

**SOUTHERN NEVADA HEALTH DISTRICT  
AQUATIC FACILITY REGULATIONS**

Adopted \_\_\_\_\_ date \_\_\_\_\_



**Southern Nevada Health District  
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**PREAMBLE**

WHEREAS, the Southern Nevada Health District is a public health authority organized pursuant to Nevada Revised Statutes, Chapter 439 with jurisdiction over all public health matters within Clark County, Nevada; and

WHEREAS, the Southern Nevada District Board of Health (Board) is the Southern Nevada Health District's governing body, and is authorized to adopt regulations to protect and promote public health and safety in the interest of public health in the geographical area subject to its jurisdiction; and

WHEREAS, in accordance with the authority granted pursuant to Nevada Revised Statutes Chapter 439 and Chapter 444, the Board hereby adopts regulations to attain uniform, minimum standards for the operation and maintenance of public swimming pools, spas, natural bathing places, and other public aquatic venues and facilities in Clark County, Nevada, and to assure a clean, healthful, and safe environment for all bathers using these pools; and

WHEREAS, these Regulations in no way preclude a facility from establishing additional rules and operating procedures as long as they do not contradict those established herein.

WHEREAS, the Board does therefore publish, promulgate and order compliance within Clark County, Nevada with the substantive and procedural requirements hereinafter set forth.

# AQUATIC FACILITIES REGULATION

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## SECTION 1 Glossary

### Parts

1-1 Acronyms and Initialisms

1-2 Definitions

1-1 Acronyms and Initialisms

### Subpart

1-101 Acronyms and Initialisms

### 1-101 Acronyms and Initialisms

Acronym/ Initialism	Meaning
<b>AED</b>	Automated External Defibrillator
<b>ANSI</b>	American National Standards Institute
<b>ASTM</b>	American Society for Testing and Materials
<b>CDC</b>	Centers for Disease Control and Prevention
<b>CPSC</b>	Consumer Product Safety Commission
<b>CYA</b>	Cyanuric Acid
<b>DCoF</b>	Dynamic Coefficient of Friction
<b>DVGW</b>	Deutscher Verein des Gas- und Wasserfaches e.V. – Technisch wissenschaftlicher Verein (German Technical and Scientific Association for Gas and Water)
<b>GPM</b>	Gallons Per Minute
<b>MAHC</b>	Model Aquatic Health Code
<b>NCAA</b>	National Collegiate Athletic Association
<b>NEC</b>	National Electrical Code
<b>NRTL</b>	Nationally Recognized Testing Laboratory
<b>NSF</b>	National Sanitation Foundation
<b>OEM</b>	Original Equipment Manufacturer
<b>ÖNORM</b>	Österreichisches Normungsinstitut (Austrian Standards Institute)
<b>OSHA</b>	Occupational Safety and Health Administration
<b>PPE</b>	Personal Protective Equipment
<b>PPM</b>	Parts Per Million
<b>PVC</b>	Polyvinyl Chloride
<b>PVC-P</b>	Plasticized Polyvinyl Chloride
<b>RPZ</b>	Reduced Pressure Zone
<b>RWI</b>	Recreational Water Illness
<b>SDS</b>	Safety Data Sheet
<b>TDH</b>	Total Dynamic Head
<b>TDS</b>	Total Dissolved Solids
<b>UL</b>	Underwriter Laboratories
<b>VFD</b>	Variable Frequency Drive



## 1-2 Definitions

### Subpart

### 1-201 Glossary Terms

#### 1-201 Glossary Terms

“**ACTIVITY POOL**” see “**POOL**”

“**AGITATED WATER**” see “**THEORETICAL PEAK OCCUPANCY**”

“**AIR HANDLING SYSTEM**” means equipment that brings outdoor air into a building and removes air from a building for the purpose of introducing air with fewer contaminants and removing air with contaminants created while BATHERS are using AQUATIC VENUES. The system contains components that move and condition the air for temperature, humidity, and pressure control, and transport and distribute the air to prevent condensation, corrosion, and stratification, provide acceptable indoor air quality, and deliver outside air to the breathing zone.

“**APPROVED**” means acceptable to the HEALTH AUTHORITY based on compliance with the law, conformance with appropriate, accepted, or recognized industry standards and good public health practice.

“**AQUATIC FACILITY**” means a physical place that contains one or more AQUATIC VENUES and support infrastructure.

- “**INDOOR AQUATIC FACILITY**” means a physical place that contains one or more AQUATIC VENUES and the surrounding BATHER and SPECTATOR/STADIUM SEATING areas within a structure that meets the definition of “building” per the 2012 International Building Code. It does not include equipment, chemical storage, or BATHER hygiene rooms or any other rooms with a direct opening to the AQUATIC FACILITY.

“**AQUATIC FEATURE**” means an individual component within an AQUATIC VENUE. Examples include SLIDES, structures designed to be climbed or walked across, and structures that create falling or shooting water.

“**AQUATIC VENUE**” means an artificially constructed structure or modified natural structure where the general public is exposed to water intended for recreational or therapeutic purpose. Such structures do not necessarily contain standing water, so water exposure may occur via contact, ingestion, or aerosolization.

- “**INCREASED RISK AQUATIC VENUE**” means an AQUATIC VENUE which, due to its intrinsic characteristics and intended use has a greater likelihood of affecting the BATHERS of that venue by being at increased risk for microbial contamination (e.g., by children less than five (5) years old) or being used by people that may be more susceptible to infection (e.g., therapy patients with open wounds). Examples of INCREASED-RISK AQUATIC VENUES include spray pads, WADING POOLS, CHILD AMUSEMENT LAGOONS, and other AQUATIC VENUES designed for children less than five (5) years old as well as THERAPY POOLS.
- “**INTERACTIVE WATER PLAY AQUATIC VENUE**” means any indoor or outdoor installation that includes sprayed, jetted or other water sources contacting BATHERS and not incorporating standing or captured water as part of the BATHER activity area. These AQUATIC VENUES are also known as splash pads or spray pads. For the purposes of

these Regulations only those designed to recirculate water and intended for public use and recreation shall be regulated.

- **“LAZY RIVER”** means a channeled flow of water of near constant depth in which the water is moved by pumps or other means of propulsion to provide a river like flow that transports BATHERS over a defined path. A LAZY RIVER may include AQUATIC FEATURES and devices. A LAZY RIVER may also be referred to as a tubing POOL, leisure river, leisure POOL or a current channel.
- **“SPA”** means a structure intended for either warm or cold water where prolonged exposure is not intended. SPA structures are intended to be used for bathing or other recreational uses and are not drained and refilled after each use. It may include hydrotherapy jets and air induction bubbles.
- **“SPECIAL USE AQUATIC VENUE”** means AQUATIC VENUES that do not meet the intended use and design features of any other AQUATIC VENUE or POOL listed/identified in these Regulations.

**“ARTIFICIAL SWIMMING LAGOON”** means an artificial body of water with more than 10,000 square feet of water surface area that is intended to be used by persons for swimming or bathing and that is constructed with special features to imitate a NATURAL BATHING PLACE.

**“ATTENDANT”** means an employee who monitors and controls the flow of BATHERS at the entrance and exits of aquatic attractions such as WAVE POOLS, LAZY RIVERS, SLIDES and FLUMES.

**“AUTOMATED CONTROLLER”** means a system of at least one chemical probe, a controller, and an auxiliary or integrated component that senses the level of one or more water parameters and provides a signal to other equipment to maintain the parameters within a user-established range.

**“AVAILABLE CHLORINE”** see **“CHLORINE”**

**“BACKFLOW”** means a hydraulic condition caused by a difference in water pressure that causes an undesirable reversal of the flow as the result of a higher pressure in the system than in its supply.

**“BARRIER”** means an obstacle intended to prevent direct access from one point to another.

**“BATHER”** means a person at an AQUATIC VENUE who has the potential of entering the body of water.

**“BATHER COUNT”** means the number of BATHERS in an AQUATIC VENUE at any given time.

**“BATHER OCCUPANCY”** means the total number of BATHERS in an AQUATIC FACILITY ENCLOSURE at any given time both in the water and on the DECK.

**“BREAKPOINT CHLORINATION”** means the conversion of inorganic CHLORAMINE compounds to nitrogen gas by reaction with FAC. When CHLORINE is added to water containing ammonia (from urine, sweat, or the environment), it initially reacts with the ammonia to form monochloramine. If more CHLORINE is added, monochloramine is converted into DICHLORAMINE, which decomposes into nitrogen gas, hydrochloric acid and CHLORINE. The apparent residual CHLORINE decreases since it is partially reduced to hydrochloric acid. The point at which the drop occurs is referred to as the “breakpoint.” The amount of free CHLORINE that must be added to the water to achieve BREAKPOINT CHLORINATION is approximately ten times the amount of combined CHLORINE in the

water. As additional CHLORINE is added, all inorganic combined CHLORINE compounds disappear, resulting in a decrease in eye irritation potential and CHLORINE odors.

“**BULKHEADS**” means a movable partition that physically separates an AQUATIC VENUE into multiple sections.

“**CHEMICAL STORAGE SPACE**” means a space in an AQUATIC FACILITY used for the storage of AQUATIC VENUE chemicals such as acids, salt, or corrosive or oxidizing chemicals.

“**CHILD AMUSEMENT LAGOON**” see “**POOL**”

“**CHLORAMINE**” means a DISINFECTION BY-PRODUCT formed when CHLORINE binds to nitrogenous waste in AQUATIC VENUE water to form an amine-containing compound with one or more CHLORINE atoms, known as combined CHLORINE.

- “**DICHLORAMINE**” means a DISINFECTION BY-PRODUCT formed when CHLORINE binds to nitrogenous waste in AQUATIC VENUE water to form an amine-containing compound with two CHLORINE atoms ( $\text{NHCl}_2$ ). It is a known acute respiratory and ocular irritant.
- “**TRICHLORAMINE**” means a DISINFECTION BY-PRODUCT formed when CHLORINE binds to nitrogenous waste in AQUATIC VENUE water to form an amine-containing compound with three CHLORINE atoms ( $\text{NCl}_3$ ). It is a known acute respiratory and ocular irritant. It has low solubility in water and is rapidly released into the air above AQUATIC VENUES where it can accumulate, particularly in indoor settings.

“**CHLORINE**” refers to hypochlorous acid and hypochlorite ion in aqueous solution derived from CHLORINE gas or a variety of CHLORINE-based disinfecting agents.

- “**AVAILABLE CHLORINE**” means the amount of CHLORINE in the +1 OXIDATION state, which is the reactive or oxidized form. In contrast, a chloride ion ( $\text{Cl}^-$ ) is in the -1 OXIDATION state, which is the inert or reduced state. AVAILABLE CHLORINE is subdivided into FAC and combined AVAILABLE CHLORINE. AQUATIC VENUE chemicals containing AVAILABLE CHLORINE are both oxidizers and DISINFECTANTS. Elemental CHLORINE ( $\text{Cl}_2$ ) is defined as containing 100 percent AVAILABLE CHLORINE. The concentration of AVAILABLE CHLORINE in water is normally reported as PPM “as  $\text{Cl}_2$ ”, that is, the concentration is measured on a  $\text{Cl}_2$  basis, regardless of the source of the AVAILABLE CHLORINE.
- “**FREE AVAILABLE CHLORINE or FAC**” means the portion of the total AVAILABLE CHLORINE that is not “combined CHLORINE” and is present as hypochlorous acid ( $\text{HOCl}$ ) or hypochlorite ion ( $\text{OCl}^-$ ). The PH of the water determines the relative amounts of hypochlorous acid and hypochlorite ions.  $\text{HOCl}$  is a very effective bactericide and is the active bactericide in POOL water.  $\text{OCl}^-$  is also a bactericide, but acts more slowly than  $\text{HOCl}$ . Thus, CHLORINE is a more effective bactericide at low PH than at high PH. A FAC must be maintained for adequate DISINFECTION.

“**CLEANSING SHOWER**” see “**SHOWER**”

“**COMBUSTION DEVICE**” means any appliance or equipment using fire such as gas or oil furnaces, boilers, POOL heaters, domestic water heaters, etc.

