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TITLE 216 – DEPARTMENT OF HEALTH

CHAPTER 50 – ENVIRONMENTAL HEALTH

SUBCHAPTER 05 – WATER QUALITY

PART 4 – Licensing of Aquatic Venues

4.1 Authority and Purpose

4.1.1 AUTHORITY

These regulations are promulgated pursuant to the authority conferred under R.I. Gen. Laws § 23-22-2, for the purpose of adopting minimum safety standards for Aquatic Venues.

4.1.2 SCOPE

These regulations apply as defined in R.I. Gen. Laws § 23-22-1.

4.1.3 INCORPORATION BY REFERENCE

- A. These regulations hereby adopt and incorporate the U.S. Department of Health and Human Services Centers for Disease Control and Prevention’s “2016 Model Aquatic Health Code” (July 2016) § 4.0, Facility Design and Construction Standards, by reference, and those sections of the Model Aquatic Health Code cross-referenced therein, not including any further editions or amendments thereof and only to the extent that the provisions therein are not inconsistent with these regulations.
- B. These regulations hereby adopt and incorporate the American Public Health Association/American Water Association/Water Environmental Federation’s “Standard Methods for the Examination of Water and Wastewater, 23rd Edition” (2017) by reference, not including any further editions or amendments thereof and only to the extent that the provisions therein are not inconsistent with these regulations.
- C. These regulations hereby adopt and incorporate the NSF International Standard/American National Standard’s “NSF/ANSI 50 – 2016a, Equipment for Swimming Pools, Spas, Hot Tubs and Other Recreational Water Facilities” (2017) by reference, not including any further editions or amendments thereof and only to the extent that the provisions therein are not inconsistent with these regulations.

4.2 Definitions

- A. The following definitions shall apply in the interpretation and application of this Part:
1. "Americans with Disabilities Act" or "ADA" means the Americans with Disabilities Act of 1990 and subsequent amendments thereto.
 2. "Authority Having Jurisdiction" or "AHJ" is synonymous with "Licensing Agency."
 3. "Applicant" means an individual or business entity with the legal authority to apply for licensure of an Aquatic Venue.
 4. "Aquatic facility" is comprised of one or more Aquatic Venues.
 5. "Aquatic venue" means a traditional swimming pool, non-traditional pool, wading pool, therapeutic pool, hot tub or spa.
 6. "Barrier" means an obstacle intended to prevent direct access from one point to another.
 7. "Cleansing shower" means a shower, located within a hygiene facility, using warm water and soap. The purpose of a cleansing shower is to remove contaminants including perianal fecal material, sweat, skin cells, personal care products, and dirt before bathers enter the Aquatic Venue.
 8. "Director" means the Director of the Rhode Island Department of Health or his or her designee.
 9. "Enclosure" means an uninterrupted constructed feature or obstacle used to surround and secure an area that is intended to deter or effectively prevent unpermitted, uncontrolled, and unfettered access.
 10. "Hygiene facility" means a structure or part of a structure that contains toilet, shower, diaper-changing unit, hand wash station, and dressing capabilities serving bathers and patrons at an aquatic facility.
 11. "Hygiene fixtures" means all components necessary for hygiene facilities including plumbing fixtures, diaper-changing stations, hand wash stations, trashcans, soap dispensers, paper towel dispensers or hand dryers, and toilet paper dispensers.
 12. "Imminent health hazard" means a significant threat or danger to health that is considered to exist when there is evidence sufficient to show that a product, practice, circumstance, or event creates a situation that requires immediate correction or cessation of operation to prevent injury based on

the number of potential injuries and the nature, severity, and duration of the anticipated injury or illness.

13. “Increased risk aquatic venue” means an aquatic venue which due to its intrinsic characteristics and intended users has a greater likelihood of affecting the health of the bathers of that venue by being at increased risk for microbial contamination (e.g., by children less than 5 years old) or being used by people that may be more susceptible to infection (e.g., therapy patients with open wounds).
14. “Infinity edge” means a pool wall structure and adjacent perimeter deck that is designed in such a way where the top of the pool wall and adjacent deck are not visible from certain vantage points in the pool or from the opposite side of the pool. Water from the pool flows over the edge and is captured and treated for reuse through the normal pool filtration system. They are also referred to as “vanishing edges,” “negative edges,” or “zero edges.”
15. “In-kind replacement” means replacement equipment identical to that which was originally approved by the Licensing Agency when the Aquatic Facility or Aquatic Venue was constructed or during a subsequent alteration.
16. “Licensee” means any person who holds a license issued by the Licensing Agency pursuant to these regulations and applicable statutes.
17. “Licensing agency” means the Rhode Island Department of Health.
18. “Like-kind replacement” is synonymous with “in-kind replacement.”
19. “Model Aquatic Health Code” or “MAHC” means the 2016 Model Aquatic Health Code, Second Edition (July 2016), U.S. Department of Health and Human Services, Centers for Disease Control and Prevention.
20. “Non-substantial alteration” means the alteration, modification, or renovation of an Aquatic Venue where the total cost of the work is 10% or less than the replacement cost of the Aquatic Venue and does not result in a change in water treatment or hydraulics.
21. “Operator” means Licensee or the Licensee’s designee responsible for the operation and maintenance of the water and air quality systems and the associated infrastructure of the Aquatic Facility or Aquatic Venue.
22. “Oocyst” means the thick-walled, environmentally resistant structure released in the feces of infected animals that serves to transfer the infectious stages of sporozoan parasites (e.g., *Cryptosporidium*) to new hosts.

