oxygen under positive pressure or compressed air is provided at facilities where chlorine gas is utilized. The chlorine gas mask is approved by the Bureau of Mines and the Fairfax County Fire and Rescue Department. The gas mask is accessible to, but outside of, the gas chlorinator room. The chlorinator is provided with an emergency cut-off device to prevent gas discharge or injection of gas during electrical outage. A gas chlorine detection device with an alarm is provided.
  - 2. The use of gas chlorine as a disinfectant requires a chemical feeder for the feeding of sodium carbonate into the recirculation system.
  - 3. The use of gas chlorine as a disinfectant requires that a supply of ammonia hydroxide



be present for the checking of leaks in the chlorination system.

- C. When the pool water recirculation system is equipped with an automatic chemical control mechanism that continuously analyzes the pool water and automatically activates chemical feeding, a water flow sensing device shall be provided that automatically deactivates all associated chemical feeders, when the water flow in the recirculation system ceases.
- D. The use of bromine as the disinfectant requires the following:
  - 1. Bromine is fed on a continuous basis.
  - 2. A concentration of at least two parts per million of bromine residual is maintained throughout the pool water at all times. A maximum of six parts per million of bromine residual is permitted in any swimming pool during use.
  - 3. Solid stick or tablet type bromine is used with NSF International certified commercial feed equipment.

#### **Section 69.1-2-24. Fencing and Barriers.**

All outdoor pool areas shall be completely enclosed with a perimeter fence or equivalent barrier at least six feet in height, measured from the highest ground elevation within three feet adjacent to the outside of the barrier. Where the barrier is composed of horizontal and vertical members, and the distances between the tops of the horizontal members is less than 45 inches, the horizontal members shall be located on the swimming pool side of the fence. Spacing between vertical members shall not exceed 1¾ inches in width. Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is 45 inches or more, spacing between the vertical members shall not exceed four inches in width. Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 1¾ inches in width. The fence or barrier shall be non-climbable from the outside of the enclosure. Non-climbable shall mean no handholds, footholds, horizontal members or other features that are available which would aid in climbing the fence from outside of the barrier. There shall be no objects within an arc of six feet from the top of the perimeter fence or barrier and no closer than three feet to any part of the fence or barrier. The material used to construct the fence or barrier shall be approved by the Director. Access gates installed in the perimeter fence or barrier shall have latches and locks at least 48 inches above the deck or ground surface. Emergency gate(s) having a minimum horizontal opening of eight feet shall be provided for outdoor pools. Where grassed areas are provided for patrons within the pool enclosure, they shall be separated from the pool deck by a three feet high control fence or equivalent barrier equipped with a waist high shower at each entrance to the pool deck.



**Section 69.1-2-25. Spectator Areas.**

Spectators at swimming or diving meets and other special events shall not have access to and be separated from the portions of the pool area used by swimmers or divers. Spectator balconies shall not overhang within five feet of any portion of the pool water surface.

**Section 69.1-2-26. Drinking Fountains.**

Each swimming facility shall have at least one drinking fountain readily accessible to all patrons within the pool area.

**Section 69.1-2-27. Wading Pools.**

Wading pools shall meet all applicable requirements of this Ordinance, and the following additional requirements:

- A. The slope of the bottom of any wading pool shall be no greater than 1:12 or less than 1:40.
- B. Wading pools shall be separated from any other swimming pool or spa pool by a fence approved by the Director. The fence shall be at least three feet in height with a latching, self-closing, three feet wide gate.
- C. A separate recirculation system shall be provided exclusively for the wading pool.
- D. Wading pool skimmers and main drain outlets shall be interconnected with equal diameter piping.
- E. The distance from the deck to the water level shall be six inches or less.
- F. The total water velocity through the wading pool main drain outlets shall not exceed one foot per second.

**Section 69.1-2-28. Slides, Sprinklers, Fountains, Activity Pools, Interactive Water Features and Other Pool Equipment.**

- A. Slides, sprinklers, fountains, activity pools, interactive water features, and other pool equipment for which design standards are not contained in this Article shall meet the design standards in Article 6 of this Ordinance or design standards approved by the Director.
- B. Interactive water features shall be completely enclosed by a perimeter fence or equivalent barrier at least three feet in height. Waist high foot showers shall be provided at all entrances to the deck.
- C. The construction of the filter room shall meet the requirements of Section 69.1-2-12. The collector tank or reservoir shall be installed in accordance to manufacturer's



specifications.

- D. The disinfectant residual, pH, total alkalinity, and calcium hardness shall be continuously maintained within the minimum and maximum ranges specified in the table below:

	Minimum	Ideal	Maximum
IWF free chlorine (ppm)	3.0	4.0	9.0
Combined chlorine (ppm)	0	0	0.2
Bromine residual (ppm)	2.0	4.0 - 6.0	9.0
Ph	7.2	7.4 – 7.6	7.8
Total Alkalinity (ppm)	80	100	160
Calcium hardness (ppm)	200	200 – 400	800

- E. The operations of an IWF facility shall be under the immediate control of a person who possesses a valid pool operator's credential accepted by the Director.

**Article 3.  
Swimming Pools; Operation and Maintenance.**

**Section 69.1-3-1. Security.**

Swimming pool facilities shall be operated and maintained in a manner which will not create a nuisance or hazard to the public safety or health. The pool shall be adequately secured to prevent unauthorized entry when not in use.

**Section 69.1-3-2. Water Operating Levels.**

The water level shall be maintained within the operating range of the skimmers or at the top of the overflow rim of a gutter system at all times the swimming pool is open for use.

**Section 69.1-3-3. Monitoring, Reporting, and Record Keeping.**

The following information shall be recorded and maintained by the owner for a minimum of one year from the date of the recording, occurrence or incident, and shall be available for inspection at all times while the swimming pool is in operation:

- A. Water Quality Parameters and Maintenance.
1. The disinfectant residual and pH shall be tested and the results recorded at least once every two hours while the pool is in use. ORP readings, if applicable, shall also be recorded every two hours while the pool is in use. The water temperature for heated pools, and the total chlorine residual for pools utilizing chlorine shall be tested and recorded a minimum of one time per day.
  2. Influent and effluent pressure gauge readings and the flow rate shall be observed every two hours and be recorded at least two times per day; at least one time prior to opening to the public and during the last hour of operation. The date and time of each backwash or filter cleaning shall be recorded.



3. Total alkalinity and calcium hardness tests shall be performed and recorded weekly or more often, as necessary, to provide proper chemical balance of the pool water. Cyanuric acid tests shall be performed and recorded weekly at all pools utilizing cyanuric acid or chlorinated cyanurates.
4. The date, time, type, and amount of any chemicals added to the pool water shall be recorded. However, for chemicals added continuously with a chemical feeder, only the type of chemical shall be documented.