“**CONTAMINATION RESPONSE PLAN**” means a plan for handling contamination from formed-stool, diarrheal-stool, vomit, and blood.

“**CROSS-CONNECTION**” means a connection or arrangement, physical or otherwise, between a potable water supply system and a PLUMBING FIXTURE, tank, receptor, equipment, or device, through which it may be possible for non-potable, used, unclean, polluted and contaminated water, or other substances to enter into a part of such potable water system under any condition.

“**DECK**” means surface areas serving the AQUATIC VENUE, including the PERIMETER DECK, POOL DECK, and DRY DECK.

- “**DRY DECK**” means all pedestrian surface areas within the AQUATIC VENUE ENCLOSURE not subject to frequent splashing or constant wet foot traffic. The DRY DECK is not PERIMETER DECK or POOL DECK, which connect the AQUATIC VENUE to adjacent amenities, entrances, and exits. Landscape areas are not included in this definition.
- “**PERIMETER DECK**” means the hardscape surface area immediately adjacent to and within four (4) feet of the edge of the AQUATIC VENUE.
- “**POOL DECK**” means surface areas serving the AQUATIC VENUE, beyond PERIMETER DECK, which is expected to be regularly trafficked and made wet by BATHERS.

“**DEEP WATER**” means any part of an AQUATIC VENUE with a depth greater than five (5) feet.

“**DESIGN PROFESSIONAL**” means a Nevada licensed professional engineer or a Nevada registered architect. A licensed professional engineer or a registered architect shall include his or her seal and signature on any plans and specifications submitted to the HEALTH AUTHORITY.

“**DESIGNATED WALKWAY**” means an exterior or interior way of passage from one part of an AQUATIC FACILITY to another for pedestrians, including, but not limited to walkways, pathways, DECKS, and stairways.

“**DICHLORAMINE**” see “**CHLORAMINE**”

“**DISINFECTION**” means a treatment that kills or irreversibly inactivates microorganisms (e.g., bacteria, viruses, and parasites); in water treatment, a chemical (commonly CHLORINE, CHLORAMINE, or ozone) or physical process (e.g., UV radiation) can be used.

“**DISINFECTION BY-PRODUCT**” means a chemical compound formed by the reaction of a disinfectant (e.g. CHLORINE) with a precursor (e.g. natural organic matter, nitrogenous waste from BATHERS) in a water system (AQUATIC VENUE and water supply).

“**DIVING POOL**” see “**POOL**”

“**DROP SLIDE**” see “**SLIDE**”

“**DRY DECK**” see “**DECK**”

“**DYNAMIC COEFFICIENT OF FRICTION**” means the friction resistance between two objects when one is already in motion.

“**EMERGENCY ACTION PLAN or EAP**” means a plan that identifies the objectives that need to be met for a specific type of emergency, who will respond, what each person’s role will be during the response, and what equipment is required as part of the response.

**“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 to an AQUATIC VENUE or FACILITY. It is designed to resist climbing (absence of handholds or footholds) and to prevent passage through it and under it.

**“EPA REGISTERED”** means all products regulated and registered under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) by the U.S. Environmental Protection Agency. EPA REGISTERED products will have a registration number on the label (usually it will state “EPA Reg No.” followed by a series of numbers). This registration number can be verified by using the EPA National Pesticide Information Retrieval System.

**“EQUIPMENT ROOM”** means a space intended for the operation of pumps, filters, heaters, and controllers. This space is not intended for the storage of hazardous AQUATIC VENUE chemicals.

**“EXIT GATE”** means an emergency exit, which is a gate or door allowing free exit at all times.

**“EXPANSION JOINT”** means a watertight joint provided in an AQUATIC VENUE vessel used to relieve flexural stresses due to movement caused by thermal expansion/contraction.

**“FLAT WATER”** see **“THEORETICAL PEAK OCCUPANCY”**

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

**“FOOT CANDLES”** means a measurement of light equivalent to one lumen per square foot.

**“FREE AVAILABLE CHLORINE or (FAC)”** see **“CHLORINE”**

**“GROUND-FAULT CIRCUIT INTERRUPTER or (GFCI)”** means a device for protection of personnel that de-energizes an electrical circuit or portion thereof in the event of excessive ground current.

**“HAND WASH STATION”** means a location which has a hand washing sink, adjacent soap dispenser, paper towel dispenser or hand dryer, and trash receptacle.

**“HEALTH AUTHORITY”** means officers or agents of the Southern Nevada Health District.

**“HOT WATER”** see **“THEORETICAL PEAK OCCUPANCY”**

**“HYGIENE FACILITY”** means a structure or part of a structure that contains toilet(s), SHOWER(S), HAND WASH STATION(S), and dressing capabilities serving BATHERS and PATRONS at an AQUATIC FACILITY.

**“HYGIENE FIXTURES”** means all components necessary for HYGIENE FACILITIES including PLUMBING FIXTURES, HAND WASH STATIONS, trash receptacles, soap dispensers, paper towel dispensers or hand dryers, and toilet paper dispensers.

**“IMMINENT HEALTH HAZARD”** means a serious threat to public health or safety that is considered to exist when there is evidence indicating 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. See Section 5-6

**“INDOOR AQUATIC FACILITY”** see **“AQUATIC FACILITY”**

**“INCREASED RISK AQUATIC VENUE”** see **“AQUATIC VENUE”**

**“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.

**“INLET”** means wall or floor fittings where treated water is returned to the AQUATIC VENUE.

**“INTERACTIVE WATER PLAY AQUATIC VENUE”** see **“AQUATIC VENUE”**

**“ISLAND”** means a structure inside an AQUATIC VENUE where the perimeter is completely surrounded by water and the top is above the surface of the AQUATIC VENUE.

**“ISOLATION AND FLOTATION UNIT”** means a vessel that provides a light and/ or sound free environment, contains a saturated solution of sodium chloride or magnesium sulfate having a specific gravity of 1.27 to 1.3, and is maintained at a temperature of approximately 93.5°F. It may also be referred to as an isolation tank, pods, or flotation therapy.

**“LANDING POOL”** see **“POOL”**

**“LAZY RIVER”** see **“AQUATIC VENUE”**

**“LIFEGUARD”** means an individual who has successfully completed a recognized LIFEGUARD training course offered by a recognized training agency, holds a current certificate for such training, has met the pre-service requirements, and is participating in continuing in-service training requirements of the AQUATIC FACILITY.

**“LIFEGUARD STATION”** means a designated stand or roving zone established to monitor BATHERS in a body of water.

**“LIFEGUARD SUPERVISOR”** means an individual responsible for the oversight of LIFEGUARD performance and emergency response at an AQUATIC FACILITY.

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

**“MOVEABLE FLOORS”** means an AQUATIC VENUE floor whose depth varies through the use of controls.

**“NATURAL BATHING PLACE”** means any bathing place at a lake, pond, stream or similar body of water, together with any buildings and appurtenances used by the public for bathing or swimming with the express permission of the lessee or any person responsible for the premise; or advertised as a place for bathing or swimming for the public.

**“NON-SUBSTANTIAL ALTERATION”** means the addition or replacement of all or part of any structure, circulation system or appurtenance of an AQUATIC VENUE that is not addressed under SUBSTANTIAL ALTERATION.

“**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.

“**OWNER**” means any person, individual, partnership, corporation, company, association or like entity that owns, leases, or proposes to own or lease an AQUATIC VENUE or AQUATIC FACILITY.

“**OXIDATION**” means the process of changing the chemical structure of water contaminants by either increasing the number of oxygen atoms or reducing the number of electrons of the contaminant or other chemical reaction, which allows the contaminant to be more readily removed from the water or made more soluble in the water. It is the “chemical cleaning” of POOL water. OXIDATION can be achieved by common disinfectants (e.g., CHLORINE, bromine), SECONDARY DISINFECTION SYSTEMS (e.g. ozone) and oxidizers (e.g. potassium monopersulfate).

“**OXIDATION REDUCTION POTENTIAL or ORP**” means a measure of the tendency for a solution to either gain or lose electrons; higher (more positive) OXIDATION REDUCTION POTENTIAL indicates a more oxidative solution.

“**PATRON**” means a BATHER or other person at an AQUATIC FACILITY who may or may not have contact with AQUATIC VENUE water either through partial or total immersion. PATRONS may not have contact with AQUATIC VENUE water, but could still be exposed to potential contamination from the AQUATIC FACILITY air, surfaces, or aerosols.

“**PENINSULA or WING WALL**” means a structural projection into a POOL intended to provide separation within the body of water.

“**PERIMETER DECK**” see “**DECK**”

“**PERIMETER GUTTER SYSTEM**” means the alternative to SKIMMERS as a method to remove water from the POOL’S surface for treatment. The gutter provides a level structure along the POOL perimeter versus intermittent SKIMMERS.

“**PERMIT**” means the document issued by the HEALTH AUTHORITY that authorizes a person or authorized agent of the OWNER to operate an AQUATIC VENUE.

“**PERMIT HOLDER**” means the person or entity that is legally responsible for the operation of the AQUATIC FACILITY.

“**PH**” means the negative log of the concentration of hydrogen ions. When water ionizes, it produces hydrogen ions (H<sup>+</sup>) and hydroxide ions (OH<sup>-</sup>). If there is an excess of hydrogen ions the water is acidic. If there is an excess of hydroxide ions the water is basic. PH ranges from 0 to 14. Pure water has a PH of 7.0. If PH is higher than 7.0, the water is said to be basic, or alkaline. If the water’s PH is lower than 7.0, the water is acidic. As PH is raised, more ionization occurs and CHLORINE disinfectants decrease in effectiveness.

“**PLUMBING FIXTURE**” means a receptacle, fixture, or device that is connected to a water supply system or discharges to a drainage system or both and may be used for the distribution and use of water; e.g. toilets, urinals, SHOWERS, and hose bibs. Such receptacles, fixtures, or devices require a supply of water, discharge liquid waste or liquid-borne solid waste, or require a supply of water and discharge waste to a drainage system.

**“POOL”** means a subset of AQUATIC VENUES designed to have standing water for total or partial BATHER immersion. This does not include SPAS.

- **“ACTIVITY POOL”** means a water attraction designed primarily for play activity that uses constructed features and devices including pad walks, flotation devices, and similar attractions.
- **“CHILD AMUSEMENT LAGOON”** means a water attraction designed primarily for play activity that uses constructed features and devices including POOL SLIDES, shallow POOLS, children washes, and similar attractions, which are intended for use by young children.
- **“DIVING POOL”** means a POOL used exclusively for diving.
- **“LANDING POOL”** means an AQUATIC VENUE or designated section of an AQUATIC VENUE located at the exit of one or more WATERSLIDE FLUMES. The body of water is intended and designed to receive a BATHER emerging from the FLUME for the purpose of terminating the SLIDE action and providing a means of exit to a DECK or walkway area. Also known as a splash POOL or catch POOL.
- **“SKIMMER POOL”** means a POOL using a SKIMMER SYSTEM.
- **“SURF POOL”** means any POOL designed to generate waves dedicated to the activity of surfing on a surfboard or analogous surfing device commonly used in the ocean and intended for sport as opposed to the general play intent of WAVE POOLS.
- **“THERAPY POOL”** means a POOL used exclusively for aquatic therapy, physical therapy, and/or rehabilitation to treat a diagnosed injury, illness, or medical condition, wherein the therapy is provided under the direct supervision of a licensed physical therapist, occupational therapist, or athletic trainer. This could include wound patients or immunocompromised patients whose health could be impacted if there is not additional water quality protection.
- **“WADING POOL”** means any POOL used exclusively for walking through or sitting and intended for use by young children where the depth does not exceed two (2) feet.
- **“WAVE POOL”** means any POOL designed to simulate breaking or cyclic waves for the purposes of general play.

**“POOL COMPANY”** means any firm or self-employed individual engaged in providing POOL services at an AQUATIC FACILITY.

**“POOL DECK”** see **“DECK”**

**“POOL SLIDE”** see **“SLIDE”**

**“QUALIFIED OPERATOR”** means an individual, with an active HEALTH AUTHORITY registration, responsible for the operation and maintenance of the water systems and the associated infrastructure of the AQUATIC FACILITY. Examples of QUALIFIED OPERATOR responsibilities include: maintaining water quality, cleaning filters, maintaining equipment, and POOL appurtenances.