23. "Person" includes any partnership, association, corporation, city or town.
24. "Potable water source" means a Public Water System licensed by the Rhode Island Department of Health.
25. "ppm" means parts per million.
26. "Public water system" means water systems including licensed community water systems, non-transient/non-community water systems, or transient non-community water systems, as licensed by the Rhode Island Department of Health.
27. "Recirculation system" means the combination of the main drains, gutter or skimmer system, inlets, piping, pumps, controls, surge tank, balance tank and components that provide water recirculation to and from the Aquatic Venue and the treatment system.
28. "Rinse shower" means a shower typically located in the pool deck area with ambient temperature water.
29. "Secondary disinfection systems" means those disinfection processes or systems that are required for Increased Risk Aquatic Venues and are used in addition to disinfection systems that impart either a chlorine or bromine disinfectant residual.
30. "Substantial alteration" means the alteration, modification, or renovation of an Aquatic Venue where the total cost of the work exceeds 10% of the replacement cost of the Aquatic Venue or results in a change in water treatment or hydraulics.
31. "Supplemental treatment systems" means those disinfection processes or systems that are not required for an Aquatic Venue for health and safety reasons. If approved by the Licensing Agency, they may be used to enhance overall system performance and improve water quality.
32. "Swimming pool" as broadly defined in R.I. Gen. Laws § 23-22-1, includes the following sub-classifications:
 - a. "Traditional swimming pool" means a watertight structure of concrete, masonry, or other approved materials located either indoors or outdoors, used for bathing or swimming and filled with a filtered and disinfected water supply, together with buildings, appurtenances and equipment used in connection therewith, excluding "water slides" and/or "recreational water parks."
 - b. "Non-traditional pool" means a watertight structure of concrete, masonry, or other approved materials located either indoors or outdoors, filled with a filtered and disinfected water supply and

allowing for total or partial bather immersion, together with buildings, appurtenances and equipment used in connection therewith. Non-traditional pools include lazy rivers, landing pools, wave pools, surf pools, and other special purpose pools holding a filtered and disinfected water supply for total or partial bather immersion.

- c. "Hot tub" is synonymous with "Spa."
- d. "Spa" means any watertight structure having a maximum depth of forty-eight (48) inches (1.2 meters), filled with a filtered and disinfected water supply, either mineral or nonmineral in nature, utilizing hot, cold or ambient temperature water that is not emptied after each individual use, used in conjunction with high velocity water recirculation systems, together with buildings, appurtenances and equipment used in connection therewith.
- e. "Therapeutic pool" is synonymous with "Spa."
- f. "Wading pool" means a watertight structure of concrete, masonry, or other approved materials located either indoors or outdoors, used for bathing or swimming, filled with a filtered and disinfected water supply, which includes a range in water depth from two (2) feet down to zero for wading, together with buildings, appurtenances and equipment used in connection therewith.

4.3 Licensure, Lifeguards and Inspections

4.3.1 REQUIREMENT TO OBTAIN LICENSURE

No person acting severally or jointly with any other shall operate or maintain an Aquatic Venue without a license unless exempt under R.I. Gen. Laws Chapter 23-22.

4.3.2 PERIOD OF LICENSURE

Periods of licensure for Aquatic Venues shall be determined in accordance with R.I. Gen. Laws § 23-22-6(a).

4.3.3 POSTING REQUIREMENTS

- A. A license issued in accordance with this Part shall be posted in a conspicuous place on the premises where it is visible by individuals who use the Aquatic Venue.
- B. If an active license becomes defaced or is physically destroyed while still in effect, the Licensee shall apply for a duplicate license in accordance with the requirements of R.I. Gen. Laws § 23-22-10 and for the fee assessed in the rules

and regulations pertaining to the Fee Structure for Licensing, Laboratory and Administrative Services Provided by the Department of Health (Part 10-05-2 of this Title). The Licensee shall display the duplicate license in accordance with § 4.3.3(A) of this Part.

- C. Suspended and revoked licenses must be removed from display in accordance with R.I. Gen. Laws § 23-22-10.

4.3.4 APPLICATION FOR NEW LICENSE

- A. An application for a license to operate or maintain a newly constructed Aquatic Venue, or an application for a new license to operate or maintain an existing Aquatic Venue following a change of ownership, shall be submitted to the Licensing Agency on forms obtained from the Licensing Agency. The application form shall contain such information as the Licensing Agency reasonably requires and shall be accompanied by the licensure fee set forth in the rules and regulations pertaining to the Fee Structure for Licensing, Laboratory and Administrative Services Provided by the Department of Health (Part 10-05-2 of this Title).
- B. The Licensing Agency's granting of such license shall be in accordance with R.I. Gen. Laws § 23-22-7.

4.3.5 LICENSE RENEWAL

A license may be renewed from year to year with approval by the Licensing Agency upon receipt of the license renewal fee set forth in the rules and regulations pertaining to the Fee Structure for Licensing, Laboratory and Administrative Services Provided by the Department of Health (Part 10-05-2 of this Title).

4.3.6 LICENSES FOR EXISTING UNLICENSED AQUATIC VENUES

- A. A license for an existing unlicensed Aquatic Venue subject to licensure under R.I. Gen. Laws Chapter 23-22 shall be granted if the Applicant demonstrates to the Licensing Agency's satisfaction that the Aquatic Venue meets the requirements set forth in R.I. Gen. Laws Chapter 23-22 and this Part, or if the Applicant demonstrates to the Licensing Agency's satisfaction that a variance to a regulatory requirement does not create a violation of federal or state law and does not create a condition that presents an imminent health hazard.
- B. Applicants for licensure shall follow the procedure set forth in § 4.3.4 of this Part.

4.3.7 DENIAL OF LICENSE

License applications are subject to denial in accordance with R.I. Gen. Laws § 23-22-7.

4.3.8 SUSPENSION AND REVOCATION OF LICENSE

Licenses are subject to suspension and revocation in accordance with R.I. Gen. Laws § 23-22-8.