**B. Other Records**

1. The owner shall immediately notify the Director of all drownings, near drownings, injuries, water-related illness or deaths which have occurred. Notification of minor injuries, such as minor abrasions or superficial cuts, shall not be required. Owners shall submit a complete written drowning and injury report, containing all relevant facts and information related to the incident, to the Director within seven days of an incident. The following information must be included in the report of all drownings, near drownings, injury, water-related illness or deaths which have occurred:
  - Pool Operator on duty at time of incident
  - Date, time, and exact location of incident
  - Name, age, and certifications of persons involved in incident
  - Number of lifeguards on duty at time of incident
  - Exact locations of all lifeguards on duty
  - Pool and/or spa water clarity
  - Number of bathers in the pool
  - Number of patrons in the facility
  - Police Case Number (if available)
  - Injury description
  - Names of witnesses
  - Detailed description of accident
2. Owners shall have available, at the water recreation facility, proof of the credentials, training, and/or certifications required for personnel as detailed in § 69.1-1-10 and § 69.1-3-8.
3. Material Safety Data Sheets (MSDS) for all chemicals used at a swimming pool facility shall be provided in a location readily accessible to all employees.

**Section 69.1-3-4. Placards.**

- A. The water test results specified in § 69.1-3-3(A)(1) shall be legibly and conspicuously posted on a permanent, water proof, and durable placard in a location where it is readily observable by the patrons. The most recent required daily water quality test results, including the date and time of day tested, shall be posted. The minimum and maximum standards for these parameters, as specified in § 69.1-3-13 Table III, shall be included on the placard. Water temperature shall also be posted for heated pools.
- B. Areas restricted to operating personnel only shall be prominently identified with a permanent, legible placard stating "Authorized Personnel Only" including but not limited to the filter and chemical storage rooms. The placards shall be conspicuously located on



the exterior of the doors to the restricted areas.

- C. A permanent, legible, placard(s) specifying facility rules and regulations regarding personal health and safety shall be posted in plain view of patrons within the facility.
- D. A permanent, legible, engraved plastic or laminated paper specification placard shall be conspicuously displayed within the filter room(s) and be adequately lighted. The following information shall be included on the placard:
  - Name and address of the facility
  - Volume in gallons
  - Water surface area in square feet
  - Minimum turnover time in hours
  - Minimum rate of flow in gallons per minute to provide the required turnover time
  - Maximum facility load, and maximum pool load(s)
- E. Separate legible placards shall be posted in an appropriate location within the filter room(s) to describe the following pool operating procedures:
  1. Instructions on the proper operation of pumps and filters, including the valve line ups for filtration.
  2. Instructions on proper backwashing or cleaning procedures and valve positions for backwashing.
- F. A separate, permanent, legible placard clearly indicating the maximum facility load and individual swimming pool load(s) shall be conspicuously posted at the main entrance to the swimming pool facility. The letters and numbers indicating the load(s) shall be a minimum of two inches in height.

**Section 69.1-3-5. Precautions Relative to Communicable Disease.**

Any person having an obvious skin disease, nasal or ear discharge, inflamed eye or any communicable disease shall be excluded from the facility.

**Section 69.1-3-6. Food Service.**

Any person in the process of eating or drinking shall remain in an area designated for the consumption of food and drink. This area shall be at least ten feet from the swimming pool edge and enclosed by a fence or suitable barrier. Glass containers are not permitted in the pool area.

**Section 69.1-3-7. Boisterous and Rough Play.**

Boisterous and/or rough play and running is prohibited at any swimming pool facility.

**Section 69.1-3-8. Lifeguards.**

- A. There shall be at least one lifeguard at all pool facilities. A minimum of one lifeguard shall be required for every 50 patrons or fraction thereof in the pool area. Additional



lifeguards may be required by the Director when deemed necessary for complete visual coverage of the pool or when conditions exist that may compromise the health or safety of pool patrons.

- B. Lifeguards shall be at least 15 years of age and properly trained and certified, in accordance with nationally recognized standards equivalent to or exceeding those set by the American Red Cross. Lifeguards shall also be trained and certified in cardio-pulmonary resuscitation, in accordance with national standards equivalent to or exceeding those set by the American Red Cross. It is the responsibility of each training organization that issues lifeguard and/or CPR certifications to insure that the course standards are equivalent to or exceed those set by the American Red Cross. Lifeguards shall have their original document of certification and valid photo identification at the pool facility during operation of the pool facility.
- C. Lifeguards shall wear distinguishing emblems on their clothing clearly identifying them as lifeguards while on duty. Lifeguards shall not be subject to duties that would distract their attention from the proper observation of patrons in the pool area or that would prevent immediate assistance to patrons in distress.

**Section 69.1-3-9. Safety and Rescue Equipment; Other Safety Features.**

- A. Every swimming pool facility shall be equipped with the following readily accessible safety and rescue aids:
  - 1. A minimum of one rescue tube provided immediately adjacent to each lifeguard stationed poolside. The rescue tube must be at least 45 inches in length and provide adequate buoyancy to keep two persons afloat in the water.
  - 2. An approved first aid kit, which meets OSHA First Aid 29 CFR 1910.151 standards and the minimum requirements of generic first aid kits according to the American National Standards Institute (ANSI) Z308.1-1978.
  - 3. A full-length backboard with an impervious surface, hand/straps holes, runners, and a minimum of three body straps, that is buoyant and capable of supporting a minimum of 350 pounds, center loaded, with minimal deflection.
  - 4. One or more light, but strong, non-telescopic poles with blunted ends not less than 12 feet in length including a body hook.
- B. Other Safety Features.
  - 1. The room designated for emergency care of casualties shall, at a minimum, be equipped with an approved first aid kit, a cot, and two blankets. Filter or chemical storage rooms shall not be used as emergency care rooms.
  - 2. All chemicals associated with the facility shall be stored and utilized in a safe and approved manner in accordance with manufacturer's recommendations. Incompatible chemicals shall not be stored in close proximity to each other. Cleaning chemicals and supplies shall be stored in a safe manner, separate from swimming pool chemicals. Chemicals shall be stored in properly labeled containers and kept covered at all times.
  - 3. Chemical vats shall be covered with proper lids and provided with an approved



means of secondary containment such as an outer spill control container or a spill pallet adequate in size and capacity to contain spills and leaks.

4. Protective equipment including, but not limited to goggles or full face shields, neoprene rubber gloves, and rubber aprons shall be provided and used by personnel handling hazardous chemical compounds.
5. Plugs or caps shall be installed at all pool suction cleaner outlet ports when the suction cleaner is not in use. The main valve controlling the water flow from the pool suction cleaner outlet ports shall be closed, when the pool suction cleaner is not in use.
6. All safety equipment and features required in this Ordinance shall be maintained in good condition and repair.
7. Pool water temperature shall not exceed 104 degrees Fahrenheit.
8. Safety signs shall be displayed in a prominent location warning against diving into water depths less than five feet of water without specific supervision. The letterings of the safety signs must be a minimum of five inches in height.

### **Section 69.1-3-10. Laundering.**

Bathing suits, towels, and other reusable materials furnished by a swimming pool facility shall be properly cleaned or laundered and disinfected before being issued to patrons.