**“RECESSED STEPS”** means a way of ingress/egress for an AQUATIC VENUE similar to a ladder, but the individual treads are recessed into the AQUATIC VENUE wall.

**“RECIRCULATION SYSTEM”** means the combination of the main drain, gutter or SKIMMER, INLETS, piping, pumps, controls, surge tank or balance tank to provide AQUATIC VENUE water recirculation to and from the AQUATIC VENUE and the treatment systems.



**“REDUCTION EQUIVALENT DOSE BIAS or RED”** means a variable used in UV system validation to account for differences in UV sensitivity between the UV system challenge microbe (e.g., MS2 virus) and the actual microbe to be inactivated (e.g., *Cryptosporidium*).

**“RESPONSIBLE PERSON”** means an on-site individual at staffed AQUATIC FACILITIES without a full time on-site QUALIFIED OPERATOR who is authorized and capable of closing the AQUATIC VENUE as needed, knowing when to close an AQUATIC VENUE, and knowing how and when to contact the QUALIFIED OPERATOR.

**“RINSE SHOWER”** see **“SHOWER”**

**“ROBOTIC CLEANER”** means a modular vacuum system consisting of a motor-driven, in-water suction device, either self-powered or powered through a low voltage cable, which is connected to a DECK-side power supply.

**“RUNOUT”** means that part of a WATERSLIDE where riders are intended to decelerate and/or come to a stop. The RUNOUT is a continuation of the WATERSLIDE FLUME surface.

**“SAFETY PLAN”** means a written document that has procedures, requirements, and/or standards related to safety which the AQUATIC FACILITY staff must follow. These plans include training, emergency response, and operational procedures.

**“SANITIZE”** means reducing the level of microbes to that considered safe by public health standards (usually 99.999%). This may be achieved through a variety of chemical or physical means such as chemical treatment, physical cleaning, or drying.

**“SECONDARY DISINFECTION SYSTEMS”** means those DISINFECTION processes or systems installed in addition to the standard systems required on all AQUATIC VENUES, which are required to be used for INCREASED RISK AQUATIC VENUES.

**“SHALLOW WATER”** means any part of an AQUATIC VENUE with a depth that does not exceed five (5) feet.

**“SHOWER”** means a device that sprays water on the body.

- **“CLEANSING SHOWER”** means a SHOWER located within a HYGIENE FACILITY providing warm water and soap. The purpose of these SHOWERS is to remove contaminants including perianal fecal material, sweat, skin cells, personal care products, and dirt before BATHERS enter the AQUATIC VENUE.
- **“RINSE SHOWER”** means a SHOWER typically located in the POOL DECK area with ambient temperature water. The main purpose is to remove dirt, sand, or organic material prior to entering the AQUATIC VENUE to reduce the introduction of contaminants and the formation of DISINFECTION BY-PRODUCTS.

**“SKIMMER”** means a device installed in the AQUATIC VENUE wall whose purpose is to remove floating debris and surface water to the filter. They shall include a weir to allow for the automatic adjustment to small changes in water level, maintaining skimming of the surface water.

**“SKIMMER POOL”** see **“POOL”**

**“SKIMMER SYSTEM”** means periodic locations along the top of the AQUATIC VENUE wall for removal of water from the AQUATIC VENUE’s surface for treatment.

**“SLIDE”** means an AQUATIC FEATURE where BATHERS slide down from an elevated height into water.

- **“DROP SLIDE”** means a SLIDE that drops BATHERS into the water from a height above the water versus delivering the BATHER to the water entry point.
- **“POOL SLIDE”** means a SLIDE having a configuration as defined by the Code of Federal Regulations in 16 CFR §1207, or is similar in construction to a playground SLIDE used to allow BATHERS to SLIDE from an elevated height to a POOL. They shall include children’s (tot) SLIDES and all other non-FLUME SLIDES that are mounted on the POOL DECK or within the basin of a public swimming POOL.
- **“WATERSLIDE”** means a SLIDE that runs into a LANDING POOL or RUNOUT through a fabricated channel with flowing water.

**“SPA”** see **“AQUATIC VENUE”**

**“SPECIAL USE AQUATIC VENUE”** see **“AQUATIC VENUE”**

**“SPECTATOR”** means any individual at an AQUATIC FACILITY who is present to observe an event without the potential of entering the water of any AQUATIC VENUE.

**“STADIUM SEATING”** see **“THEORETICAL PEAK OCCUPANCY”**

**“STRUCTURAL CRACK”** means a break or split in the AQUATIC VENUE surface that weakens the structural integrity of the vessel.

**“SUBSTANTIAL ALTERATION”** means the alteration, modification, or renovation of an AQUATIC VENUE or INDOOR AQUATIC FACILITY that involves the alteration or replacement of the shell, replacement of the complete plumbing system or a complete rebuild.

**“SUBSTANTIALLY SIMILAR”** means the replacement of equipment that has identical hydraulic characteristics and performs to the same manufacturer’s specifications.

**“SUPERCHLORINATION”** means the addition of large quantities of CHLORINE-based chemicals to raise the FAC levels for water quality maintenance such as to kill algae, destroy odors, or improve the ability to maintain a disinfectant residual.

**“SUPPLEMENTAL DISINFECTION SYSTEMS”** means those DISINFECTION processes or systems which are not required on an AQUATIC VENUE for health and safety reasons. They may be used to enhance overall system performance and improve water quality.

**“SURF POOL”** see **“POOL”**

**“THERAPY POOL”** see **“POOL”**

**“THEORETICAL PEAK OCCUPANCY”** means the anticipated peak number of BATHERS in an AQUATIC VENUE or the anticipated peak number of PATRONS of the DECK of an AQUATIC FACILITY. This is the lower limit of peak occupancy to be used for design purposes for determining services that support PATRONS. THEORETICAL PEAK OCCUPANCY is used to determine the number of SHOWERS. For AQUATIC VENUES, the THEORETICAL PEAK OCCUPANCY is calculated around the type of water use or space:

- **“AGITATED WATER”** means an AQUATIC VENUE with mechanical means (AQUATIC FEATURES) to discharge, spray, or move the water's surface above and/or below the static water line of the AQUATIC VENUE so BATHERS are standing or playing vertically. Where there is no static water line, movement shall be considered above the DECK plane.
- **“FLAT WATER”** means an AQUATIC VENUE in which the water line is static except for movement made by BATHERS usually as a horizontal use as in swimming. Diving spargers do not void the FLAT WATER definition.
- **“HOT WATER”** means an AQUATIC VENUE with a water temperature over 90°F.
- **“STADIUM SEATING”** means an area of high-occupancy seating provided above the POOL level for observation.

**“TRANSMISSIVITY”** means the percentage measurement of UV light able to pass through a solution.

**“TRICHLORAMINE”** see **“CHLORAMINE”**

**“TURNOVER”** means the period of time, usually expressed in hours, required to circulate a volume of water equal to the capacity of the AQUATIC VENUE.

**“UNBLOCKABLE DRAIN COVER”** has the meaning ascribed in ANSI/APSP-16 2011 Standard.

**“UNDERWATER BENCH”** means a submerged seat with or without hydrotherapy jets.

**“UNDERWATER LEDGE”** means a continuous step in the AQUATIC VENUE wall that allows swimmers to rest by standing without treading water.

**“VARIANCE”** means a written document APPROVED by the Southern Nevada Health District Board of Health, which seeks a full recusal of these Regulations and may impact the health and safety of PATRONS.

**“WADING POOL”** see **“POOL”**

**“WAIVER”** means a written agreement between the HEALTH AUTHORITY and the PERMIT HOLDER that authorizes a modification of one or more regulatory requirements and has no impact on the health and safety of PATRONS.

**“WATER QUALITY TESTING DEVICE or WQTD”** means a product designed to measure the level of a parameter in water. A WQTD includes a device or method to provide a visual indication of a parameter level, and may include one or more reagents and accessory items.

**“WATERSLIDE”** see **“SLIDE”**

**“WAVE POOL”** see **“POOL”**

**“ZERO DEPTH ENTRY”** means a sloped entry into an AQUATIC VENUE from DECK level into the interior of the AQUATIC VENUE as a means of access and egress.

## SECTION 2 Facility Design and Construction

### Parts

- 2-1 Plan Submittal
- 2-2 Materials
- 2-3 Aquatic Venue Structure
- 2-4 Indoor/Outdoor Environment
- 2-5 Recirculation System Design, Equipment, and Water Treatment
- 2-6 Decks and Equipment
- 2-7 Recirculation Equipment Room
- 2-8 Hygiene Facilities
- 2-9 Water Supply and Wastewater Disposal
- 2-10 Special Use Aquatic Venues

2-1 Plan Submittal
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Subparts
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|---|
| 2-101 New Construction and Substantial Alteration |
| 2-102 Content of Design Report                    |
| 2-103 Plan Approval                               |
| 2-104 Compliance Certificate                      |

The provisions of this Section apply to construction of a new AQUATIC FACILITY or AQUATIC VENUE, or the SUBSTANTIAL ALTERATION to an existing AQUATIC FACILITY or AQUATIC VENUE, unless otherwise noted.

### 2-101 New Construction and SUBSTANTIAL ALTERATION

- 2-101.1 AQUATIC FACILITY construction plans shall be designed to provide sufficient clarity to indicate the location, nature, and extent of the work proposed.
- 2-101.2 AQUATIC FACILITY construction plans shall show in detail that it will conform to the provisions of these Regulations and relevant laws to protect the health and SAFETY of the facility's BATHERS and PATRONS.
- 2-101.3 No person shall begin to construct a new AQUATIC FACILITY or shall substantially alter an existing AQUATIC FACILITY without first having the construction plans detailing the construction or SUBSTANTIAL ALTERATION submitted to and APPROVED by the HEALTH AUTHORITY.
- 2-101.4 An OWNER who allows new construction or a SUBSTANTIAL ALTERATION of an AQUATIC FACILITY to begin prior to obtaining approval from the HEALTH AUTHORITY will be subject to applicable fees. Any contractor who begins new construction or a SUBSTANTIAL ALTERATION of an AQUATIC FACILITY prior to obtaining APPROVED plans may be reported to the Nevada State Contractors Board.
- 2-101.5 All applications and supporting documentation, such as plans and hydraulics, must be prepared by a DESIGN PROFESSIONAL, a licensed contractor who holds a classification A license with an A-10 subclassification issued by the State Contractors' Board, or who is Nevada registered or licensed to practice his or her respective design profession as defined by the state of Nevada.
- 2-101.6 All construction plans shall include the following statements:

- (A) "The proposed aquatic facility and all equipment shall be constructed and installed in conformity with the approved plans and specifications or approved amendments," and
- (B) "No substantial alteration, changes, additions, or equipment not specified in the approved plans or allowed in these Regulations can be made or added until the plans for such substantial alteration, changes, additions, or equipment are submitted to and approved by the Health Authority."

**2-101.7** All documentation must be submitted to the HEALTH AUTHORITY electronically.

- (A) In addition, the following documents must also be submitted as hard copies a minimum of:
  - (1) One complete set of plans;
  - (2) One copy of the HEALTH AUTHORITY'S Construction Application, signed and stamped by the DESIGN PROFESSIONAL or licensed contractor; and
  - (3) One copy of the hydraulic calculations.

**2-102 Content of Design Report**

**2-102.1** Basis of Design Report

- (A) AQUATIC FACILITY plans shall include the name, address, and contact information for the OWNER and designer. Builder information must be submitted prior to the start of construction.
- (B) AQUATIC FACILITY plans shall include site information indicating at a minimum: the location of all utilities, wells, topography, natural water features, and potential sources of surface drainage and pollution which may affect the proposed AQUATIC FACILITY.
- (C) AQUATIC FACILITY plans shall include a site plot plan including:
  - (1) A general map and detailed scaled drawings of the AQUATIC FACILITY site plan or floor plan with detailed locations of the AQUATIC VENUES and AQUATIC FEATURES; and
  - (2) The locations of all water supply facilities, sources of drinking water, public and private sewers, and relative elevations of paved or other walkways and the EQUIPMENT ROOM floor shall be shown on the plans with the elevations of storm and sanitary sewer inverts and street grade.