4.3.9 PROCEDURE FOR DENIAL, SUSPENSION OR REVOCATION OF LICENSE

- A. Whenever an action shall be proposed to deny, suspend or revoke the license of an Applicant and/or Licensee, the Licensing Agency shall notify the Applicant or Licensee, by certified mail or by hand delivery, setting forth the reasons for the proposed action. The Applicant or Licensee shall be provided opportunity for hearing in accordance with R.I. Gen. Laws Chapter 42-35 and § 4.7.4 of this Part.
- B. If the Licensing Agency determines that conditions at an Aquatic Venue present an imminent health hazard that requires emergency action and incorporates a finding to that effect in its order, the Licensing Agency may order summary suspension of a license pending proceedings for revocation or other action.
- C. Any of the following violations are imminent health hazards which shall require immediate correction or immediate pool closure:
 - 1. Failure to provide adequate supervision and staffing of the Aquatic Facility as prescribed in this Part;
 - 2. Failure to provide the minimum disinfectant residual levels or exceeding the maximum disinfectant residual levels listed in this Part;
 - 3. Failure to maintain pH level within the appropriate range stated in this Part;
 - 4. Failure to continuously operate the Aquatic Venue filtration and disinfection equipment;
 - 5. Use of an unapproved or contaminated water supply source;
 - 6. Unprotected overhead electrical wires within twenty (20) feet horizontally of the Aquatic Venue;
 - 7. Non GFCI protected electrical receptacles within twenty (20) feet of the inside wall of the Aquatic Venue;
 - 8. Failure to maintain an emergency lighting source;
 - 9. Absence of all required lifesaving equipment on deck;
 - 10. Aquatic Venue bottom not visible;
 - 11. Total absence of or improper depth markings at an Aquatic Venue;

12. Plumbing cross-connections between the drinking water supply and Aquatic Venue water or between sewage system and the Aquatic Venue including filter backwash facilities;
13. Failure to provide and maintain an enclosure or barrier as described in this Part to inhibit unauthorized access to the Aquatic Facility or Aquatic Venue when required;
14. Use of unapproved chemicals or the application of chemicals by unapproved methods to the Aquatic Venue water;
15. Broken, unsecured, or missing main drain grate or any submerged suction outlet grate in the Aquatic Venue;
16. Number of bathers/patrons exceeds the theoretical peak occupancy;
17. Broken glass, sharp objects, vomit, fecal matter, or any other item determined to be a public health hazard by the AHJ in the Aquatic Venue or on the deck area; and
18. Failure to maintain the water quality standards for cyanuric acid.

4.3.10 VIRGINIA GRAEME BAKER POOL AND SPA SAFETY ACT

- A. Licenses shall not be issued for new Aquatic Venues that fail to demonstrate compliance with the requirements of the Virginia Graeme Baker Pool and Spa Safety Act, 15 U.S.C. §§ 8001-8003.
- B. Licenses shall be suspended per § 4.3.9(B) of this Part for licensed Aquatic Venues that fail to demonstrate compliance with the requirements of 15 U.S.C. §§ 8001-8003 until such time that the Licensee demonstrates to the Licensing Agency's satisfaction that compliance has been achieved.

4.3.11 UNAPPROVED SUBSTANTIAL ALTERATIONS TO EXISTING LICENSED AQUATIC VENUES

Licenses for any Aquatic Venue with substantial alterations that have not received prior approval from the Licensing Agency may be suspended per § 4.3.9 of this Part until such time the Licensee demonstrates to the Licensing Agency's satisfaction that such alterations comply with §§ 4.4, 4.5 and 4.6 of this Part.

4.3.12 LIFEGUARDS

- A. Requirements for lifeguard oversight of Aquatic Venues are pursuant to R.I. Gen. Laws § 23-22-6(b).

- B. Aquatic Venues that operate without lifeguards shall comply with the requirements of §§ 4.5.14(H), 4.5.14(I)(3), 4.5.14(J), 4.6.6(D) and 4.6.8(C) of this Part.

4.3.13 INSPECTIONS AND WATER QUALITY TESTING

- A. The Licensing Agency shall be granted access in accordance with R.I. Gen. Laws 23-22-11.
- B. Upon request of the Licensing Agency, Licensees shall complete an Aquatic Venue self-assessment inspection checklist provided by the Licensing Agency. Licensees shall return the checklist to the Licensing Agency within 30 days of the date of the request. Failure to return the checklist shall result in a violation as set forth in § 4.7 of this Part.

4.3.14 INCIDENT REPORTING

Licensees are required to report to the Licensing Agency, within 24 hours or on the next business day, any drowning, near drowning, or any entrapment or potentially life-threatening injury that occurs at the Aquatic Facility. Failure to report an incident will be deemed a violation resulting in action under § 4.7 of this Part.

4.4 Design Standards and Construction Requirements for New Aquatic Facilities and Aquatic Venues; for Substantial Alterations to Existing Aquatic Facilities and Aquatic Venues; for Non-Substantial Alterations to Existing Aquatic Facilities and Aquatic Venues; and for In-Kind Replacements

All Aquatic Venues that require licensure under R.I. Gen. Laws Chapter 23-22 shall comply with the requirements set forth in §§ 4.1.3(A), 4.1.3(B) and 4.1.3(C) of this Part.

4.5 Supplemental Regulations for Facility Design and Construction Requirements for All Aquatic Facilities and Aquatic Venues

4.5.1 GENERAL

- A. Model Aquatic Health Code references to “design professional who is registered or licensed to practice their respective design profession” shall mean a Professional Engineer with an active Rhode Island registration. (Restriction on MAHC § 4.0)
- B. Recirculation of unfiltered and/or untreated water is prohibited. (Restriction on MAHC § 4.7.1.10.2.1)

- C. Aquatic Venues with infinity edges shall satisfy the enclosure requirements of § 4.5.14 of this Part and shall provide for a permanent, fixed safety barrier not less than five (5) feet in height at the infinity edge to protect against falls from the infinity edge. (Restriction on MAHC § 4.5.15)
- D. Food and/or beverage concessions shall be permitted in designated area(s) within the Aquatic Facility provided that the concession structures, service area, seating, patron circulation and related activities are separated from the Aquatic Venue by a permanent, fixed barrier that does not encroach on the Aquatic Venue's perimeter walkway. (Restriction on MAHC § 4.6.9.1)
- E. The Applicant shall coordinate review with all other agencies from which the Applicant is required to obtain approval. The Applicant shall provide copies to the Licensing Agency of permits issued by other agencies if the Licensing Agency so requests. (Restriction on § MAHC 4.1.3.1.2)
- F. The Applicant shall communicate Licensing Agency approvals to other agencies involved in the construction of an Aquatic Facility or Aquatic Venue. (Restriction on MAHC § 4.1.3.1.3)
- G. In cases where the Aquatic Facility or Aquatic Venue is exempt from Americans with Disabilities Act standards, the owner shall provide written documentation to the Licensing Agency attesting to such exemption at the time of application for construction or substantial alteration to an Aquatic Facility or Aquatic Venue. (Restriction on MAHC § 4.5.10).
- H. The Licensing Agency shall conduct a conformance inspection of newly constructed Aquatic Facilities and Aquatic Venues, and substantially altered Aquatic Facilities and Aquatic Venues, upon completion of construction or renovation. The Licensing Agency shall not issue a license to operate until the Applicant has corrected, to the satisfaction of the Licensing Agency, all deficiencies identified during the inspection. (Restriction on MAHC § 4.1.5.3)