### **Section 69.1-3-11. Water Contamination.**

- A. The following information shall be posted at the entrance of every pool:
  1. If you have or have had diarrhea in the past two weeks, please do not use the pool.
  2. Shower your child and yourself before entering the pool or after using the toilet.
  3. Bathers who are not toilet trained or incontinent persons must wear a swim diaper.
  4. Do not drink pool water.
- B. The introduction of body waste including sputum or vomitus into a pool is prohibited. Patrons wearing cloth or disposable diapers are prohibited from entering the pool water. A pool contaminated by human feces or vomit shall be cleared immediately. The following actions shall be taken prior to reopening the pool:
  1. In the event of well-formed stool contamination:
    - (a) Clear the pool.
    - (b) Remove as much of the contaminating material as possible using a net or scoop. Vacuuming is not recommended unless it discharges directly to waste.
    - (c) Raise pool disinfectant level to a minimum of three parts per million and adjust pH to a level of 7.5 or less.
    - (d) Prohibit patrons from entering the pool for a minimum of one hour.
  2. In the event of diarrhea or vomitus contamination:
    - (a) Clear the pool.
    - (b) Remove as much contaminating material as possible from the water using a net or scoop. Vacuuming is not recommended unless it discharges directly to waste.
    - (c) Raise pool disinfectant level to a minimum of three parts per million and adjust pH to a level of 7.5 or less.
    - (d) Prohibit patrons from entering the pool for a minimum of two hours.



3. In the event of a fecal or vomitus contamination from a patron with Cryptosporidiosis:
  - (a) Clear the pool.
  - (b) Immediately notify the Director of the occurrence.
  - (c) Remove as much of the contaminating material as possible from the pool water. Vacuuming is not recommended unless it discharges directly to waste.
  - (d) Raise pool disinfectant level to a minimum of 20 parts per million and adjust pH to a level of 7.5 or less for a minimum of nine hours.
  - (e) Patrons are prohibited from entering the pool during this time period.
  - (f) Achieve acceptable disinfectant residuals and chemical balance as specified in the § 69.1-3-13 Table III prior to allowing patrons to enter the pool.

**Section 69.1-3-12. Water Clarity.**

When a swimming pool is open for use, the water shall be considered sufficiently clear when the main drain grates are clearly visible.

**Section 69.1-3-13. Water Treatment and Test Equipment.**

- A. The following chemicals may be used to treat swimming pool water: aluminum sulfate, calcium chloride, calcium hypochlorite, carbon dioxide, cyanuric acid, lime, muriatic acid, polyaluminum chloride, sodium bicarbonate, sodium bisulfate, sodium carbonate, sodium hypochlorite, sodium thiosulphate, approved algaecides, approved bromine compounds, and approved chelating, sequestering, and clarifying agents. No other chemicals shall be used to treat swimming pool water without prior written authorization from the Director.
- B. Aluminum sulfate and polyaluminum chloride shall not be fed continuously into a recirculation system using rapid sand filters. Formation of the flock shall be achieved separately and applied directly to the filter influent during the rewash and continuing into the early part of the filter cycle.
- C. Chemical water quality standards for swimming pools shall be as follows:
  1. Except as noted below, disinfectant residual, pH, total alkalinity, and calcium hardness shall be continuously maintained within the minimum and maximum ranges specified in Table III. If the swimming pool is equipped with automatic chemical controllers utilizing ORP measurements, ORP shall be maintained within the ranges specified in Table III. Disinfectant residual limits specified in Table III may be exceeded in pools with automatic chemical controllers, which utilize ORP measurements and continually analyze and automatically control pH and the disinfectant residual, only if necessary to maintain the ORP specified in Table III. However, the disinfectant residual shall not exceed ten parts per million in such pools. The use of ORP sensing equipment does not eliminate the requirement for routine water testing specified in § 69.1-3-3.



Disinfectant residual limits specified in Table III may be exceeded when superchlorinating a swimming pool provided that no patrons are present in the swimming pool water, and the disinfectant level is returned to the acceptable range prior to allowing patrons to enter the swimming pool water.

Table III. Chemical Water Quality Standards for Swimming Pools.

Parameter	Minimum	Ideal	Maximum
Free Chlorine Residual (ppm)	1	1 – 3	10
Combined Chlorine Residual (ppm)	0	0	0.2
Bromine Residual (ppm)	2	2 – 4	6
Oxidation Reduction Potential (millivolts)	650	750 – 900	N/A
pH	7.2	7.4 – 7.6	7.8
Total Alkalinity (ppm)	60	80 – 120	180
Calcium Hardness (ppm)	150	200 – 400	1,000

2. Except as noted in § 69.1-3-13(C)(1)&(D), disinfectant residuals shall be maintained within the ranges specified in Table III, 24 hours per day, through the use of automatic disinfection equipment specified in § 69.1-2-23. For swimming pools that backwash/clean filters to storm drains, streams, lakes or other bodies of water, disinfectant levels may be temporarily reduced immediately prior to the backwashing/cleaning of filters, provided the swimming pool facility is not open for patron use.
- D. If Cyanuric acid or chlorinated cyanurates is used in an outdoor swimming pool, the Cyanuric acid levels and disinfectant residuals shall be maintained within the following ranges:
1. A free chlorine residual of at least two parts per million shall be maintained for Cyanuric acid levels from zero to 50 parts per million.
  2. The concentration of Cyanuric acid shall not exceed 50 parts per million.
  3. The use of Cyanuric acid or other chlorine stabilizers is prohibited in indoor swimming pools.
- E. An approved water quality test kit for determining free and total chlorine or total bromine residuals, pH, total alkalinity, and calcium hardness shall be provided and maintained. Provisions shall be made for checking superchlorination levels. Diethyl-p-phenylene diamine (DPD), or other testing reagent approved by the Director, is required



for determining free halogen residual. If another disinfectant has been approved by the Director for use at a swimming pool, an appropriate test kit approved by the Director shall be provided and maintained. A test kit for measuring the concentration of Cyanuric acid, accurate within five parts per million, shall be provided at each swimming pool using Cyanuric acid or chlorinated cyanurates.

- F. Hand feeding of chemicals shall not be permitted during hours of operation or within 30 minutes prior to opening.

**Section 69.1-3-14. Design Load.**

The maximum individual swimming pool bather load shall be determined by dividing the total water surface area in square feet of each swimming pool within the swimming pool facility by 27 square feet. The designated maximum individual swimming pool bather load and the maximum facility load shall not be exceeded. The pool operator shall be responsible for enforcing the maximum individual swimming pool bather load and the maximum facility load. The maximum facility load may be temporarily exceeded to allow for spectators of special events, such as recreational swimming meets or other water sport activities, provided that the spectators shall not have access to and be separated from the pool(s) both during and after the event.

**Section 69.1-3-15. Spectators.**

No person in street shoes shall be allowed on the deck of a swimming pool within five feet of the pool edge. Exceptions may be made for participants and spectators of swimming meets or other water sport activities, operating personnel, personnel engaged in repair work or the Director.

**Article 4.  
Spa Pools; Design and Construction.**

**Section 69.1-4-1. Location.**

The location of a spa pool shall in no way hinder the operations for which it is designed, nor adversely affect patron safety or water quality.

**Section 69.1-4-2. Access.**

Direct and unobstructed access to any spa pool area shall be provided as specified in § 69.1-2-2(A). Emergency access to indoor or elevated spa pools shall be provided as specified in § 69.1-2-2(B).



**Section 69.1-4-3. Construction Materials.**

Spa pools shall be constructed of materials specified in § 69.1-2-3.