**2-102.2** Plans and Specifications

- (A) Detailed scaled and dimensional drawings for each individual AQUATIC VENUE shall include an AQUATIC VENUE area plan and layout plan along with dimensioned longitudinal and transverse cross sections of the AQUATIC VENUE.
- (B) Detailed scaled and dimensional drawings for each individual AQUATIC VENUE shall include location and type of:
  - (1) INLETS;
  - (2) Overflows;
  - (3) Gravity drains;
  - (4) Suction outlets;
  - (5) Overflow gutters or devices;
  - (6) Piping;
  - (7) Designed AQUATIC VENUE water elevation;
  - (8) AQUATIC FEATURES such as ladders, stairs, diving boards, SLIDES, and play features;

- (9) Area Lighting/Photometric;
  - (10) AQUATIC VENUE markings; and
  - (11) Surface materials.
- (C) Detailed scaled and dimensional drawings of the AQUATIC FACILITY and for each individual AQUATIC VENUE, as appropriate, shall include location and type of:
- (1) Design of DECK, curb, or walls enclosing the AQUATIC VENUE;
  - (2) DECK drains;
  - (3) Paved walkways and other hardscape features;
  - (4) Non-slip flooring;
  - (5) AQUATIC VENUE area finishes;
  - (6) Drinking fountains or other sources of drinking water;
  - (7) Entries and exits;
  - (8) Hose bibs;
  - (9) ENCLOSURES;
  - (10) Telephones; and
  - (11) Area lighting, to include a photometric layout.
- (D) Detailed scaled and dimensional drawings for each individual AQUATIC VENUE shall contain a flow diagram showing the location, plan, elevation, and schematics of:
- (1) Filters;
  - (2) Pumps;
  - (3) Chemical feeders and interlocks;
  - (4) Chemical controllers and interlocks;
  - (5) SECONDARY DISINFECTION SYSTEMS, if required;
  - (6) SUPPLEMENTARY DISINFECTION SYSTEMS, if installed;
  - (7) Ventilation devices or AIR HANDLING SYSTEMS;
  - (8) Heaters;
  - (9) Surge tanks, including operating levels;
  - (10) BACKFLOW prevention assemblies and air gaps;
  - (11) Valves;
  - (12) Piping;
  - (13) Flow meters;
  - (14) Gauges;
  - (15) Thermometers;
  - (16) Test cocks;
  - (17) Sight glasses; and
  - (18) Drainage system for the disposal of AQUATIC VENUE water and filter wastewater.
- (E) Detailed scaled and dimensional drawings for each individual AQUATIC VENUE shall contain a schematic layout of the AQUATIC VENUE EQUIPMENT ROOM or area showing accessibility for installation and maintenance.
- (F) Detailed scaled and dimensional drawings for each individual AQUATIC VENUE shall contain a schematic layout of the AQUATIC FACILITY CHEMICAL STORAGE SPACE(S).
- (G) Detailed scaled and dimensional drawings for each AQUATIC FACILITY shall show the location and number of all available HYGIENE FACILITIES provided including dressing rooms, lockers and basket storage, SHOWERS, lavatories, and toilet fixtures.

**2-102.3** Technical Specifications

- (A) Technical specifications for the construction of each AQUATIC VENUE and all appurtenances shall accompany the drawings for the AQUATIC FACILITY plans.
- (B) The technical specifications for each AQUATIC FACILITY and each AQUATIC VENUE shall include all construction details not shown on the plans that relate to the AQUATIC FACILITY.
- (C) The technical specifications for each AQUATIC FACILITY shall include the sources of all water supplies.
- (D) Technical specifications shall include the water surface area and volume of each AQUATIC VENUE and associated water features, as applicable.
- (E) The technical specifications for each AQUATIC FACILITY and each AQUATIC VENUE shall include the THEORETICAL PEAK OCCUPANCY, respectively.
  - (1) The THEORETICAL PEAK OCCUPANCY for an AQUATIC FACILITY shall be used for designing systems that serve BATHERS and PATRONS and shall incorporate non-water related areas such as DECKS and other adjacent portions of the AQUATIC FACILITY not associated with the AQUATIC VENUE.
  - (2) The THEORETICAL PEAK OCCUPANCY shall be calculated by dividing the surface area in square feet of the AQUATIC VENUE by the density factor (D) that fits the specific AQUATIC VENUE being considered.
    - (a) The overall density of the AQUATIC FACILITY may be adjusted as deemed appropriate by the HEALTH AUTHORITY with respect to health and SAFETY concerns related to the intended use.
    - (b) The THEORETICAL PEAK OCCUPANCY for an AQUATIC FACILITY shall be determined by adding the calculations for each AQUATIC VENUE in the AQUATIC FACILITY.

<b>THEORETICAL PEAK OCCUPANCY = AQUATIC VENUE surface area / D</b>
<p><b>The density factors (D) are:</b></p> <p>Water/BATHER-related:</p> <ul style="list-style-type: none"> <li>1) SHALLOW WATER FLAT WATER density factor = 10 ft<sup>2</sup> per BATHER.</li> <li>2) DEEP WATER FLAT WATER density factor = 20 ft<sup>2</sup> per BATHER.</li> <li>3) AGITATED WATER density factor = 15 ft<sup>2</sup> per BATHER.</li> <li>4) HOT WATER density factor = 10 ft<sup>2</sup> per BATHER.</li> <li>5) WATERSLIDE LANDING POOL density factor = manufacturer-established capacity at any given time.</li> <li>6) INTERACTIVE WATER PLAY water density factor = 10 ft<sup>2</sup> per BATHER on surface.</li> </ul>

- (F) The technical specifications and supplemental engineering data for each AQUATIC FACILITY and each AQUATIC VENUE shall include:
  - (1) Detailed information on the type, size, operating characteristics, and rating of all mechanical and electrical equipment;
  - (2) Hydraulic computations for head loss in all piping and recirculation equipment; and
  - (3) Pump curves that demonstrate that the selected recirculation pump(s) are adequate for the calculated required flows.
- (G) The technical specifications for each AQUATIC VENUE shall include the recirculation rate, TURNOVER time, filter media, each piece of

equipment, safety equipment, and any other additional information related to the project requested by the HEALTH AUTHORITY for the purposes of the construction of the AQUATIC FACILITY, each AQUATIC VENUE and all appurtenances.

**2-103 Plan Approval**

**2-103.1 New Construction**

- (A)** The HEALTH AUTHORITY shall clearly state on the plans the limitations of its approval, and that the review does not include structural design or structural stability of any part of the AQUATIC FACILITY.
- (B)** The approval is independent of all other approvals required by other regulatory entities. The applicant must separately obtain all other required approvals and permits.
- (C)** The HEALTH AUTHORITY may coordinate its AQUATIC FACILITY plan review and communicate its approval with other agencies involved in the AQUATIC FACILITY construction.
- (D)** The HEALTH AUTHORITY shall provide a written response to the AQUATIC FACILITY OWNER or OWNER'S representative within 30 business days of the most recent submission, whether an original or revised submission, containing, but not limited to, the following information:
  - (1)** Categorical items marked satisfactory, unsatisfactory, not applicable, or insufficient information;
  - (2)** A comment section keyed to the compliance review list shall detail unsatisfactory and insufficient information;
  - (3)** Indication of the HEALTH AUTHORITY approval or disapproval of the AQUATIC FACILITY construction plans;
  - (4)** In the case of a disapproval, specific reasons for disapproval and procedure for resubmittal; and
  - (5)** Reviewer's name, signature, and date of review.
- (E)** The OWNER or OWNER'S agent shall contact the HEALTH AUTHORITY to schedule all required inspections identified in the plan submission process.
- (F)** Additional inspections may be required by the HEALTH AUTHORITY when deemed necessary.
- (G)** The AQUATIC FACILITY OWNER shall maintain at least one set of APPROVED plans made available to the HEALTH AUTHORITY on-file for as long as the AQUATIC FACILITY is in operation.

**2-103.2 NON-SUBSTANTIAL ALTERATIONS**

- (A)** The AQUATIC FACILITY OWNER planning a NON-SUBSTANTIAL ALTERATION shall make application to the HEALTH AUTHORITY to review proposed changes prior to starting the NON-SUBSTANTIAL ALTERATION.
- (B)** All applications and supporting documentation, such as plans and hydraulics, shall be prepared by a DESIGN PROFESSIONAL or a licensed contractor with an appropriate classification issued by the Nevada State Contractors' Board.
- (C)** The AQUATIC FACILITY operator shall consult with the HEALTH AUTHORITY to determine if new or modified plans are required for approval of the NON-SUBSTANTIAL ALTERATIONS proposed.

**2-103.3 Replacements**

- (A)** When replacing like equipment, the AQUATIC FACILITY OWNER shall submit technical verification to the HEALTH AUTHORITY that the



replacement is equal to the originally APPROVED equipment within 5 business days of installation.

- (B) The replacement of pumps, filters, feeders, controllers, filter valves, or other similar equipment with SUBSTANTIALLY SIMILAR equipment may be done after contacting the HEALTH AUTHORITY to review the proposed changes without the submission of altered AQUATIC FACILITY plans, unless the review determines the equipment is not SUBSTANTIALLY SIMILAR.
- (C) The HEALTH AUTHORITY shall provide the AQUATIC FACILITY OWNER written approval or disapproval of the proposed replacement equipment's equivalency.
- (D) The AQUATIC FACILITY OWNER accepts responsibility for proper and immediate replacement if equipment installed is not deemed to be SUBSTANTIALLY SIMILAR by the HEALTH AUTHORITY.
- (E) Documentation of proposed, APPROVED, and disapproved replacements shall be maintained by the HEALTH AUTHORITY.

## **2-104 Compliance Certificate**

- 2-104.1** A certificate of construction compliance shall be submitted to the HEALTH AUTHORITY for all AQUATIC FACILITY plans for new construction and SUBSTANTIAL ALTERATIONS requiring HEALTH AUTHORITY approvals.
- 2-104.2** This certificate shall be prepared by a licensed professional and be within the scope of the licensed professional's practice as defined by state law.
- 2-104.3** The certificate shall also include a statement that the AQUATIC FACILITY, all equipment, and appurtenances have been constructed and/or installed in accordance with APPROVED plans and specifications.
- 2-104.4** If commissioning or testing reports for systems such as AQUATIC FACILITY lighting, air handling, recirculation, filtration, and/or DISINFECTION are conducted, then those reports shall be included in furnished documentation.

<b>2-2 Materials</b>
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<b>Subparts</b>
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- |                                      |
|--------------------------------------|
| <b>2-201 Aquatic Venues</b>          |
| <b>2-202 Indoor Aquatic Facility</b> |

## **2-201 Aquatic Venues**

- 2-201.1** AQUATIC VENUES shall be constructed of reinforced concrete or impervious and structurally sound material(s), which provide a smooth, easily cleaned, watertight structure capable of withstanding the anticipated stresses and loads for full and empty conditions; taking into consideration climatic, hydrostatic, seismic, and the integration of the AQUATIC VENUE with other structural conditions and as required by other regulatory entities.
- 2-201.2** All materials shall be inert, non-toxic, resistant to corrosion, impervious, enduring, and resistant to damages related to environmental conditions of the installation region.
- 2-201.3** Where located in areas subject to freezing, AQUATIC VENUES and appurtenances shall be protected and designed to protect against freezing.
- 2-201.4** AQUATIC VENUES shall be designed in such a way to maintain their ability to retain the designed amount of water.
- 2-201.5** All vertical walls shall have a durable finish suitable for regular scrubbing and cleaning at the waterline.