4.5.2 SKIMMER SYSTEMS

- A. Skimmer systems shall include a minimum of two skimmers.
- B. The piping and other pertinent components of a skimmer system shall be sized based on 100 percent of recirculation flow being directed through the skimmer system at the maximum possible recirculation flow rate as determined by pump capacity and minimum total dynamic head of the recirculation system. (Restriction on MAHC § 4.7.1.5.1.4)
- C. Each skimming device shall be equipped with an equalizer pipe located at least one (1) foot below the lowest skimmer overflow level, or some other device to prevent air lock in the skimmer suction line. (Restriction on MAHC § 4.7.1.5)

4.5.3 OVERFLOW GUTTERS

- A. Overflow gutters extending completely around a pool shall be provided on all pools having a water surface area of 4,000 square feet or more. (Restriction on MAHC § 4.7.1.5.1.5)
- B. The gutter system shall be designed to allow continuous removal of water from the pool's upper surface based on 125 percent of recirculation flow being directed through the gutter system at the maximum possible recirculation flow rate as determined by pump capacity and minimum total dynamic head of the recirculation system. (Restriction on MAHC § 4.7.1.4.2.1)
- C. A gutter system shall provide an acceptable handhold for bathers and present no accident hazard to bathers. (Restriction on MAHC § 4.5.14.1)

4.5.4 ACCESS AND EGRESS

There shall be at least one means of access and egress located at the shallow end of a swimming pool and at least one means of access and egress located at the deep end of a swimming pool. (Restriction on MAHC § 4.5.3.1)

4.5.5 LANE MARKINGS

The Applicant shall state the basis of design for lane markings and end wall targets, such as FINA, NCAA, USA Swimming, NFSHSA, or another recognized standard. (Restriction on MAHC § 4.2.1.4)

4.5.6 DIVING AREA

Platforms and diving stands that are over three (3) feet high shall be equipped with guard rails. (Restriction on MAHC § 4.8.2.2.3)

4.5.7 THEORETICAL PEAK OCCUPANCY

Three hundred (300) square feet of pool water surface area shall be reserved around each diving board or platform. This area shall not be included in determining the bather load capacity. (Restriction on MAHC § 4.1.2.3.5.3)

4.5.8 ELECTRICAL REQUIREMENTS

All electrical wiring for Aquatic Venues shall comply with R.I. Gen. Laws Chapter 23-27.3.

4.5.9 HEATER REQUIREMENTS

- A. Water heaters shall have a seal of approval from a standards testing agency such as the American National Standards Institute (ANSI-Z-21.56) or the Underwriters Laboratory (UL 1261). (Restriction on MAHC § 4.6.4)

- B. Electrically operated water heaters shall comply with § 4.5.8 of this Part. (Restriction on MAHC § 4.6.4)
- C. Water heaters shall be equipped with a thermostatic control for the water temperature and shall be set at a temperature not to exceed 104°F. (Restriction on MAHC § 4.6.4)
- D. A fixed thermometer shall be installed on the discharge side of the heater. (Restriction on MAHC § 4.6.4)

4.5.10 PRE-COAT FILTERS

- A. Pressure pre-coat filters shall be equipped with a pre-coat pot for the purpose of introducing filter aid to form a pre-coat evenly over the filter elements when a filter is put into initial operation and after each cleaning. (Restriction on MAHC § 4.7.2.3)
- B. The filter plant shall be provided with such pressure, vacuum, or compound gauges as are required to indicate the condition of the filter. An air relief valve shall be provided at the high point of a pressure pre-coat filter. (Restriction on MAHC § 4.7.2.3)
- C. Vacuum pre-coat filter installations shall be equipped with an adjustable high vacuum automatic shutoff to prevent damage to the pump by cavitation. (Restriction on MAHC § 4.7.2.3)

4.5.11 VACUUM CLEANING

An existing aquatic venue that has an integral vacuum system as described by MAHC § 4.8.7.3 of the Model Aquatic Health Code shall be required to make, upon determination by the Department in its sole discretion that such configuration is present, all alterations necessary to comply with MAHC § 4.8.7. (Restriction on MAHC § 4.8.7.3)

4.5.12 HYGIENE FACILITIES AND HYGIENE FEATURES

- A. The minimum number of lavatories and water closets provided for each sex shall be equal to no less than one (1) per sixty (60) bathers based on maximum bather load. (Restriction on MAHC § 4.10.1.4)
- B. The minimum number of cleansing showers provided for each sex shall be equal to no less than one (1) per forty (40) bathers based on maximum bather load. (Restriction on MAHC § 4.10.1.4)
- C. Urinals for male bathers may be substituted for up to one-third the number of water closets required where more than one water closet is required. (Restriction on MAHC § 4.10.1.4)

- D. The Licensing Agency may increase the number of required fixtures for Aquatic Facilities at schools or other locations where scheduling of facility use warrants special consideration. (Restriction on MAHC § 4.10.1.4)

4.5.13 DEPTH MARKERS AND DIVING RESTRICTIONS

A minimum of one (1) water depth marker and one (1) no-diving marker is required for all wading pools. (Restriction on MAHC § 4.5.19.8)