**Section 69.1-4-4. Design.**

Subject to the provisions below, a spa pool may be of any dimension or shape, provided that satisfactory recirculation of water can be obtained and that no undue hazards to patrons are created. The dimension or shape shall comply with the following specifications:

- The maximum water depth is four feet measured from the water line.
- The maximum depth of any seat or sitting bench is not more than 24 inches below the water line.
- All corners are coved as specified in § 69.1-2-7.
- The slope of the floor does not exceed a ratio of 1:12.

**Section 69.1-4-5. Hydrostatic Pressure Relief Valve.**

Hydrostatic pressure relief valves shall be installed as specified in § 69.1-2-5, unless it can be demonstrated that the spa pool will not be displaced by hydrostatic pressure.

**Section 69.1-4-6. Handholds.**

Spa pools shall be provided with suitable handholds as specified in § 69.1-2-9.

**Section 69.1-4-7. Stairs and Bench Seats.**

- A. Spa pool stairs shall be provided where water depths are greater than 24 inches.
- B. The design and construction of spa pool stairs and bench seats shall conform to the following specifications:
  1. Step treads have a minimum unobstructed horizontal depth of ten inches and a minimum continuous width of 24 inches.
  2. Riser heights are not be less than seven inches nor greater than 12 inches with the bottom tread not serving as a bench or seat.
  3. A minimum of one handrail to fully service all treads and risers for each set of stairs.
  4. The top and leading edge of all stair treads are to be marked on the horizontal surface as specified in § 69.1-2-10(B)(3).
  5. The step treads of all stairs are of non-slip construction.
  6. A minimum of one means of egress is to be provided for spa pools with a perimeter of 50 feet or less, and one additional means of egress for each additional 50 feet of pool perimeter or fraction thereof. Additional means of egress may be required as determined by the Director. The location of the means of egress to be determined by the design of the spa pool.



**Section 69.1-4-8. Decks.**

All spa pools shall have a continuous deck, at least five feet in width, extending around at least 50 percent of the spa pool. Except as provided above, decks shall comply with the requirements specified in § 69.1-2-20.

**Section 69.1-4-9. Lighting.**

Lighting shall be provided according to all applicable specifications of § 69.1-2-21.

**Section 69.1-4-10. Safety Requirements.**

- A. Spa pool depth markings shall comply with the requirements specified in § 69.1-2-22(D).
- B. There shall be no protrusions, extensions, means of entanglement or obstructions which can cause entrapment or injury.
- C. A timer switch that automatically shuts off the hydrotherapy jets and air blowers shall be provided. The timer switch shall be readily accessible to patrons and located directly adjacent to the spa pool, and have a maximum setting which does not exceed 15 minutes. The timer switch shall not be accessible from within the spa pool.
- D. A prominently identified and conspicuously located spa pool emergency pump cut-off switch shall be provided at each spa pool and be immediately accessible from the spa pool deck, to be used strictly in the event of an emergency. The emergency switch shall deactivate all spa pool pumps. An "EMERGENCY PUMP CUT-OFF SWITCH" sign shall be posted at the switch and have letters at least two inches in height which are color contrasted with the background color of the sign. The emergency pump cut-off switch shall not be capable of activating the spa pool pumps.
- E. If the telephone specified in § 69.1-2-22(C) is not provided, a direct dial, hard wired telephone that is fully operational shall be provided within 100 feet of the spa pool and be readily accessible at all times. The facilities name, address, and the emergency numbers, including the phone number for the pool operator, shall be posted by the telephone.

**Section 69.1-4-11. Fencing and Barriers.**

Fencing and barriers shall be provided as specified in § 69.1-2-24. In addition, for indoor spa pool facilities, locked doors or an equivalent barrier acceptable to the Director shall be provided to prevent the entry of unauthorized individuals.



### **Section 69.1-4-12. Drinking Fountains.**

Each spa pool facility shall have at least one drinking fountain readily accessible to all patrons.

### **Section 69.1-4-13. Inlets, Outlets, Piping, Drains, and Skimmers.**

- A. Spa pool inlets and outlets shall be provided and arranged to maintain a uniform circulation of water and disinfectant residual.
- B. All spa pool piping shall comply with the requirements specified in § 69.1-2-15, except only subsurface spa pool piping which is not integrally included in the manufacture of the spa pool shall be embedded in and covered with sand or an approved equivalent.
- C. All spa pools shall be provided with a minimum of one skimmer. Spa pool skimmers shall comply with the requirements specified in § 69.1-2-19(B).
- D. Spa pool suction outlets shall be designed so that each pumping system in the spa pool provides one of the following alternatives:
  - 1. Two or more interconnected suction outlets. The system shall be designed so that none of the outlets can be isolated from the suction line by a valve or by any other means. All piping associated with the suction outlets shall be of equal diameter and each suction outlet be of equal size. Suction outlets and associated piping shall be hydraulically designed to provide equal flow through each suction outlet. The open area of the suction outlets shall be covered with suitable protective grates or covers that are anchored using manufacturer supplied parts, in strict accordance with the manufacturer's specifications and recommendations, and designed to prevent body entrapment or injury. The suction outlet covers shall be secured so that their removal requires the use of tools. Suction outlet covers shall be manufactured and installed according to the latest specifications set forth by the ASME/ANSI and NSF International Standards for suction fittings. The cover, frame, and all components shall be corrosion resistant and shall be designed to withstand the maximum anticipated forces generated by active use. If the suction outlets are main drain outlets, they shall have antivortex covers or grates, located in the deepest part of the spa pool, and capable of draining the pool. The total water velocity through suction outlets, with the exception of skimmers, shall not exceed one foot per second, and not exceed the maximum flow rate specified by the manufacturer of the suction outlet cover.
  - 2. Other methods that prevent suction outlet body entrapment or injury may be approved by the Director.
- E. If fill spouts are used at spa pools, they shall be installed according to applicable requirements specified in § 69.1-2-15(B).



**Section 69.1-4-14. Recirculation System.**

- A. All spa pools shall be equipped with a recirculation system consisting of at least a pump, connecting piping, fittings, valves, a filter, disinfecting equipment, necessary pipe connections to the inlets and outlets, skimmer(s), and main drains.
- B. The recirculation system shall be designed for a maximum turnover time of 15 minutes.
- C. Adequate provision shall be made for backwashing or cleaning the filters.
- D. A separate recirculation system shall be provided for each spa pool.

**Section 69.1-4-15. Filters and Gauges.**

- A. The recirculation system of a spa pool shall be equipped with a filtration system that will filter the entire volume of the spa pool at the rate specified in § 69.1-4-14(B).
- B. Only high-rate sand, diatomaceous earth or replaceable cartridge filters shall be used for spa pools. Other filtration systems may be used with the approval of the Director. Except as provided above, filters and associated piping and valves shall comply with the requirements specified in § 69.1-2-13(A).
- C. Pressure gauges and flow meters shall be installed as specified in § 69.1-2-13(B).
- D. When cartridge filters are used, an extra set of cartridge filters shall be on site.

**Section 69.1-4-16. Pumps and Strainers.**

A pump(s) shall be provided with adequate capacity to re-circulate the spa pool water at the rate specified § 69.1-4-14(B). Pump(s) and strainer(s) shall meet the requirements specified in § 69.1-2-14(A) & (B), except the turnover time specified in § 69.1-4-14(B) be achieved.

**Section 69.1-4-17. Filter Room.**

A filter room(s) shall be provided which meets the requirements specified in § 69.1-2-12, except that this room(s) not be required to be directly accessible from the spa pool area.