- (A) The finish shall be able to withstand daily brushing, scrubbing, and cleaning of the surface in accordance with the manufacturer's recommendations.
- (B) SKIMMER POOLS shall have a six (6) inch to twelve (12) inch high waterline finish that meets the requirements of this section.
- (C) PERIMETER GUTTER SYSTEMS shall have a minimum finish height of two (2) inches that meets the requirements of this section.
- (D) Dark colors in excess of what is required in these Regulations for the AQUATIC VENUE finish shall not extend more than twelve (12) inches below the waterline.

**2-201.6** AQUATIC VENUE floors in areas less than three (3) feet deep shall have a slip resistant finish with a minimum dynamic coefficient of friction at least equal to the requirements of ANSI A137.1-2012 of 0.42 as measured by the DCOF AcuTest.

**2-201.7** Stainless steel, vinyl, PVC-P, or PVC panel and liner AQUATIC VENUE finish systems shall be acceptable provided that the system is installed on top of APPROVED materials using design requirements as listed within this Section or as APPROVED by the HEALTH AUTHORITY. If, at any time, the liner system is damaged or cut in such a way that its integrity is compromised, the AQUATIC VENUE shall be shut down until the system is fully repaired.

**2-201.8** Wood, porous stone, loose pebbles, or earth shall not be permitted as an interior finish.

## **2-202 Indoor Aquatic Facility**

**2-202.1** The interior building finishes of an INDOOR AQUATIC FACILITY shall be designed for an indoor relative humidity of not less than 80 percent.

### **2-202.2 Mechanical Systems**

- (A) AIR HANDLING SYSTEMS must be designed in accordance with applicable regulatory requirements.
- (B) Filters for outdoor-air intake shall be rated moisture-resistant.

### **2-202.3 INDOOR AQUATIC FACILITY Doors**

- (A) INDOOR AQUATIC FACILITY doors shall either be constructed of corrosion-resistant materials or have a covering or coating designed to withstand humid and corrosive environments which is acceptable to the HEALTH AUTHORITY.
- (B) INDOOR AQUATIC FACILITY doors which may be exposed to temperatures below INDOOR AQUATIC FACILITY-air dew point shall have thermal breaks, insulation, and/or glazing as necessary to minimize the risk of uncontrolled condensation.
- (C) INDOOR AQUATIC FACILITY doors and/or door frames shall be equipped with seals and/or gaskets to minimize air leakage when the door is closed.
- (D) All pedestrian doors around the INDOOR AQUATIC FACILITY perimeter shall be equipped with an automatic door closer capable of closing the door completely with a self-latching device designed to engage and keep the door closed without human assistance.

**2-202.4** INDOOR AQUATIC FACILITY window frames shall be constructed of suitable materials or shall have a suitable covering or coating that is designed to withstand the expected atmosphere, not contribute to microbial growth, and constructed to minimize the risk of uncontrolled condensation.

<b>2-3</b>	<b>Aquatic Venue Structure</b>		
<b>Subparts</b>			
<b>2-301</b>	<b>Design for Risk Management</b>	<b>2-3011</b>	<b>Walls</b>
<b>2-302</b>	<b>Bottom Slope</b>	<b>2-3012</b>	<b>Structural Stability</b>
<b>2-303</b>	<b>Aquatic Venue Access and Egress</b>	<b>2-3013</b>	<b>Handholds</b>
<b>2-304</b>	<b>Stairs</b>	<b>2-3014</b>	<b>Infinity Edges</b>
<b>2-305</b>	<b>Handrails</b>	<b>2-3015</b>	<b>Underwater Benches</b>
<b>2-306</b>	<b>Grab Rails</b>	<b>2-3016</b>	<b>Underwater Ledges</b>
<b>2-307</b>	<b>Recessed Steps</b>	<b>2-3017</b>	<b>Underwater Shelves</b>
<b>2-308</b>	<b>Ladders</b>	<b>2-3018</b>	<b>Depth Markers and Markings</b>
<b>2-309</b>	<b>Zero Depth (Sloped) Entries</b>	<b>2-3019</b>	<b>Movable Floors</b>
<b>2-3010</b>	<b>Color and Finish</b>	<b>2-3020</b>	<b>Bulkheads</b>

**2-301 Design for Risk Management**

The design of AQUATIC FACILITIES and/or AQUATIC VENUE(s) shall include the OWNER and/or an aquatic risk management consultant to incorporate operational considerations such as the layout for zones of BATHER surveillance and an unobstructed view of the bottom of the AQUATIC VENUE.

**2-301.1** The AQUATIC VENUE shape shall provide for the safety of BATHERS and PATRONS, thorough and complete circulation of the water, the ability to clean and maintain the AQUATIC VENUE, and the supervision of BATHERS and PATRONS using the AQUATIC VENUE.

**2-301.2** The water in an AQUATIC VENUE shall be sufficiently clear so that the pattern of the main suction outlet is visible while the water is static.

- (A)** To make this observation, the main suction outlet shall be located at the deepest part of the AQUATIC VENUE.
- (B)** The main suction outlet shall be visible at all times at any point on the DECK up to 30 feet away in a direct line of sight from the main suction outlet.
- (C)** For SPAS, this test shall be performed when the water is in a non-turbulent state and bubbles have been allowed to dissipate.

**2-302 Bottom Slope**

**2-302.1** The bottom slope of an AQUATIC VENUE shall be governed by the following parameters, but WAIVERS or VARIANCES may be granted for special uses and situations so long as public safety and health are not compromised.

**2-302.2** In water depths under five (5) feet, the slope of the floor of all AQUATIC VENUES shall not exceed one (1) foot vertical drop for every 12 feet horizontal.

**2-302.3** In water depths five (5) foot and greater, the slope of the floors of all AQUATIC VENUES shall not exceed one (1) foot vertical drop to three (3) feet horizontal, except that AQUATIC VENUES designed and used for competitive diving shall be designed to meet the standards of the sanctioning organization (such as NFSHSA, NCAA, USA Diving or FINA).

**2-302.4** AQUATIC VENUES shall be designed so that they drain without leaving puddles or trapped standing water.

**2-303 Aquatic Venue Access and Egress**

- 2-303.1** Each AQUATIC VENUE shall have a minimum of two (2) means of access and egress, and no less than one (1) for each 75 feet of perimeter, with the exception of:  
**(A)** WATERSLIDE LANDING POOLS;  
**(B)** WATERSLIDE RUNOUTS; and  
**(C)** WAVE POOLS.
- 2-303.2** Acceptable means of access/egress shall include stairs with handrails, grab rails with RECESSED STEPS, ladders, ramps, swimouts, and zero-depth entries.
- 2-303.3** For AQUATIC VENUES wider than 30 feet, such means of access/egress shall be provided on each side of the AQUATIC VENUE, and shall not be more than 75 feet apart.

**2-304 Stairs**

- 2-304.1** Stairs shall be constructed with slip-resistant materials.
- 2-304.2** The leading horizontal and vertical edges of stair treads shall be outlined with slip-resistant contrasting tile or other permanent marking of two (2) inches on the tread and one (1) to two (2) inches on the riser.
- 2-304.3** Where stairs are provided in AQUATIC VENUE water depths greater than five (5) feet, they shall be recessed and not protrude into the swimming area of the AQUATIC VENUE. The lowest tread shall be at least four (4) feet below the normal water elevation.
- 2-304.4** Dimensions of stair treads shall conform to the following requirements: The tread of the first step must be between 12 inches and 18 inches, the tread of the remaining steps must be between 12 inches and 18 inches, all steps must be a minimum of 24 inches wide.
- 2-304.5** Stair risers shall have a minimum uniform height of six (6) inches and a maximum height of 12 inches, with a tolerance of 1/2 inches between adjacent risers. Stairs shall not be used underwater to transition between two (2) sections of an AQUATIC VENUE with different depths.

Note: The bottom riser may vary due to potential cross slopes with the AQUATIC VENUE floor; however, the bottom step riser may not exceed the maximum allowable height required by this section.

- 2-304.6** The top surface of the uppermost stair tread shall be located not more than 12 inches below the AQUATIC VENUE coping or DECK.
- 2-304.7** For AQUATIC VENUES with PERIMETER GUTTER SYSTEMS, the gutter may serve as a step, provided that the gutter is provided with a grating or cover and conforms to all construction and dimensional requirements herein specified.
- 2-304.8** Extended treads may vary from the maximum tread depth dimension values. The maximum water depth above an extended tread must not exceed 18 inches.

**2-305 Handrails**

- 2-305.1** Handrail(s) shall be provided for each set of stairs and not obstruct access to the stair treads.
- 2-305.2** Handrails shall be constructed of corrosion-resistant materials, and anchored securely with a space at least three (3) inches from the adjacent riser.

- 2-305.3** The upper railing surface of handrails shall extend above the AQUATIC VENUE coping or DECK between 34 inches and 38 inches.
- 2-305.4** Stairs wider than five (5) feet shall have at least one (1) additional handrail for every 10 feet of stair width.
- 2-305.5** Handrails shall be designed to resist a load of 50 pounds per linear foot applied in any direction and independently a single concentrated load of 200 pounds applied in any direction at any location. Hand rails shall be designed to transfer these loads through the supports to the AQUATIC VENUE or DECK structure.

**2-306 Grab Rails**

- 2-306.1** Where grab rails are provided, they shall be constructed of corrosion-resistant materials.
- 2-306.2** Grab rails shall be anchored securely.
- 2-306.3** Grab rails shall be provided at both sides of RECESSED STEPS.
- 2-306.4** The horizontal clear space between grab rails shall be not less than 18 inches and not more than 24 inches.
- 2-306.5** The upper railing surface of grab rails shall extend above the AQUATIC VENUE coping or DECK a minimum of 28 inches.
- 2-306.6** Grab rails shall be designed to resist a load of 50 pounds per linear foot applied in any direction and independently a single concentrated load of 200 pounds applied in any direction at any location. Grab rails shall be designed to transfer these loads through the supports to the AQUATIC VENUE or DECK structure.

**2-307 Recessed Steps**

- 2-307.1** RECESSED STEPS shall:
  - (A)** Be slip-resistant;
  - (B)** Be designed to be easily cleaned; and
  - (C)** Drain into the AQUATIC VENUE.
- 2-307.2** RECESSED STEPS shall be uniformly spaced not less than six (6) inches and not more than 12 inches vertically along the AQUATIC VENUE wall.
- 2-307.3** Each recessed step must be uniformly constructed to provide for a height of five (5) inches, depth of five (5) inches, and a width of 12 inches.
- 2-307.4** The top surface of the uppermost RECESSED STEP shall be located not more than 12 inches below the AQUATIC VENUE coping or DECK.
- 2-307.5** For AQUATIC VENUES with PERIMETER GUTTER SYSTEMS, the gutter may serve as a step, provided that the gutter is provided with a grating or cover and conforms to all construction and dimensional requirements herein specified.

**2-308 Ladders**

- 2-308.1** Where provided, ladders shall be constructed of corrosion-resistant materials and be anchored securely to the DECK.
- 2-308.2** Ladder Handrails
  - (A)** Ladders shall have two (2) handrails.
  - (B)** The horizontal clear space between handrails shall be not less than 18 inches and not more than 24 inches.
  - (C)** The upper railing surface of handrails shall extend above the AQUATIC VENUE coping or DECK a minimum of 28 inches.
  - (D)** The clear space between handrails and the AQUATIC VENUE wall shall be not less than three (3) inches and not more than six (6) inches.

- (E) Ladders shall be designed to resist a load of 50 pounds per linear foot applied in any direction and independently a single concentrated load of 200 pounds applied in any direction at any location.
- (F) Ladders shall be designed to transfer these loads through the supports to the AQUATIC VENUE or DECK structure.

**2-308.3 Ladder Treads**

- (A) Ladder treads shall be slip-resistant.
- (B) Ladder treads shall have a minimum horizontal tread depth of 1.5 inches and the distance between the horizontal tread and the AQUATIC VENUE wall shall not be greater than four (4) inches.
- (C) Ladder treads shall be uniformly spaced not less than seven (7) inches and not more than 12 inches vertically at the handrails.
- (D) The top surface of the upmost ladder tread shall be located not more than 12 inches below the AQUATIC VENUE coping, gutter, or DECK.