4.5.14 ENCLOSURES AND BARRIERS

- A. The maximum vertical clearance between grade and the bottom of an outdoor Aquatic Venue enclosure shall be no greater than two (2) inches, measured on the exterior side of the enclosure. (Restriction on § MAHC 4.8.6.2)
- B. Openings in the enclosure structure shall not allow passage of a four (4) inch diameter sphere. (Restriction on MAHC § 4.8.6.2)
- C. Solid enclosures that do not have openings, such as a masonry or stone walls, shall not contain indentations or protrusions except for normal construction tolerances and tooled masonry joints. (Restriction on MAHC § 4.8.6.2)
- D. Where the enclosure is composed of horizontal and vertical members and the distance between the tops of the horizontal members is less than 45 inches, the horizontal members shall be located on the interior side of the enclosure. Spacing between vertical members shall not exceed one and three-fourths ($1 \frac{3}{4}$) inches in width. Where the enclosure is composed of horizontal and vertical members and the distance between the tops of the horizontal members is 45 inches or more, the distance between the vertical members shall not exceed 4 inches. Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed one and three-fourths ($1 \frac{3}{4}$) inches in width. (Restriction on MAHC § 4.8.6.2)
- E. Where the enclosure is composed of diagonal members, such as a lattice fence, the maximum opening formed by the diagonal members shall be no more than one and three-fourths ($1 \frac{3}{4}$) inches. (Restriction on MAHC § 4.8.6.2)
- F. Enclosures constructed with chain-link fencing shall have a maximum mesh opening of two and one-fourth ($2 \frac{1}{4}$) square inches unless the enclosure is provided with slats fastened at the top or the bottom which reduce the openings to no more than one and three-fourths ($1 \frac{3}{4}$) square inches. (Restriction on MAHC § 4.8.6.2.1.2)
- G. The fence or screen enclosure shall be equipped with self-closing and self-latching gates. Release mechanisms for self-latching devices must be located no less than fifty-four (54) inches from the bottom of the gate. (Restriction on MAHC § 4.8.6.3.7)

- H. Enclosures for outdoor Aquatic Venues operating without lifeguards shall comply with R.I. Gen. Laws §§ 23-22-6(b)(1) and 23-22-6(b)(4).
- I. Where a wall of a building serves as part of an outdoor Aquatic Venue enclosure, direct access to the pool through the wall shall be limited to doors and windows that meet the following conditions.
 - 1. Windows leading to the Aquatic Venue area shall have a latching device at least fifty-four (54) inches above the floor. (Restriction on MAHC § 4.8.6.2.3)
 - 2. Hinged Doors, sliding doors or sliding screen doors leading to the Aquatic Venue area shall be self-closing and shall have a self-latching device that meets the requirements of § 4.5.13(G) of this Part. (Restriction on MAHC § 4.8.6.3)
 - 3. Doors leading to outdoor Aquatic Venues that operate without lifeguards shall meet the requirements of R.I. Gen. Laws § 23-22-6(b)(1). (Restriction on MAHC § 4.8.6.3)
- J. Access to Indoor Aquatic Facilities operating without lifeguards shall comply with the requirements of R.I. Gen. Laws § 23-22-6(b).
- K. Where a wading pool is adjacent to the deep-water area of another Aquatic Venue, a minimum four (4) foot vertical barrier with a self-closing and self-latching gate shall be installed to separate the two Aquatic Venues. (Restriction on MAHC § 4.12.9.2)

4.5.15 WATER SUPPLY AND WASTEWATER DESIGN

- A. The discharge end of a pipe delivering potable water to an Aquatic Venue shall provide an air gap equivalent to at least two (2) pipe diameters above the maximum elevation of the water in the Aquatic Venue. Piping from a potable water system shall not be physically connected to the recirculation system of an Aquatic Venue. (Restriction on MAHC § 4.11)
- B. There shall be no direct physical connection between any part of an Aquatic Venue or its recirculation system and a sanitary sewer or subsurface sewage disposal system unless equipped with a backflow device approved by the Licensing Agency. (Restriction on MAHC § 4.11)

4.5.16 CONSUMABLES

All consumable materials, including but not limited to filter cartridges, filter media and water treatment chemicals, shall be listed and labeled to the standards of NSF/ANSI 50 by an ANSI-accredited certification organization.

4.6 Requirements for the Operation of Aquatic Facilities and Aquatic Venues

4.6.1 GENERAL SANITATION REQUIREMENTS

- A. Aquatic Facilities shall be maintained in good repair and working order, and in a clean and sanitary condition.
- B. Aquatic Facilities shall be kept clear of debris and organic materials. Aquatic Venue water and surfaces shall be kept clear of slime and biofilm.
- C. The floors of dressing, toilet, shower rooms and passageways shall be well drained and shall be treated daily with an EPA-approved fungicide.
- D. Hot tubs, spas and therapeutic pools shall be drained, cleaned, scrubbed, and water replaced using a water replacement interval (in days) calculated by dividing the spa volume (in gallons) by three and then dividing by the average number of users per day. The interval between cleanings shall not exceed thirty (30) days.
 - 1. The AHJ shall have discretion in determining the viability of cleaning intervals calculated pursuant to § 4.6.1(D) of this Part.
- E. Aquatic Venues constructed or substantially altered shall operate at the approved design flow rate twenty-four (24) hours per day, except as provided for in § 4.6.1(E)(2) of this Part.
 - 1. All components of the filtration and recirculation systems shall be kept in continuous operation twenty-four (24) hours per day.
 - 2. The system flowrate shall not be reduced more than twenty-five percent (25%) lower than the minimum design requirements and only reduced when the Aquatic Venue is unoccupied.

4.6.2 DAILY WATER QUALITY MONITORING

- A. Operators shall, on each operating day prior to opening an Aquatic Venue to bathers, visually observe water clarity and collect and analyze water samples to verify that water quality is not detrimental to the health and safety of bathers. If any water quality parameter is not within the range listed in the appropriate table in §§ 4.6.2(B)(8), (9), (10) (11) or (12) of this Part, or water clarity does not meet the standards of § 4.6.2(C) of this Part, the Aquatic Venue shall close and remain closed until such time that the Licensing Agency determines the water quality meets all standards.
- B. Chemical Standards of the Aquatic Venue water:
 - 1. An Aquatic Venue shall be continuously disinfected by a chlorinated or brominated agent which imparts a measurable residual.