**Section 69.1-4-18. Air Induction Systems.**

- A. An air induction system, when provided, shall prevent water back-up that could cause electrical shock hazards.
- B. Air intake sources shall be positioned to minimize introduction of contaminants, such as deck water and dirt, into the spa pool.



- C. Integral air passages shall be pressure tested at 1½ times the intended working pressure during the time of installation to ensure airtight integrity.

**Section 69.1-4-19. Disinfection Equipment.**

- A. All spa pools shall be provided with disinfection equipment meeting the requirements specified in § 69.1-2-23(A) & (C).
- B. Chlorine gas shall not be used as a disinfectant in spa pools.

**Article 5.  
Spa Pools; Operation and Maintenance.**

**Section 69.1-5-1. Security.**

Spa pool facilities shall be operated and maintained as specified in § 69.1-3-1.

**Section 69.1-5-2. Water Operating Levels.**

The water level shall be maintained within the operating range of the skimmer or at the top of the overflow rim of a gutter system at all times the spa is open for use.

**Section 69.1-5-3. Monitoring, Reporting, and Record Keeping.**

Spa pool water testing shall be performed as specified in § 69.1-3-3. In addition, the dates and times the spa pool is drained and cleaned shall be recorded.

**Section 69.1-5-4. Placards.**

Placards shall be provided as specified in § 69.1-3-4.

**Section 69.1-5-5. Precautions Relative to Communicable Disease.**

Precautions relative to communicable disease specified in § 69.1-3-5 shall be enforced.

**Section 69.1-5-6. Food Service.**

Food service shall be limited as specified in § 69.1-3-6.

**Section 69.1-5-7. Boisterous and Rough Play.**

Boisterous and/or rough play and running at any spa pool facility is prohibited.

**Section 69.1-5-8. Temperature Requirements.**

Spa pool water temperature shall not exceed 104 degrees Fahrenheit. A thermostat shall be provided for the control of the spa pool water temperature. An accurate, impact



resistant spa pool thermometer shall be kept in each spa pool for measuring water temperature.

### **Section 69.1-5-9. Safety and Rescue Equipment; Other Safety Features.**

- A. Every spa pool facility shall be equipped with the following readily accessible safety and rescue aids:
  - 1. An approved first aid kit, which meets OSHA First Aid 29 CFR 1910.151 Standards, shall be readily available and also meet the minimum requirements of generic first aid kits according to the American National Standards Institute (ANSI) Z308.1-1978.
  - 2. A full-length backboard shall be provided as specified in § 69.1-3-9(A)(3).
  - 3. A working clock shall be provided which is clearly visible from within the spa pool.
  
- B. Other safety features:
  - 1. The following recommendations for safe use of the spa shall be posted at the entrance of every spa pool:
    - (a) Do not use alone.
    - (b) Pregnant women, elderly persons, and persons suffering from heart disease, diabetes or abnormal blood pressure or other at-risk persons should not enter the spa pool without consulting a physician.
    - (c) Do not use the spa pool while under the influence of alcohol, tranquilizers, or other drugs which may cause drowsiness, alter blood pressure or put the patron at risk.
    - (d) Do not use at water temperatures above 104 degrees Fahrenheit.
    - (e) Unsupervised use by children is prohibited.
    - (f) Enter and exit slowly.
    - (g) Limit your use of the spa pool to a maximum of 15 minutes at one time.
    - (h) Cool down before revisit.
    - (i) Long exposure may result in nausea, dehydration, dizziness, fainting or death.
    - (j) The use of oils, body lotions and mineral bath salts is prohibited.
    - (k) Patrons with symptoms of a communicable disease are prohibited from entering the spa pool.
    - (l) Failure to comply with these regulations constitutes grounds for exclusion from the premises or management action, as necessary.
  - 2. All chemicals associated with spa pools shall be stored and utilized in a safe and approved manner as specified in § 69.1-3-9(B)(2).
  - 3. Protective equipment shall be provided for handling hazardous chemicals as specified in § 69.1-3-9(B)(4).
  - 4. Filter and chemical storage rooms shall be locked at all times, when authorized personnel are not present.

### **Section 69.1-5-10. Laundering.**

Bathing suits, towels, and other reusable materials furnished by a spa pool facility shall be properly cleaned or laundered and disinfected before being issued to patrons.



**Section 69.1-5-11. Water Clarity.**

When a spa pool is open for use, the water shall be considered sufficiently clear when the main drain grates are clearly visible.

**Section 69.1-5-12. Water Treatment and Test Equipment.**

- A. No chemicals other than those specified in § 69.1-3-13(A) shall be used to treat spa pool water without written authorization from the Director.
- B. Except as noted below, disinfectant residual, pH, total alkalinity, and calcium hardness shall be continuously maintained within the minimum and maximum ranges specified in Table IV. If the spa pool is equipped with automatic chemical controllers utilizing ORP measurements, ORP shall be maintained within the ranges specified in Table IV. Disinfectant residual limits specified in Table IV may be exceeded in pools with automatic chemical controllers, which utilize ORP measurements and continually analyze and automatically control pH and the disinfectant residual only, if necessary, to maintain the ORP specified in Table IV. However, the disinfectant residual shall not exceed ten ppm in such pools. The use of ORP sensing equipment does not eliminate the requirement for routine water testing specified in § 69.1-5-3. Disinfectant residual limits specified in Table IV may be exceeded, when superchlorinating a spa pool, provided that no patrons are present in the spa pool water and the disinfectant level is returned to the acceptable range prior to allowing patrons to enter the spa pool water.

Table IV. Chemical Water Quality Standards for Spa Pools.

Parameter	Minimum	Ideal	Maximum
Free Chlorine Residual (ppm)	2	3 – 5	10
Combined Chlorine Residual (ppm)	0	0	0.2
Bromine Residual (ppm)	2	3 – 5	10
Oxidation Reduction Potential (millivolts)	650	750 - 900	N/A
pH	7.2	7.4 - 7.6	7.8
Total Alkalinity (ppm)	60	80 - 120	180
Calcium Hardness (ppm)	150	200 - 400	1000

- C. If cyanuric acid or chlorinated cyanurates is used in an outdoor spa pool, the cyanuric acid levels and disinfectant residuals shall be maintained within the following ranges:
  - 1. A free chlorine residual of at least four ppm shall be maintained for cyanuric acid levels from zero to 50 ppm. The concentration of cyanuric acid shall not exceed 50



ppm. The use of cyanuric acid or other chlorine stabilizers is prohibited in indoor spa pools.

- D. An approved water quality test kit shall be provided as specified in § 69.1-3-13(E).
- E. Hand-feeding of chemicals shall not be permitted while the spa pool is open or accessible to patrons and within 30 minutes of opening.

**Section 69.1-5-13. Water Contamination.**

The introduction of body wastes, including sputum or vomitus, into a spa pool is prohibited. A spa pool contaminated by human feces or vomit shall be closed immediately, and the following additional actions shall be taken by the spa pool operator:

- Remove contaminating material from the pool water.
- Backwash the filters.
- Drain the spa pool.
- Clean and disinfect the bottom and sidewalls of the spa pool and skimmers.
- Refill with potable water.