**2-309 Zero Depth (Sloped) Entries**

**2-309.1** Where ZERO DEPTH ENTRIES are provided, they shall be constructed with slip-resistant materials.

**2-309.2** ZERO DEPTH ENTRIES shall have a maximum floor slope of 1:12, consistent with the requirements of Section 2-302. Changes in floor slope shall be permitted.

**2-309.3** Trench drains shall be used along ZERO DEPTH ENTRIES at the waterline to facilitate surface skimming.

- (A) The trenches may be flat or follow the slope of the ZERO DEPTH ENTRY.

**2-3010 Color and Finish**

**2-3010.1** Floors and walls below the water line shall be white or light pastel in color such that from the AQUATIC VENUE DECK a BATHER is visible on the AQUATIC VENUE floor and

- (A) The following items can be identified:
  - (1) Algae growth, debris or dirt within the AQUATIC VENUE;
  - (2) Cracks in the surface finish of the AQUATIC VENUE; and
  - (3) Suction outlets in accordance with Section 2-301.2.

(B) The finish shall be at least 6.5 on the Munsell color value scale.

(C) An exception shall be made for the following AQUATIC VENUE components:

- (1) Competitive lane markings;
- (2) Dedicated competitive diving well floors;
- (3) Step or bench edge markings;
- (4) Water line tiles;
- (5) WAVE POOL and SURF POOL depth change indicator tiles; or
- (6) Other APPROVED designs.

(D) Munsell color values less than 6.5 or designs such as rock formations may be permitted by the HEALTH AUTHORITY as long as it does not exceed 12 inches below the water surface.

**2-3010.2** The HEALTH AUTHORITY may grant a WAIVER to the color requirements of these Regulations for Munsell color values less than 6.5. Competitive or lap POOLS may have lane markings and end wall targets installed in accordance with FINA, NCAA, USA Swimming, NFSHSA, or other recognized standards.

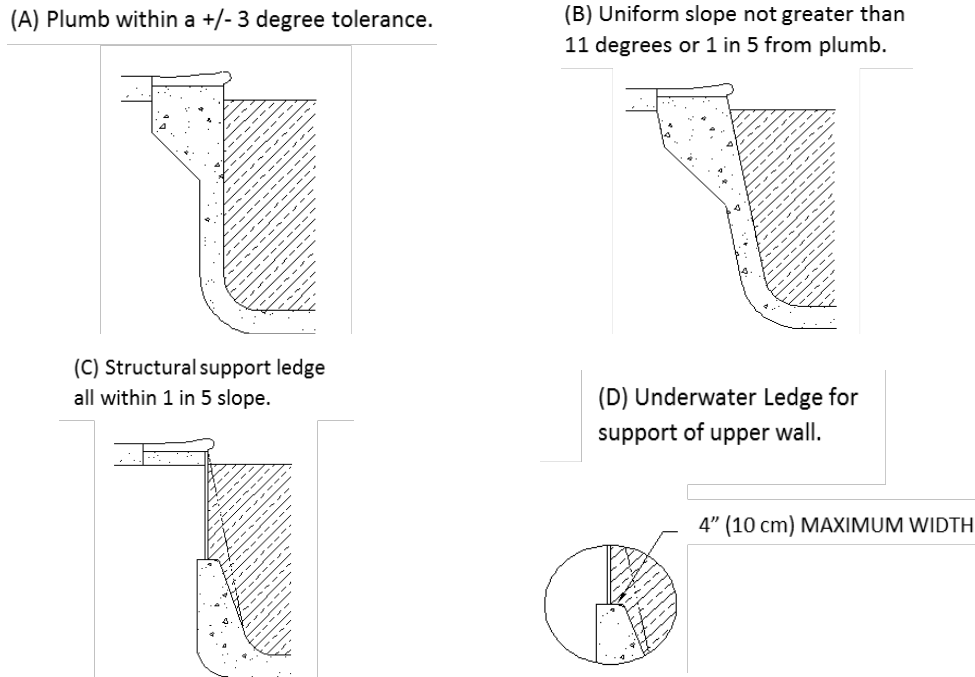
**2-3010.3** Any graphics, color, or finish incorporated into the construction of an AQUATIC VENUE floor or walls must not prevent the detection of a BATHER in

distress, algae growth, sediment, or other objects in the AQUATIC VENUE. Permission in writing from the HEALTH AUTHORITY for the use of any graphics shall be obtained before the graphics are used.

**2-3011 Walls**

- 2-3011.1** AQUATIC VENUE walls shall be plumb within a plus or minus (+/-) three degree tolerance, unless the wall design requires structural support ledges and slopes below to support the upper wall. Refer to **Figure 2-3011.3**.
- 2-3011.2** All corners created by adjoining floors and walls must be of a coved design.
- 2-3011.3** All structural support ledges and slopes of the wall shall fall entirely within a plane slope from the water line at not greater than a +/- three degree tolerance. A contrasting color shall be provided on the edges of any support ledge to draw attention to the ledge for BATHER safety. All corners created by adjoining walls shall be rounded or have a radius in both the vertical and horizontal dimensions to eliminate sharp corners. There shall be no projections from an AQUATIC VENUE wall with the exception of structures or elements such as stairs, grab rails, ladders, handholds, PENINSULAS, WING WALLS, underwater lights, safety ropes, WATERSLIDES, play features, other APPROVED AQUATIC VENUE amenities, UNDERWATER BENCHES, and UNDERWATER LEDGES as described in this Section. Refer to **Figure 2-3011.3**.

**Figure 2-3011.3: AQUATIC VENUE Walls**



**2-3012 Structural Stability**

- 2-3012.1** AQUATIC VENUES shall be designed to withstand the reasonably anticipated loads imposed by AQUATIC VENUE water, BATHERS, and adjacent soils or structures.

**2-3012.2** A hydrostatic relief valve and/or suitable under drain system shall be provided where the water table exerts hydrostatic pressure to uplift the AQUATIC VENUE when empty or drained.

**2-3012.3** AQUATIC VENUES and related circulation piping shall be designed with a winterizing strategy when in an area subject to freeze or thaw cycles.

### **2-3013 Handholds**

**2-3013.1** Where not otherwise exempted, every AQUATIC VENUE shall be provided with handholds (such as PERIMETER GUTTER SYSTEM, coping, horizontal bars, recessed handholds, cantilevered DECKING) around the perimeter of the AQUATIC VENUE where the water depth at the wall exceeds 24 inches. These handholds shall be installed not greater than nine (9) inches above, or three (3) inches below the static water level.

**2-3013.2** Horizontal recesses may be used for handholds provided they are a minimum of 24 inches long, a minimum of four (4) inches high and between two (2) inches and three (3) inches deep.

**(A)** Horizontal recesses shall drain into the AQUATIC VENUE.

**(B)** Horizontal recesses need not be continuous, but consecutive recesses shall be separated by no more than 12 inches of wall.

**2-3013.3** Where PERIMETER GUTTER SYSTEMS are not provided, a coping or cantilevered DECKING of reinforced concrete or material equivalent in strength and durability, with rounded, slip-resistant edges shall be provided.

**2-3013.4** The overhang for coping or cantilevered DECKING shall not be greater than two (2) inches from the vertical plane of the AQUATIC VENUE wall, nor less than one (1) inch.

**2-3013.5** The overhang for coping or cantilevered DECKING shall not exceed 3.5 inches in thickness for the last two (2) inches of the overhang.

### **2-3014 Infinity Edges**

**2-3014.1** Not more than fifty percent (50 percent) of the AQUATIC VENUE perimeter shall incorporate an INFINITY EDGE detail, unless an adjacent and PATRON accessible DECK space conforming to Sections 2-601.1 and 2-601.3 is provided.

**2-3014.2** The length of an INFINITY EDGE shall be no more than 30 feet long when in water depths greater than five (5) feet.

**2-3014.3** Handholds conforming to the requirements of Section 2-3013 shall be provided for INFINITY EDGES, which may be separate from, or incorporated as part of the INFINITY EDGE detail.

**2-3014.4** Where INFINITY EDGES are provided, they shall be constructed of reinforced concrete or other impervious and structurally rigid material(s), and designed to withstand the loads imposed by AQUATIC VENUE water, BATHERS, and adjacent soils or structures.

**2-3014.5** Troughs, basins, or capture drains designed to receive the overflow from INFINITY EDGES shall be watertight, free from STRUCTURAL CRACKS, and have a non-toxic, smooth, and slip-resistant finish.

### **2-3015 Underwater Benches**

**2-3015.1** Where provided, UNDERWATER BENCHES shall be constructed with slip-resistant materials having a minimum DYNAMIC COEFFICIENT OF FRICTION at least equal to the requirements of ANSI A137.1-2012 of 0.42 as measured by DCOF AcuTest.



- 2-3015.2** The leading horizontal and vertical edges of UNDERWATER BENCHES shall be outlined with slip-resistant color contrasting tile or other permanent marking of two (2) inches on the horizontal surface and one to two inches (1-2 inches) on the vertical surface.
- 2-3015.3** UNDERWATER BENCHES may be installed in areas of varying depths, but the maximum AQUATIC VENUE water depth in that area shall not exceed five (5) feet.
- 2-3015.4** The maximum submerged depth of any seat or sitting bench shall be 24 inches measured from the water line.

**2-3016 Underwater Ledges**

- 2-3016.1** Where UNDERWATER LEDGES are provided to enable BATHERS in DEEP WATER to rest or to provide structural support for an upper wall, they shall be constructed with slip-resistant materials.
- 2-3016.2** UNDERWATER LEDGES for resting may be recessed or protrude beyond the vertical plane of the AQUATIC VENUE wall, provided they meet the criteria for slip resistance and tread depth outlined in this section.
- 2-3016.3** UNDERWATER LEDGES for resting shall only be provided within areas of an AQUATIC VENUE with a five (5) feet or greater water depth.
  - (A)** UNDERWATER LEDGES must start no earlier than four (4) lineal feet to the deep side of the five (5) foot slope break.
  - (B)** UNDERWATER LEDGES must be at least four (4) feet below the static water level.
- 2-3016.4** UNDERWATER LEDGES for structural support of upper walls are allowed.
- 2-3016.5** The edges of UNDERWATER LEDGES shall be outlined with slip-resistant color contrasting tile or other permanent marking of not less than one (1) inch and not greater than two (2) inches. If they project past the plane of the AQUATIC VENUE wall, the edges of UNDERWATER LEDGES shall be clearly visible from the DECK.
- 2-3016.6** UNDERWATER LEDGES shall have a maximum uniform horizontal tread depth of four (4) inches. See **Figure 2-3011.3**.

**2-3017 Underwater Shelves**

- 2-3017.1** UNDERWATER SHELVES may be constructed immediately adjacent to water shallower than five (5) feet.
- 2-3017.2** UNDERWATER SHELVES shall have a slip-resistant, color contrasting nosing at the leading horizontal and vertical edges on both the top of horizontal edges and leading vertical edges and should be viewable from the DECK and from underwater.
- 2-3017.3** UNDERWATER SHELVES shall have a maximum depth of 24 inches.

**2-3018 Depth Markers and Markings**

- 2-3018.1** Location
  - (A)** AQUATIC VENUE water depths shall be clearly and permanently marked at the following locations:
    - (1)** Minimum depth;
    - (2)** Maximum depth;
    - (3)** On both sides and at each end of the AQUATIC VENUE; and
    - (4)** At the break in the floor slope between the shallow and deep portions of the AQUATIC VENUE.
  - (B)** Depth markers shall be located on the vertical AQUATIC VENUE wall and positioned to be read from within the AQUATIC VENUE.

- (C) Where depth markings cannot be placed on the vertical wall above the water level, other means shall be used so that the markings will be plainly visible to BATHERS in the AQUATIC VENUE.
- (D) Depth markers shall also be located on the horizontal AQUATIC VENUE coping or DECK within 18 inches of the AQUATIC VENUE structural wall or perimeter gutter.
- (E) Depth markers shall be positioned to be read while standing on the DECK facing the AQUATIC VENUE.
- (F) Depth markers shall be installed at not more than 25 foot intervals around the AQUATIC VENUE perimeter edge and according to the requirements of this Section. In addition, for water less than five (5) feet in depth, the depth shall be marked at one (1) foot depth intervals.