2. Only chlorine or bromine products that are EPA-registered for use as sanitizers or disinfectants in Aquatic Venues in the United States are permitted.
3. Bromine-based disinfectants may be applied to Aquatic Venues through the addition of an organic bromine compound (1,3-Dibromo-5,5-dimethylhydantoin (DBDMH) or 1-bromo-3-chloro-5,5-dimethylhydantoin (BCDMH)).
4. Use of cyanuric acid or stabilized chlorine is prohibited for use in all indoor Aquatic Venues and in outdoor hot tubs, spas and therapeutic pools.
5. Testing equipment shall be capable of measuring the maximum and minimum chemical standards based on Aquatic Venue type and disinfectant. FAS-DPD titration test kits are considered acceptable in determining maximum and minimum disinfectant residuals. Reagents shall be replaced prior to their expiration date.
6. Chemicals other than those used for the proper maintenance of the Aquatic Venue water shall not be added to an Aquatic Venue without the written approval of the Licensing Agency. The Licensing Agency shall determine, in its sole discretion, if such chemicals will require more frequent water quality monitoring and/or monitoring for additional water quality parameters.
7. Acceptable water quality parameters for traditional swimming pools, non-traditional pools, and wading pools using a chlorine disinfectant are as follows:

Parameter	Minimum	Ideal	Maximum
Free chlorine residual (ppm) for indoor traditional swimming pools, indoor non-traditional pools, and indoor wading pools	1.0	2.0-4.0	10.0
Free chlorine residual (ppm) for outdoor traditional swimming pools, outdoor non-traditional pools, and outdoor wading pools not using cyanuric acid or stabilized chlorine	1.0	2.0-4.0	10.0
Free chlorine residual (ppm) for outdoor traditional swimming pools, outdoor non-traditional swimming pools, and outdoor wading pools using cyanuric acid or stabilized chlorine	2.0	2.0-8.0	10.0

Combined Chlorine (ppm)	0.0	0.0	0.2
pH	7.2	7.4- 7.6	7.8

8. Acceptable water quality parameters for all hot tubs, spas and therapeutic pools using a chlorine disinfectant are as follows:

	Minimum	Ideal	Maximum
Temperature (degrees Fahrenheit)		Personal preference	104
Free chlorine residual (ppm) for all hot tubs, spas and therapeutic pools	2.0	3.0-5.0	10.0
Combined chlorine (ppm)	0.0	0.0	0.2
pH	7.2	7.4 – 7.6	7.8

9. Water quality parameters for traditional swimming pools, non-traditional pools, and wading pools using a bromine disinfectant are as follows:

	Minimum	Ideal	Maximum
Total Bromine Residual (ppm)	3.0	4.0-6.0	8.0
pH	7.2	7.4-7.6	7.8

10. Water quality parameters for all hot tubs and spas using bromine disinfectant are as follows:

	Minimum	Ideal	Maximum
Temperature (degrees Fahrenheit)		Personal preference	104
Total bromine residual (ppm)	4.0	4.0-6.0	8.0
pH	7.2	7.4 – 7.6	7.8

11. Cyanuric acid levels shall not exceed twenty-five (25) ppm.
12. Secondary and supplemental disinfectants shall at no time exceed the following concentrations, and delivery systems shall satisfy the following requirements:

	Maximum	Requirements
Residual ozone	0.1 ppm	<p>Ozone systems shall be operated and maintained according to the manufacturer's instructions to maintain the required design performance to achieve 3-log (99.9%) reduction in the number of infective cryptosporidium parvum oocysts per pass through the system.</p> <p>All employees shall be properly trained in the operation and maintenance of the equipment.</p>
Copper/Silver ions	1.3 ppm (copper) 0.10 ppm (silver)	<p>Only those systems that are EPA-registered for use as sanitizers or disinfectants in aquatic venues in the United States are permitted.</p>
Ultraviolet light	Not applicable	<p>UV systems shall only operate while the recirculation system is operating.</p> <p>UV sensors shall be calibrated at a frequency in accordance with manufacturer recommendations.</p> <p>Secondary UV systems shall be operated and maintained not to exceed the maximum validated flow rate and meet or exceed the minimum validated output intensity needed to achieve the required dose for a 3-log (99.9%) reduction in the number of infective cryptosporidium parvum oocysts per pass through the secondary disinfection system.</p>

- C. At all times an Aquatic Venue is open to bathers the water shall be sufficiently clear such that a marker tile or floor suction outlets are visible while the water is static. In the absence of a marker tile or floor suction outlet, the Operator shall obtain approval from the Licensing Agency for an alternate method of determining water clarity.

- D. Operators shall record the results of all daily water quality analyses, water clarity observations, routine maintenance, corrective actions and closures on forms provided by the Licensing Agency. These records shall be available to the Licensing Agency at the time of an inspection authorized under § 4.3.13 of this Part, and shall be submitted to the Licensing Agency electronically within 24 hours of any written or telephone request from the Licensing Agency.
1. Operators shall maintain copies of all records required under § 4.6.2(D) of this Part for no less than one (1) year.

4.6.3 BACTERIOLOGICAL ANALYSIS OF WATER

- A. Operators shall collect one (1) water sample every 90 days from each year-round Aquatic Venue for heterotrophic plate count analysis by a laboratory certified for Method 9215B. Free chlorine residual, combined chlorine, and pH must be measured and recorded concurrent with sample collection.
- B. Operators shall collect one (1) water sample from each seasonal Aquatic Venue in June and one water sample from each seasonal Aquatic Venue in August for heterotrophic plate count analysis by a laboratory certified for Method 9215B. Free chlorine residual, combined chlorine, and pH must be measured and recorded concurrent with sample collection.
- C. No water sample shall have a heterotrophic plate count density greater than 200 colony forming units per milliliter (200 CFU/ml) as determined by the standard thirty-five degree Celsius (35°C) agar plate count.
- D. The Licensing Agency may require, when water quality or laboratory analytical results so warrant, Licensees with hot tubs, spas and therapeutic pools to collect water samples for analysis for the *Pseudomonas* group by a laboratory certified for Method 9213E or IDEXX Pseudalert.
- E. No water sample shall contain *Pseudomonas aeruginosa* at a density greater than less than one (<1) organisms per 100 ml.
- F. Samples collected for microbiological examination testing shall be collected in accordance with procedures set forth in § 4.1.3(B) of this Part.
- G. The Operator shall close the effected Aquatic Venue immediately upon notification that the heterotrophic plate count for a water sample exceeds 200 CFU or when *Pseudomonas aeruginosa* are present in a water sample at a density greater than five (5) organisms per 100 ml. Operators shall notify the Licensing Agency of the analytical results and the closure, by telephone, within 24 hours or on the next business day. The Aquatic Venue shall remain closed until such time the Operator has restored water quality and has provided evidence of such to the Licensing Agency.