**Section 69.1-5-14. Posting of Water Quality Test Results and Water Quality Standards.**

The water tests indicated in § 69.1-5-3 shall be conducted and the results posted as specified in § 69.1-3-4(A).

**Section 69.1-5-15. Design Load.**

The maximum individual spa pool bather load shall be calculated by dividing the total water surface area in square feet of each spa within the spa pool facility by ten square feet or shall be determined by the Director at the time of construction. The designated maximum individual spa pool bather load and the maximum facility load shall not be exceeded. The pool operator shall be responsible for enforcing the maximum individual spa pool bather load and the maximum facility load.

**Article 6.  
Waterpark Facilities;  
Design, Construction, Operation, and Maintenance.**

**Section 69.1-6-1. Scope.**

This Article addresses the special design, construction, operation, and maintenance considerations unique to waterpark facilities.



## Section 69.1-6-2. Design.

- A. Waterpark facilities shall meet or exceed the following design and construction standards in effect at the time of construction including, but not limited to:
1. Specifications contained in this Ordinance.
  2. ASTM F-24 "Standards on Amusement Rides and Devices."
  3. "Virginia Amusement Device Regulations."
  4. Industry standards and manufacturer's specifications and recommendations.
- B. The proposed design shall be reviewed and approved by a licensed engineer.
- C. Waterpark facilities shall be designed to provide for the safety of the patron and proper recirculation of the pool water. The design shall include, but not be limited to, the following:
1. Absence of protrusions, pinch hazards, extensions, means of entanglement, or other obstructions which can cause entrapment or injury.
  2. Construction tolerances conforming to ANSI public pool standards.
- D. A report, prepared by a licensed engineer that certifies the design of the waterpark facility is consistent with accepted safety engineering practices, industry standards, manufacturer's specifications and recommendations, and this Ordinance shall be included with the original plans and specifications submitted to the Director for review.
1. The report shall address issues related to safety design, including the ergonomic aspects of biomechanics for waterpark facilities.
  2. The report shall substantiate that a comprehensive risk analysis was made of the waterpark, including a risk analysis of each separate component and of the components interaction with other elements of the waterpark.
  3. The report shall demonstrate that the waterpark design protects the patron, under foreseeable conditions and normal usage and behavior, from exposure to injury. Elements to be considered include, but are not limited to, the following:
    - (a) The activity shall contain the patron.
    - (b) The activity shall provide clear and smooth passage of the patron.
    - (c) The activity shall maintain designed patron speeds.
    - (d) The activity shall provide smooth transitions in speed and direction.
    - (e) The activity shall provide for safe landing and/or disembarkation of the patron.
    - (f) The activity shall accommodate continuous patron surveillance by lifeguards and attendants, except for an enclosed, tubular chute or flume where the patron is monitored at the points of entry and exit by qualified operation personnel.
  4. The report shall specify the maximum pool loads and the maximum facility load.
  5. The report shall be accompanied by a facility operation and maintenance manual which includes manufacturer's specifications and recommendations for each attraction regarding operation and maintenance of the attraction to include, but not be limited to, the following:
    - Appropriate construction drawings.
    - Maintenance instructions.
    - Operation instructions.
    - Staffing requirements and procedures.

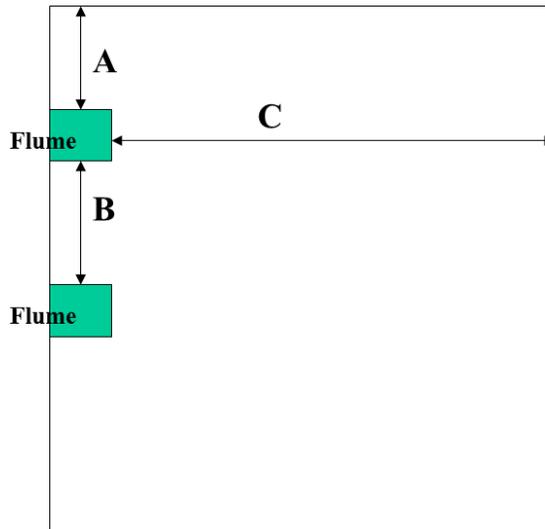


- Instructional and warning signage.
6. Upon completion of the waterpark facility and prior to issuance of the owner's seasonal or annual permit, an addendum to the report, prepared by a licensed engineer, shall be submitted to the Director. The report addendum shall certify that each attraction has been tested under normal operating conditions and found to perform satisfactorily. The Director may require that the testing procedure be witnessed by one or more designees of the Director. The addendum shall also certify that the waterpark facility was constructed as detailed in the plans and specifications approved by the Director and consistent with accepted safety engineering practices, industry standards, manufacturer's specifications and recommendations, the report described in § 69.1-6-2(D), and this Ordinance.
- E. The following specific types of waterpark facility attractions shall comply with the requirements indicated:
1. Water chutes or flumes and inner-tube rides shall be provided with:
    - (a) Control of unauthorized patron access at entry and exit areas, and points along the attraction not designed for entry or exit.
    - (b) Handrails and non-slip walking surfaces at attraction entry and exit areas.
    - (c) Attendant stations for patron control that have direct line of sight between the entry and exit areas of each attraction except as provided in § 69.1-6-2(D)(3)(f). Additional attendant stations may be required by the Director to provide complete visual coverage of the attraction.
    - (d) An effective internal communication system that allows direct communication between the attendants stationed at the entry areas, exit areas, and/or additional locations along the attraction, as necessary.
    - (e) All structure supported attractions shall be designed to prevent water leaks, discharge, and splash-out to minimize or eliminate structural deterioration, under structure erosion, loss of structural support or other safety hazards.
    - (f) Instruments shall be provided to measure the flow of water through each attraction.
    - (g) Any tethered attractions shall not pose a pinch, puncture or any other safety hazard.
  2. Receiving pools shall have the minimum clearances detailed in Figure II for flume or chute entrances into pools. Sufficient distance shall be provided between the flumes or chutes to prevent collision. Receiving pools shall also meet the following requirements:
    - (a) The flume or chute sliding surface of waterslides shall end at or below the pool operating water level.
    - (b) The flume or chute shall be perpendicular to the wall of entry for a minimum of ten feet.
    - (c) Receiving pools for drop slides shall comply with the manufacturer's specifications and recommendations.



Figure II: Minimum Clearances for Flume or Chute Entry to Receiving Pools.