**2-3018.2 Construction/Size**

- (A) Depth markers shall be constructed of a durable material resistant to weather conditions.
- (B) Depth markers shall be slip resistant when they are located on horizontal surfaces.
- (C) Depth markers shall have numbers with a minimum height of four (4) inches and letters with a minimum height of one (1) inch of a contrasting color with the background.
- (D) Depth markers shall be marked in units of feet and inches.
  - (1) Abbreviations of "FT" and "IN" may be used in lieu of "FEET" and "INCHES."
  - (2) Symbols for feet (') and inches (") shall not be permitted on water depth signs.
  - (3) Metric units may be provided in addition to, but not in lieu of, units of feet and inches.

**2-3018.3** Depth markers shall be located to indicate water depth to the nearest three (3) inches, as measured from the AQUATIC VENUE floor three (3) feet out from the AQUATIC VENUE wall to the gutter lip, mid-point of surface SKIMMER(s), or surge weir(s).

**2-3018.4** Depth Marking at Break in Floor Slope

- (A) For AQUATIC VENUES deeper than five (5) feet, a line of contrasting color, not less than two (2) inches and not more than six (6) inches in width, shall be clearly and permanently installed on the AQUATIC VENUE floor at the shallow side of the break in the floor slope, and extend up the AQUATIC VENUE walls to the waterline.
- (B) Depth marking at break in floor slope shall be constructed of a durable material resistant to local weather conditions and be slip-resistant.
- (C) When used, a safety rope must be installed one (1) foot to the SHALLOW WATER side of the break in floor slope and contrasting band, a safety float rope shall extend across the AQUATIC VENUE surface.

**2-3018.5** Symmetrical AQUATIC VENUE designs with the deep point at the center may be allowed by providing a dual depth marking system APPROVED by the HEALTH AUTHORITY. The dual depth marking system must indicate the depth at the wall and at the deep point as measured in Section 2-3018.3.

**2-3018.6** Controlled-access AQUATIC VENUES, such as ACTIVITY POOL, LAZY RIVERS, and other venues with limited access, shall only require depth markers on a sign at the points of entry.

- (A) Depth marker signs shall be clearly visible to PATRONS entering the venue.

- (B) All lettering and symbols shall be as required for other types of depth markers.
- 2-3018.7** For AQUATIC VENUES with movable floors, a sign indicating movable floor and/or varied water depth shall be provided and clearly visible from the DECK.
  - (A) The posted water depth shall be the water level to the floor of the AQUATIC VENUE according to a vertical measurement taken three (3) feet from the AQUATIC VENUE wall.
  - (B) A sign shall be posted to inform the public that the AQUATIC VENUE has a varied depth and refer to the sign showing the current depth.
- 2-3018.8** A minimum of two (2) depth markers shall be provided regardless of the shape or size of a SPA.
- 2-3018.9** AQUATIC VENUES where the maximum water depth is six (6) inches or less, such as WADING POOLS, CHILD AMUSEMENT LAGOONS, and ACTIVITY POOL areas, shall not be required to have depth markings or “NO DIVING” signage.
- 2-3018.10** No Diving Markers
  - (A) For AQUATIC VENUE water depths five (5) feet or less, all DECK depth markers shall be provided with “NO DIVING” warning signs along with the universal international symbol for “NO DIVING.”
  - (B) “NO DIVING” warning signs and symbols shall be spaced at no more than 25 foot intervals around the AQUATIC VENUE perimeter edge.
  - (C) “NO DIVING” markers shall be constructed of a durable material resistant to weather conditions.
  - (D) “NO DIVING” markers shall be slip-resistant when they are located on horizontal surfaces. All lettering and symbols shall be at least four (4) inches in height.

**2-3019 Moveable Floors**

- 2-3019.1** The moveable floor design shall:
  - (A) Not impede the effectiveness of the water treatment system, and
  - (B) Allow for inspection, cleaning and maintenance of the area underneath.
- 2-3019.2** The surface of the moveable floor shall be slip-resistant if it is intended for installation in water depths less than five (5) feet.
- 2-3019.3** Safety
  - (A) A strategy for preventing BATHERS from transitioning to deeper water when a moveable floor is not continuous over the entire surface area of the AQUATIC VENUE shall be provided.
  - (B) The underside of the moveable floor shall not be accessible to BATHERS.
  - (C) The design of a moveable floor shall protect against BATHER entrapment between the moveable floor and the AQUATIC VENUE walls and floor.
  - (D) If the moveable floor is operated using hydraulics, the hydraulic compounds shall be listed as safe for use in AQUATIC VENUE water.
- 2-3019.4** Movement
  - (A) The speed of a moveable floor shall be less than or equal to 1.5 feet per minute.
  - (B) Use of the moveable floor portion of the AQUATIC VENUE shall not be open to BATHERS when the floor is being raised or lowered.

**Exception:** The moveable floor may be used for accessibility purposes only under direct supervision.

- 2-3019.5** Water Depth and Markings
  - (A)** A floor depth indicator shall be provided that displays the current AQUATIC VENUE water depth.
  - (B)** Warning markings stating “Moveable Floor” shall be provided at 25 foot intervals around the perimeter of the moveable floor.

**2-3020 Bulkheads**

- 2-3020.1** The bottom of the BULKHEAD shall be designed so that a BATHER cannot be entrapped underneath or inside of the BULKHEAD.
- 2-3020.2** The BULKHEAD placement shall not interfere with the required water circulation in the AQUATIC VENUE.
- 2-3020.3** BULKHEADS shall be fixed to their operational position(s) by a tamper-proof system.
- 2-3020.4** The gap between the BULKHEAD and the AQUATIC VENUE wall shall be no greater than 1.5 inches.
- 2-3020.5** The BULKHEAD shall be designed to afford an acceptable handhold as required in Section 2-3013.
- 2-3020.6** Proper access and egress to the AQUATIC VENUE as required by Section 2-303 shall be provided when the BULKHEAD is in place.
- 2-3020.7** Guard railings at least 34 inches tall shall be provided on both ends of the BULKHEAD.
- 2-3020.8** The width of the walkable area (total BULKHEAD width) of a BULKHEAD shall be greater than or equal to three feet and three inches (3 ft. 3 in.).
  - (A)** If starting platforms are installed, the width of the walkable area (total BULKHEAD width) of a BULKHEAD shall be greater than or equal to three feet and nine inches (3 ft. 9 in.).
  - (B)** Starting platforms shall be “side mount” style if the BULKHEAD is less than four feet six inches (4 ft. 6 in.) wide.
- 2-3020.9** The travel of a BULKHEAD shall be in accordance with one of the following:
  - (A)** Limited such that it cannot encroach on any required clearances of other features, such as diving boards; or
  - (B)** Designed with modifications incorporated that prevent the use of other features when the required clearances have been compromised by the position of the BULKHEAD.

<b>2-4</b>	<b>Indoor/Outdoor Environment</b>	
	<b>Subparts</b>	
<b>2-401</b>	<b>Lighting</b>	<b>2-406</b> <b>First Aid Area</b>
<b>2-402</b>	<b>Indoor Aquatic Facility Ventilation</b>	<b>2-407</b> <b>Drinking Fountains</b>
<b>2-403</b>	<b>Indoor Aquatic Facility Acoustics</b>	<b>2-408</b> <b>Trash Receptacles</b>
<b>2-404</b>	<b>Indoor Aquatic Facility Electrical Systems and Components</b>	<b>2-409</b> <b>Food and Drink Concessions</b>
<b>2-405</b>	<b>Aquatic Venue Water Heating</b>	<b>2-4010</b> <b>Spectator Areas</b>

- 2-401** **Lighting**
  - 2-401.1** All lighting associated with an AQUATIC FACILITY must conform to the requirements of the latest National Electrical Code (NEC).

- 2-401.2** Lighting as described in this Section shall be provided for all AQUATIC VENUES.
- 2-401.3** No lighting controls shall be accessible to PATRONS.
- 2-401.4** Where natural lighting methods are used to meet the light level requirements of Section 2-401.5 during portions of the day when adequate natural lighting is available, one of the following methods shall be used to ensure that lights are turned on when natural lighting no longer meets these requirements:
  - (A)** Automatic lighting controls based on light levels or time of day, or
  - (B)** Written operational procedures where manual controls are used.
- 2-401.5** AQUATIC VENUE water surface and DECK light levels shall meet the following minimum maintained light levels:
  - (A)** Indoor Water Surface: 30 horizontal footcandles (323 lux)
  - (B)** Outdoor Water Surface: 10 horizontal footcandles (108 lux)
  - (C)** DECK: 10 horizontal footcandles (108 lux).
- 2-401.6** Overhead Lighting
  - (A)** Artificial lighting shall be provided at all AQUATIC VENUES.
  - (B)** Lighting shall illuminate all parts of the AQUATIC VENUE including the water, the depth markers, signs, entrances, exits, HYGIENE FACILITIES, restrooms, safety equipment, and the PERIMETER DECK area and walkways.
- 2-401.7** Underwater Lighting
  - (A)** Underwater lighting, where provided, shall be not less than eight (8) initial rated lumens per square foot of AQUATIC VENUE water surface area.
    - (1)** Such underwater lights, in conjunction with overhead or equivalent DECK lighting, shall be located to provide illumination so that all portions of the AQUATIC VENUE, including the AQUATIC VENUE bottom and drain(s), may be readily seen.
    - (2)** Higher underwater light levels shall be considered for deeper water to achieve this outcome.
    - (3)** Colored lights must meet the same requirements for illumination as indicated in this Section.
  - (B)** Dimmable lights shall not be used for underwater lighting.
  - (C)** All underwater light fixture lenses shall be clear.
- 2-401.8** Windows and any other features providing natural light into the AQUATIC VENUE space and overhead or equivalent DECK lighting shall be designed or arranged to inhibit or reduce glare on the AQUATIC VENUE water surface that would prevent seeing objects on the AQUATIC VENUE bottom.

**2-402 Indoor Aquatic Facility Ventilation**

- 2-402.1** INDOOR AQUATIC FACILITY AIR HANDLING SYSTEMS shall be designed, constructed, and installed to support the health and SAFETY of the building's PATRONS.
- 2-402.2** The AQUATIC FACILITY OWNER shall request from the contractor installing the INDOOR AQUATIC FACILITY AIR HANDLING SYSTEM an operating manual from the manufacturer.
- 2-402.3** AIR HANDLING SYSTEM Commissioning
  - (A)** A qualified, licensed professional shall commission the AIR HANDLING SYSTEM to verify that the installed system is operating properly in accordance with the system's design.

**2-403 Indoor Aquatic Facility Acoustics**

**2-403.1** INDOOR AQUATIC FACILITIES must receive acoustical treatment which will prevent reverberations of sound that may hinder communication.

**2-404 Indoor Aquatic Facility Electrical Systems and Components**

Nothing in these Regulations shall be construed as providing relief from any applicable requirements of the NEC and local codes and amendments.

**2-405 Aquatic Venue Water Heating**

When designing AQUATIC VENUE heating equipment, measures shall be taken to prevent BATHER exposure to water temperatures in excess of 104°F.

**2-406 First Aid Area**

Design and construction of new AQUATIC FACILITIES not directly associated with residential living quarters shall include an area designated for first aid equipment and/or treatment.

**2-407 Drinking Fountains**

**2-407.1** A drinking fountain shall be provided inside an AQUATIC FACILITY.

(A) Plans for alternate locations of drinking fountains, the use of bottled water, or water dispensing units may be submitted and evaluated by the HEALTH AUTHORITY.

(B) If the drinking fountain cannot be provided inside the AQUATIC FACILITY, it shall be provided in a common use building or area adjacent to the AQUATIC FACILITY entrance and on the normal path of BATHERS going to the AQUATIC FACILITY entrance.

**2-407.2** The drinking fountain shall be located where it is readily accessible and not a hazard to BATHERS. The drinking fountain shall not be located in a SHOWER area or toilet area.