- H. Year-round Aquatic Venues shall submit laboratory analytical results that do not require reporting under § 4.6.3(G) of this Part to the Licensing Agency electronically by the 10th day of the month following the month in which the sample was collected (e.g. results for a sample collected in February must be received by the Licensing Agency by March 10).
- I. Seasonal Aquatic Venues shall submit laboratory analytical results that do not require reporting under § 4.6.3(G) of this Part to the Licensing Agency electronically by the 10th day of the month following the month in which the samples were collected (e.g. results for a sample collected in June must be received by the Licensing Agency by August 10).
- J. The Licensing Agency shall require that an Aquatic Venue conduct bacteriological sampling at an increased frequency in accordance with § 4.7.3 of this Part if the Aquatic Venue fails to maintain water quality in accordance with §§ 4.6.2(B), 4.6.2(C) or 4.6.3 of this Part.
- K. Water quality sample results -- including HPC, free chlorine, combined chlorine, and pH -- shall be submitted electronically by the analyzing laboratory to the Licensing Agency in a manner compatible with the Licensing Agency's computer system. The results shall be submitted on or before deadlines set forth in §4.6.3(H) or §4.6.3(I) of this Part.

4.6.4 GENERAL SAFETY REQUIREMENTS

All entrances to an Aquatic Venue shall be secured with a locking device at all times during which the Aquatic Venue is closed to bathers.

4.6.5 CHEMICAL STORAGE

- A. Chemical storage shall comply with local building and fire codes.
- B. Chemical handling shall be conducted in a safe and appropriate manner.
- C. Storage, handling and use of all chemicals shall comply with the applicable manufacturers' safety data sheets and labels.
- D. Chemical manufacturer's safety data sheets shall be consulted for storage incompatibilities with other chemicals. Aquatic Venue chemicals shall be stored so that no mixing of incompatible materials would occur if the packages were to leak.
- E. Aquatic Venue chemicals shall be stored to prevent access by unauthorized individuals.
- F. Aquatic Venue chemicals shall be stored so that they are protected from getting wet.

- G. Possible ignition sources, including but not limited to gasoline, diesel, natural gas, or gas-powered equipment such as lawn mowers, motors, grills, pool heaters, or portable stoves shall not be stored or installed in the chemical storage space.
- H. Smoking shall be prohibited in the chemical storage space.
- I. Lighting in the chemical storage space shall be sufficient to allow operators to read labels on containers throughout the chemical storage space.
- J. Chemicals shall be stored away from direct sunlight, temperature extremes, and high humidity.
- K. A single container of a chemical that has been opened and is currently in use in the equipment room may be kept in a staging area of the equipment room if the chemical(s) is protected from exposure to heat and moisture.
- L. The chemical storage space shall be separate from the equipment room.
- M. Warning signs shall be posted on chemical storage space doors.
- N. Personal protective equipment shall be available as required on the chemical safety data sheets.
- O. Containers of chemicals shall be labeled, tagged, or marked with the identity of the material and a statement of the hazardous effects of the chemical.
- P. All Aquatic Venue chemical containers (e.g. day tanks) shall be labeled as to their contents.

4.6.6 AQUATIC FACILITY POLICIES AND SIGNAGE

- A. All licensees shall establish written policies governing no less than the following:
 1. prohibiting any person with an infectious and/or communicable disease, open lesion, blister, rash, or cut from using the Aquatic Venue;
 2. prohibiting any person who currently has, or has had diarrhea within the prior two weeks, from using the Aquatic Venue;
 3. prohibiting spitting, spouting water, and blowing of the nose in the Aquatic Venue;
 4. prohibiting hyperventilation or extended breath holding activities;
 5. prohibiting running, boisterous, or rough play in the Aquatic Venue and in surrounding areas;

6. prohibiting animals in the Aquatic Facility, except for service animals as defined by the ADA.
 7. establishing safety provisions pertaining to the use of slides and diving boards;
 8. requiring bathers to take cleansing showers prior to entering the Aquatic Venue;
 9. prohibiting food and drink within the Aquatic Facility except in designated areas;
 10. stating maximum bather occupancy for each Aquatic Venue;
 11. stating the hours of operation and a prohibition of unauthorized use outside of hours of operation; and
 12. other provisions the Licensee may deem necessary for the protection and safety of bathers.
- B. Licensees with therapeutic pools, hot tubs and spas shall establish additional written policies:
1. Advising the following to contact their physician regarding the appropriateness of their use of hot tubs and spas:
 - a. pregnant women;
 - b. individuals suffering from heart disease, diabetes and high or low blood pressure; and
 - c. persons using alcohol, anticoagulants, antihistamines, vasoconstrictors, vasodilators, stimulants, narcotics or tranquilizers.
 2. permitting the use of the therapeutic pool, hot tub, or spa only for a reasonable length of time, not to exceed fifteen (15) minutes; and
 3. suggesting that bathers shower and cool down prior to returning for another brief stay to prevent nausea, dizziness and fainting.
- C. The policies required in §§ 4.6.6(A) and (B) of this Part shall be posted on signs in lettering sufficiently large and at a sufficient number of locations to be visible by bathers throughout the Aquatic Facility.
- D. Licensees with Aquatic Venues operating without lifeguards must post the signage required for compliance with R.I. Gen. Laws § 23-22-6(b)(3).