Value	Minimum Distance	Description
A	5 Feet	Minimum distance from edge of flume to side of pool
B	6 Feet	Minimum distance between edges of parallel flumes
C	20 Feet	Minimum distance from where flume terminates to opposite side of pool



3. Children's activity pools shall comply with the specifications listed in § 69.1-2-27 except as specified in this Article, including compliance with the following specifications:
  - (a) A maximum depth of 24 inches.
  - (b) Children's activity pools which are part of a larger pool shall be protected from areas with water depths greater than 24 inches by providing:
    - (1) A dark, nonslip tile transition line on the bottom of the pool along the entire two foot water depth contour. The transition line shall be a minimum of two inches wide. The transition line shall be of high contrasting color.
    - (2) A transition zone with a maximum floor slope not exceeding 1:12.
  - (c) Where "climb-on" toys and attractions are provided, impact absorption materials shall be provided in areas where ejection or falls can reasonably be expected to

- occur.
4. Wave pools shall comply with the following specifications:
    - (a) Walls of wave pools shall be vertical with a minimum 6 inch radius of curvature between the wall and pool bottom.
    - (b) Decks shall have a minimum width of ten feet along the shallow end.
    - (c) A chain-link fence or similar restrictive barrier acceptable to the Director shall be installed to direct patrons to access the wave pool from the shallow area. The fence shall be a minimum of 36 inches in height and at least four feet out from the edge of the coping or pool/deck juncture, and be provided adjacent to water depths 24 inches or greater. The fence shall be exclusive of the perimeter fence or barrier. Emergency exit openings in the fence or barrier shall be provided at a minimum of one per 50 feet of pool sidewall and a minimum of four feet in width.
    - (d) Prominently identified and conspicuously located wave pool emergency cut-off switch(s) that terminate wave action shall be provided at each wave pool. One emergency cut-off switch shall be provided for every 100 feet of pool perimeter or fraction thereof. Cut-off switches shall be immediately accessible to each lifeguard. Cut-off switches are to be used strictly in the event of an emergency. An "EMERGENCY WAVE CUT-OFF SWITCH" sign shall be posted at the switch and have letters at least four inches in height which are color contrasted with the background color of the sign. The emergency cut-off switch shall not be capable of activating the wave action.
    - (e) A public address system shall be provided for use by authorized personnel, which is clearly audible to all portions of the wave pool.
    - (f) Pool depths shall be measured without wave action.
    - (g) A warning horn and flashing light shall be provided that automatically signals prior to the initiation of wave action. Sufficient time shall be allowed between the warning horn/flashing light and the initiation of wave action to allow patrons the option of leaving the wave pool.
  5. Slow river attractions shall have a maximum current speed of three miles per hour.
  6. For activity pools in which climb-on toys and attractions are provided in water depths less than 36 inches, impact absorption materials shall be provided in areas where ejection or falls can reasonably be expected to occur. Impact absorption materials may also be required in other areas of the facility, as determined by the Director.

### **Section 69.1-6-3. Location.**

The location of a waterpark facility shall in no way hinder the operations for which it is designed nor adversely affect patron safety or water quality. Pools within the waterpark facility shall be greater than 15 feet from any structure, object or land formation from which a patron could jump into a pool unless, at the discretion of the Director, other measures have been taken that are sufficient to prevent patrons from jumping from the structure, object, or land formation. The Director has the discretion to determine that the minimum 15 foot distance requirement does not apply to certain segments of attractions or to barriers provided to prevent unauthorized access to pools. The Director may impose additional access restrictions.



**Section 69.1-6-4. Access.**

Additional emergency access gates and lanes, in excess of those required by § 69.1-2-2, may be required, as determined by the Director, to allow immediate access to all areas within the waterpark facility.

**Section 69.1-6-5. Slope of Bottom.**

The slope of waterpark facility pools shall comply with the requirements specified in § 69.1-2-6 with the exception of the waterpark facility pools listed below:

- A. Receiving or exiting pools. The maximum slope shall not exceed 1:7 where total water depth is less than 48 inches.
- B. Activity pools. The maximum slope shall not exceed 1:12 up to a water depth of five feet in activity pools where users enter and participate in extended activities.
- C. Wave Pools. The maximum slope shall not exceed 1:12 where water depths range from zero to 3½ feet and shall not exceed 1:9 where water depths exceed 3½ feet.

**Section 69.1-6-6. Handholds and Handrails.**

All pools at waterpark facilities shall be provided with suitable handholds around their perimeter. One handrail for every seven feet, or fraction thereof, of exit area width or perimeter shall be provided at exit steps from receiving pools.

- A. Handholds may consist of any one or a combination of the following:
  - 1. Coping, gutter ledges or flanges or decks which have a top edge that provides a suitable slip resistant handhold located not more than 12 inches above the water line.
  - 2. Ladders, steps or handrails.
  - 3. Other methods approved by the Director.

**Section 69.1-6-7. Stairs, Steps and Ladders.**

Stairs, steps, and ladders shall be constructed as detailed in § 69.1-2-10 except for the circumstances outlined below.

- A. The stairs, ramps, and platforms associated with structure supported attractions shall be designed to provide for the safety of the intended users and take into account the following:
  - Heavy patron loads.
  - Slip hazards.
  - Properly located and sized handrails.



- B. Wave pools shall be provided with recessed ladders or step holes with vertical grab bars at water depths greater than 3½ feet, for emergency exit only, spaced at intervals of not greater than 50 feet.
- C. Stairs and steps shall be recessed into the pool wall or deck.
- D. Handrails shall extend over the coping or edge of the deck.
- E. Ladders or footholds shall be provided to allow patron exit from pools greater than 4 feet in water depth, except in receiving pools which bring the user toward a shallow water depth area after entering the water.
- F. A minimum of one exit shall be provided for every 50 feet or fraction thereof of pool perimeter for pools whose water depth is greater than four feet. At least two means of egress/ingress shall be provided for each diving area or drop slide receiving pool. The exits shall be arranged to prevent exit paths from crossing slide discharge paths.
- G. Slow river attractions shall be provided with properly sized recessed stairwells or rampways with handrails. Entry and exit points shall be sufficiently wide to easily accommodate patrons boarding on or disembarking from flotation devices.
- H. Additional handrails at entry and exit areas may be required as determined by the Director.

**Section 69.1-6-8. Recirculation Systems.**

The recirculation system shall meet all of the requirements specified in § 69.1-2-11 except as specified below:

- A. The recirculation system for all pools at a waterpark facility, other than those specified in § 69.1-2-11(B), shall be designed to accommodate the following required maximum turnover time:
  - 1. Children's activity pool, one hour.
  - 2. Wave pool, two hours.
  - 3. Receiving pool that is completely separate from the main body of the pool, has no more than two attractions, and has a volume of 20,000 gallons or less shall be provided with a turnover time of one hour. The turnover time may be increased by one hour for every additional 20,000 gallons of pool volume up to a maximum of four hours per turnover.
  - 4. All other pools, maximum of four hours.

**Section 69.1.6-9. Pumps.**

Pumps shall meet the specifications outlined in § 69.1-2-14(A). Pumps which drive the water current in slow river attractions shall be designed to produce minimal cross currents at their suction and discharge points. Propulsion pump water intake pipes shall be installed in a manner to prevent patron entrapment. The propulsion pump water discharge shall be



uniform and located in a manner to cause minimal effect on the patron. Booster pumps shall be sized to provide a continuous river-like flow rate no greater than three mph. The number and size of suction outlets serving the booster pump shall be designed so that the water flow through each suction outlet does not exceed a velocity of ½ foot per second.

#### **Section 69.1.6-10. Overflow Gutters and Skimmers.**

Overflow gutters and skimmers shall be provided as specified in § 69.1-2-19 except as provided below:

- A. Skimmers shall not be used in slow river attractions or any other waterpark facility pools having currents, moving water or turbulence created by mechanical means or gravity that would prevent efficient skimming action by the skimmers. Alternative means of removing floating debris, which are approved by the Director, shall be provided for such attractions.

#### **Section 69.1.6-11. Fencing and Barriers.**

At intermediate pools, which are pools between the entry and exit pools in attractions using a series of pools, barriers shall be designed and constructed to prevent unauthorized entry or access from one attraction to another attraction. Fencing or barriers shall also be provided to prevent unauthorized access to a pool or attraction which has designated entry/exit points.

#### **Section 69.1-6-12. Operation and Maintenance.**

- A. Waterparks shall be operated and maintained in accordance with the most restrictive applicable operational standards specified in the following documents:
  - 1. Specifications contained in this Ordinance.
  - 2. ASTM F-24 "Standards on Amusement Rides and Devices.
  - 3. "Virginia Amusement Device Regulations."
  - 4. Industry standards and manufacturer's specifications and recommendations.
- B. Personnel.
  - 1. Pool operators shall comply with the requirements specified in § 69.1-1-10.
  - 2. Lifeguards shall meet the requirements specified in § 69.1-3-8 and receive training specific to the waterpark facility environment.
  - 3. Attendants shall be trained to operate an attraction and control the patrons in a safe and orderly manner.
    - (a) Attendants not certified as lifeguards shall not substitute for lifeguards at any pool.
- C. Safety.
  - 1. For all attractions with flumes or chutes, clearing of the receiving pool entry area prior to allowing another patron to enter is required.
  - 2. Use of certain waterpark facility pools may be limited by an individual's



- swimming ability. Other restrictions may be imposed as necessary.
3. Attendant and lifeguard stations shall be manned at all times an attraction is in use.
  4. U.S. Coast Guard approved personal floatation devices shall be readily available and accessible for those patrons that choose to use them.
- D. Design Load. Individual pool loads and the maximum facility load shall be determined by the Director, with consideration of § 69.1-6-2(D)(4). At no time shall the designated maximum pool load or the maximum facility load be exceeded. The maximum facility load and the maximum pool loads shall be posted at the main entrance to the waterpark facility. The waterpark facility pool operator shall be responsible for enforcing the maximum facility load and maximum pool loads.
1. The maximum pool loads and the maximum facility loads may be additionally restricted due to the following conditions:
    - (a) A congested grouping of patrons, tubes or floatation devices or any other grouping that obstructs the lifeguard's view of the pool bottom.
    - (b) Other conditions which may compromise the health or safety of the patrons.
- E. Additional operational procedures.
1. Pool operators shall monitor the water flow rates through flume and attractions to insure that a constant water flow is maintained at rates in accordance with manufacturer's specifications and recommendations.
  2. The facility operation and maintenance manual specified in § 69.1-6-2(D)(5) shall be maintained at the waterpark facility and be available for inspection at all times.

**Article 7.**  
**Bathhouse Facilities; Design, Construction, and Maintenance.**

**Section 69.1-7-1. Establishments Required to Provide Bathhouse Facilities.**

All water recreation facilities shall provide bathhouse facilities. Motels and other similar establishments which restrict the use of all pools to occupant guests are not required to provide bathhouse facilities.

**Section 69.1-7-2. Design and Location.**

The bathhouse shall be designed so that the plumbing fixtures are located in the line of travel used by patrons prior to entering the pool or waterpark area. The bathhouse shall be designed so that patrons pass through the rooms containing the dressing areas, showers and toilet fixtures prior to accessing the pool. It shall be provided with an entrance and a separate exit opening directly to the swimming pool, spa pool or waterpark facility deck provided, however, the exit not be near the deep portion of a swimming pool, when the pool depth is greater than five feet. Computations for plumbing fixtures shall be based on



the premise that at the time of maximum load, ½ of the patrons will be male and ½ female.

**Section 69.1-7-3. Floors.**

Floors for all showers, toilets, and lavatories in a bathhouse shall have a minimum slope of 1:48 to the drains with no low spots which will allow water to pond. Such floors shall have a smooth but non-slip, non-absorbent, finish, not be carpeted, and be maintained in a clean and sanitary condition. The room shall be mechanically ventilated.

**Section 69.1-7-4. Dressing Rooms.**

Separate dressing rooms shall be provided for each sex. Lockers, baskets, hooks or other sanitary means for storage of clothing and personal accessories shall be provided. Dressing rooms shall be maintained in a clean and sanitary condition. Clothing hooks shall not present a puncture hazard to patrons.

**Section 69.1-7-5. Showers.**

Showers shall be provided in the proportion of one per 40 persons or fraction thereof at each swimming pool, spa pool, or waterpark facility based upon the maximum facility load. Each shower shall supply an adequate quantity of heated water through a device that will prevent scalding. The device that prevents scalding shall be adjusted to provide a maximum hot water temperature at the nozzle head of 110 degrees Fahrenheit, and a minimum hot water temperature at the nozzle head of at least 90 degrees Fahrenheit. Water from each shower shall drain separately or each shower shall be located and have the floor sloped so that waste from one shower not flow over the floor serving another. Each shower fixture shall be provided with a liquid soap dispenser and an adequate supply of liquid soap. Showers shall be maintained in a clean and sanitary condition.

**Section 69.1-7-6. Toilets, Urinals, and Mop Sink.**

Toilet facilities shall be provided in the proportion as required by the International Plumbing Code. An adequate supply of dispensed toilet paper shall be provided to each water closet. A separate custodial mop sink shall be provided exclusively for cleaning purposes and shall be located within 100 feet of the shower and toilet rooms. Toilets and urinals shall be maintained in a clean and sanitary condition.

**Section 69.1-7-7. Lavatories.**

Lavatories shall be provided in the proportion as required by the International Plumbing Code. Each lavatory shall be provided with a liquid soap dispenser and an adequate supply of liquid soap. Each lavatory shall be provided with an adequate supply of dispensed paper towels and/or a mechanical means of hand drying. Lavatories shall be maintained in a clean and sanitary condition.



### **Section 69.1-7-8. Hose Bibs.**

Hose bibs with vacuum breakers or approved backflow preventers shall be provided at convenient locations. A minimum of one hose bib shall be provided in both the female and male sections of the bathhouse.

### **Section 69.1-7-9. Lighting.**

All areas within the bathhouse facility shall be illuminated at a minimum of 30 foot-candles measured 24 inches above the floor. All light fixtures shall be shielded.

### **Section 69.1-7-10. Saunas and Steam Rooms.**

A sauna, steam room or similar device in which the patron's body is exposed to water, steam, moist or dry heat, that is provided in conjunction with a regulated swimming pool or spa pool facility, shall be installed in accordance with the requirements of the VUSBC, be maintained in a clean and sanitary condition, and comply with the following requirements:

- A. Shielded, vapor-proof lighting fixtures are provided.
- B. Adequate mechanical ventilation is provided.
- C. The doors to all steam rooms and sauna rooms have viewing ports fitted with shatterproof glass or plastic, and not be capable of being blocked or otherwise secured against opening by pushing from the inside. The door to the sauna or steam room shall open outward.
- D. A timer switch that automatically shuts off the heat or steam source. The timer switch shall be readily accessible to patrons and be located directly adjacent to the sauna or steam room and have a maximum setting which does not exceed 15 minutes.
- E. A suitable barrier shall be provided to prevent patron injury from the heating element or unit.
- F. Bench surfaces shall be of a smooth finish and free of protrusions that could cause injury to patrons.
- G. A sign shall be posted stating that users must shower prior to entering the pool.