4.6.7 COMMUNICATIONS EQUIPMENT

- A. Aquatic Facilities shall have a functional telephone or other communications system or device that is hard wired and capable of directly dialing 911 or functions as the emergency notification system.
- B. The telephone or communications system or device required under § 4.6.7(A) shall be conspicuously provided and accessible to Aquatic Facility users such that it can be reached immediately.
- C. Signage shall clearly identify the emergency telephone or communications system or device.
- D. A permanent sign shall be posted by the emergency telephone or communications system or device providing the following:
 - 1. Aquatic Facility address;
 - 2. emergency dialing instructions for police, fire and emergency responders; and
 - 3. contact information for Aquatic Facility management.

4.6.8 FIRST AID

- A. Aquatic Facilities shall have a designated location for first-aid equipment.
- B. First aid supplies shall be continuously stocked and shall include at a minimum:
 - 1. a first-aid guide;
 - 2. absorbent compress;
 - 3. adhesive bandages;
 - 4. adhesive tape;
 - 5. sterile pads;
 - 6. disposable gloves;
 - 7. scissors;
 - 8. elastic wrap;
 - 9. emergency blanket;
 - 10. resuscitation mask with one-way valve; and,
 - 11. blood-borne pathogen spill kit.

- C. Aquatic Facilities operating without lifeguards shall comply with R.I. Gen. Laws § 23-22-6(b)(2).

4.6.9 RESCUE DEVICES

- A. Aquatic Venues with depths greater than two (2) feet of standing water shall provide and maintain a U.S. Coast Guard-approved aquatic rescue throwing device with at least a 1/4-inch thick rope that is 50 feet or 1.5 times the width of the pool in length, whichever is less.
- B. Aquatic Venues with depths greater than two (2) feet of standing water shall provide and maintain a non-telescopic reaching pole of non-conductive material, 12 feet to 16 feet in length, with a securely attached Shepherd's Crook that has an aperture of at least eighteen (18) inches.
- C. Rescue devices shall be located in the immediate vicinity of the Aquatic Venue and shall be accessible to bathers.
- D. Aquatic Facilities operating with lifeguards shall provide at least one spinal injury board constructed of easily sanitized/disinfected material shall be provided. The board shall be equipped with a head immobilizer and sufficient straps to immobilize a person to the spinal injury board.

4.7 Compliance and Enforcement

4.7.1 VARIANCES

- A. The Licensing Agency may grant a variance to a requirement set forth in this Part, either upon its own motion or upon request of the applicant from the provisions of this Part in a specific case, if it finds that a literal enforcement of such provision will result in unnecessary hardship to the applicant, provided that such variance will not be contrary to the public interest and/or the health and safety of the public.
- B. An applicant requesting a variance shall file such request in writing setting forth in detail the basis upon which the request is made and providing sufficient evidence to demonstrate to the Licensing Agency's satisfaction that a variance to a regulatory provision of this Part does not create a violation of federal or state law and does not create a condition that presents an imminent health hazard.
- C. Upon the filing of each request for variance with the Licensing Agency and within sixty (60) days thereafter, the Licensing Agency shall notify the applicant by certified mail of its approval. In the case of a denial, a hearing date, time and place may be scheduled if the applicant chooses to appeal the denial.

4.7.2 VIOLATIONS

Persons who violate the provisions of this Part shall be fined in accordance with R.I. Gen. Laws § 23-22-12.

4.7.3 RETURN TO COMPLIANCE

- A. Upon the Licensing Agency's determination in its sole discretion that an Aquatic Venue was operating in a manner detrimental to the health or safety of users, the Licensee shall post public notice where visible to users of the Aquatic Venue within 24 hours of receiving Notice of Violation from the Licensing Agency, using the Public Notice document provided by the Licensing Agency. Within ten (10) days of completing the public notification requirements, the Licensee shall submit to the Licensing Agency a certification of compliance documenting the completion of public notification requirements. The Licensee must include with this certification a copy of the notice posted by the facility. Failure to comply with these provisions shall result in an additional violation as per § 4.7 of this Part.
- B. The Licensee, at Licensee's expense, shall collect water samples for laboratory analysis at an increased frequency determined by the Licensing Agency until such time that the Licensing Agency is satisfied that the detrimental condition has been corrected, after which time the Licensee shall revert to the routine sampling schedule required under § 4.6.3 of this Part.
- C. The Licensing Agency may direct the Licensee to make an inspection at the Licensee's expense to determine the cause of the detrimental condition and to develop a Corrective Action Plan.
- D. A Corrective Action Plan shall be signed by a pool care professional with certification demonstrating competency in this field, including but not limited to certification obtained through the National Swimming Pool Foundation, the Association of Pool and Spa Professionals, or another agency that the Licensing Agency in its sole discretion considers to be equivalent. Corrective Action Plans that include engineering modifications to the Aquatic Venue shall also be signed by a Rhode Island-registered Professional Engineer.
- E. The Corrective Action Plan shall be submitted to the Licensing Agency no later than thirty (30) days of the Licensing Agency's notification to the Licensee that action is required under § 4.7.3(C) of this Part.
- F. Upon the Licensing Agency's determination that the Corrective Action Plan is acceptable, the Licensee shall implement and complete the Corrective Action Plan within the timeframe established by the Licensing Agency.
- G. Aquatic Venues that receive water quality violations on three separate occasions within a 12-month period, on a rolling basis, shall be required to retain a Certified Pool Operator credentialed either by the National Swimming Pool Foundation or a similarly trained operator credentialed by an entity determined to be equivalent by the Licensing Agency in its sole discretion. The Certified Pool Operator shall

be retained by the licensee until such time that the licensee demonstrates proficiency as determined by the Licensing Agency in its sole discretion.

4.7.4 HEARINGS AND REVIEWS

All hearings and reviews required under the provisions of R.I. Gen. Laws Chapter 42-35 and this Part shall be held in accordance with the provisions of the rules and regulations for Practices and Procedures Before the Rhode Island Department of Health (Part 10-05-4 of this Title).