**2-407.3** A single drinking fountain shall be allowed for one or more AQUATIC VENUES within an AQUATIC FACILITY.

**2-407.4** The drinking fountain shall be an angle jet type installed according to applicable plumbing codes.

**2-407.5** The drinking fountain shall be supplied with water from an approved potable water supply.

**2-407.6** The wastewater discharged from a drinking fountain shall be routed to an approved sanitary sewer system or other approved disposal area according to applicable plumbing codes.

**2-408 Trash Receptacles**

**2-408.1** A sufficient number of receptacles shall be provided within an AQUATIC FACILITY to ensure that trash can be disposed of properly to maintain safe and sanitary conditions.

**2-408.2** Receptacles shall be designed to be closed with a lid or other cover so they remain closed until intentionally opened.

**2-409 Food and Drink Concessions**

Concessions for food and drink in an AQUATIC FACILITY shall meet all requirements established by the HEALTH AUTHORITY and relevant law.

**2-4010 Spectator Areas**

- 2-4010.1** An area designed for use by SPECTATORS may be located within an AQUATIC FACILITY ENCLOSURE.
- 2-4010.2** DECK
  - (A)** When a SPECTATOR area or access to a SPECTATOR area is located within the AQUATIC FACILITY ENCLOSURE, the DECK adjacent to the area or access shall provide egress width for the SPECTATORS in addition to the width required by these Regulations.
- 2-4010.3** SPECTATOR or other area located in a balcony within ten (10) feet of or overhanging any portion of an AQUATIC VENUE shall be designed to deter jumping or diving into the AQUATIC VENUE.

<b>2-5</b>	<b>Recirculation System Design, Equipment and Water Treatment</b>
<b>Subparts</b>	
<b>2-501</b>	<b>General Equipment Standards</b>
<b>2-502</b>	<b>Recirculation Systems and Equipment</b>
<b>2-503</b>	<b>Filtration</b>
<b>2-504</b>	<b>Disinfection and pH Control</b>

**2-501 General Equipment Standards**

- 2-501.1** All equipment used or proposed for use in AQUATIC FACILITIES governed under these Regulations shall be:
  - (A)** Of a proven design and construction, and
  - (B)** Listed and labeled to a specific standard for the specified equipment use by an ANSI-accredited certification organization.
- 2-501.2** Where standards do not exist, technical documentation shall be submitted to the HEALTH AUTHORITY to demonstrate acceptability for use in AQUATIC FACILITIES. The HEALTH AUTHORITY may require tests at the expense of the applicant, as proof of acceptability.

**2-502 Recirculation Systems and Equipment**

- 2-502.1** General Requirements

Each AQUATIC VENUE designed to recirculate water shall be equipped and operated with a recirculation and filtration system capable of meeting the provisions outlined in this Section.

  - (A)** The installation of the recirculation and the filtration system components shall be performed in accordance with the designer's and manufacturer's instructions.
  - (B)** A water RECIRCULATION SYSTEM consisting of one or more pumps, pipes, return INLETS, suction outlets, tanks, filters, and other necessary equipment shall be provided.
- 2-502.2** INLETS
  - (A)** The RECIRCULATION SYSTEM shall be designed with sufficient flexibility to achieve a hydraulic apportionment that will ensure the following:
    - (1)** Effective distribution of treated water, and
    - (2)** Maintenance of a uniform disinfectant residual and PH throughout the AQUATIC VENUE. Alternative designs shall be allowed based on adequate engineering justification.
  - (B)** Effective distribution of treated water shall be accomplished by either a continuous perimeter overflow system with integral INLETS or by

means of directionally adjustable INLETS adequate in design, number, and location.

- (C) AQUATIC VENUES shall use wall and/or floor INLETS to provide adequate mixing.
- (D) For AQUATIC VENUES greater than 35 feet wide, floor INLETS shall be required.
- (E) All other types of INLET systems not covered in this section shall be subject to approval by the HEALTH AUTHORITY with proper engineering justification.
- (F) INLETS shall be hydraulically sized to provide the design flow rates for each AQUATIC VENUE area of multi-zone AQUATIC VENUES based on the required design TURNOVER for each zone.
- (G) INLETS shall not extend from the wall or floor.
- (H) Floor INLETS shall be spaced to effectively distribute the treated water throughout the AQUATIC VENUE.
- (I) Floor INLETS shall be flush with the bottom of the AQUATIC VENUE.
  - (1) Distance between floor INLETS shall be no greater than 15 feet.
  - (2) A row of floor INLETS shall be located within 10 feet of each side wall.
  - (3) Floor INLETS, used in combination with wall INLETS, shall be spaced no greater than ten (10) feet from the nearest side wall.
- (J) Wall INLET velocity shall mix the water effectively.
  - (1) INLETS shall be directionally adjustable to provide effective distribution of water.
  - (2) Wall INLETS shall be spaced no greater than 15 feet apart.
  - (3) INLETS shall be placed within five (5) feet of each corner of the AQUATIC VENUE.
  - (4) INLETS shall be placed at least five (5) feet from a SKIMMER.
  - (5) INLETS shall be placed in each recessed or isolated area of the AQUATIC VENUE.
  - (6) INLETS shall be placed not less than 18 inches below the normal operating water level of the AQUATIC VENUE.
- (K) Wall INLETS shall not require design to provide directional flow if part of a manufactured gutter system in which the filtered return water conduit is contained within the gutter structure.
- (L) Dye testing may be required by the HEALTH AUTHORITY to evaluate the mixing characteristics of the RECIRCULATION SYSTEM. If a dye test reveals inadequate mixing in the AQUATIC VENUE after 20 minutes, the RECIRCULATION SYSTEM shall be adjusted or modified to assure adequate mixing.

**2-502.3 PERIMETER GUTTER SYSTEMS**

- (A) All AQUATIC VENUES shall be designed to provide skimming for the entire AQUATIC VENUE surface area with an engineering rationale provided by the DESIGN PROFESSIONAL or licensed contractor.
- (B) For AQUATIC VENUES that require a PERIMETER GUTTER SYSTEM, the PERIMETER GUTTER SYSTEM shall extend around the entire AQUATIC VENUE perimeter except where noted in these Regulations.
- (C) ZERO DEPTH ENTRY AQUATIC VENUES shall have a continuous overflow trench that terminates as close to the side walls as practical, including any zero-depth portion of the AQUATIC VENUE perimeter.
- (D) Where a PERIMETER GUTTER SYSTEM cannot be continuous, the ends of each section shall terminate as close as practical to each other.



- (E) The PERIMETER GUTTER SYSTEM shall be designed to allow the continuous removal of water from the AQUATIC VENUE'S upper surface at a rate of at least 125 percent of the APPROVED total recirculation flow rate chosen by the designer.
- (F) Gutters shall be equipped with removable grating to allow for ready inspection, cleaning, and repair.
- (G) Gutters shall be designed to prevent the entrapment of BATHER'S limbs.
- (H) Drop boxes, converters, return piping, or FLUMES used to convey water from the gutter shall be designed to:
  - (1) Prevent flooding and BACKFLOW of skimmed water into the AQUATIC VENUE, and
  - (2) Handle at least 125 percent of the APPROVED total recirculation flow.
- (I) All PERIMETER GUTTER SYSTEMS shall be designed with an effective net surge capacity of not less than one gallon for each square foot of AQUATIC VENUE surface area.
- (J) Surge shall be provided within a surge tank or the gutter above the normal operating level.
  - (1) The tank capacity specified shall be the net capacity.
  - (2) The DESIGN PROFESSIONAL, or licensed contractor, shall define the minimum, maximum, and normal AQUATIC VENUE operating water levels in the surge tank.
  - (3) The surge tank's minimum, maximum, and normal AQUATIC VENUE operating water levels shall be marked on the tank so as to be readily visible for inspection.
  - (4) Surge tanks shall have overflow pipes to convey excess water to waste via an air gap or other APPROVED BACKFLOW prevention device.
- (K) Gutters shall be level within a tolerance of plus or minus 1/16 inch around the perimeter of the AQUATIC VENUE.
- (L) Automatic makeup water supply equipment shall be provided to maintain continuous skimming of AQUATIC VENUES with PERIMETER GUTTER SYSTEMS.
- (M) Makeup water shall be supplied through an air gap or other APPROVED BACKFLOW prevention device.

**2-502.4** SKIMMERS and Alternative Gutter Technologies Using In- AQUATIC VENUE Surge Capacity

- (A) The use of manufactured direct suction SKIMMERS shall be in accordance with the manufacturer's recommendations to include the installation of associated equalizer lines and valves.
- (B) Where SKIMMERS are used, at least one surface SKIMMER shall be provided for each 400 square feet of surface area or fraction thereof, with a minimum of two skimmers provided for each AQUATIC VENUE.
- (C) Additional SKIMMERS may be required to achieve effective skimming under site-specific conditions (e.g., heavy winds and/or contaminant loading).
- (D) Hybrid systems that incorporate surge weirs in the overflow gutters to provide for in-AQUATIC VENUE surge shall meet all of the requirements specified for PERIMETER GUTTER SYSTEMS with the exception of the surge or balance tank, since the surge capacity requirement will be alternately met by the in-AQUATIC VENUE surge capacity.

- (1) The number of surge weirs shall be based on the individual surge weir capacity and the operational apportionment of the design recirculation flow rate.
- (2) The location of the required number of surge weirs shall be uniformly spaced in the gutter sections.
- (E) When used, the SKIMMER SYSTEM shall be designed to handle up to 100 percent of the total recirculation flow rate chosen by the designer.
- (F) SKIMMERS shall be so located as to provide effective skimming of the entire water surface.
- (G) SKIMMERS shall be located so as not to be affected by areas with restricted flow such as near steps and within small recesses.
- (H) Wind direction shall be considered in the number and placement of SKIMMERS.
- (I) The flow rate for the SKIMMERS shall comply with the manufacturer's data plates.
- (J) In the absence of a maximum specified SKIMMER flow rate, the flow through the SKIMMER shall not exceed 55 GPM.
- (K) Each SKIMMER shall have a weir that adjusts automatically to variations in water level over a minimum range of four (4) inches.
- (L) Each SKIMMER shall be equipped with a trimmer valve capable of distributing the total flow between individual SKIMMERS.
- (M) Each SKIMMER shall be level with all other SKIMMERS in the AQUATIC VENUE within a tolerance of plus or minus 1/4 inch.

**2-502.5** Submerged Suction Outlet

- (A) Submerged suction outlets, including sumps and covers, shall be listed and labeled to the requirements of ANSI/APSP-16 2011 or successor standard.
- (B) Unless an UNBLOCKABLE DRAIN COVER design is provided, a minimum of two (2) hydraulically balanced filtration system outlets are required in the bottom of an AQUATIC VENUE.
  - (1) One of the outlets may be located on the bottom of a side/end wall at the deepest level.
  - (2) The outlets shall be connected to a single main suction pipe by branch lines piped to provide hydraulic balance between the drains.
  - (3) The branch lines shall not be valved to be capable of operating independently.
- (C) Outlets shall be spaced no more than 15 feet from the AQUATIC VENUE side walls.
- (D) Outlets shall be located no less than three (3) feet apart, measuring between the centerlines of the suction outlet covers, or on separate planes.
- (E) Where gravity outlets are used, the main drain outlet shall be connected to a surge tank, collection tank, or balance tank/pipe.
- (F) The main drain system shall be designed at a minimum to handle recirculation flow of 100 percent of the total design recirculation flow rate.
  - (1) Where there are two main drain outlets, the branch pipe from each main drain outlet shall be designed to carry 100 percent of the recirculation flow rate.
  - (2) Where three or more main drain outlets are connected by branch piping in accordance with this Section, the design flow

through each branch pipe from each main drain outlet may be as follows:

(a)  $Q_{\max} = Q_{\text{total}} / (N-1)$  where  $Q_{\max}$  for each drain =  $Q_{\text{total}} / (\text{recirculation rate}) / (\text{number of drains less one})$ .

- (G) The main drain suction pipe to the pump shall be equipped with a proportioning valve(s) to adjust the flow distribution between the main drain piping and the surface skimming system piping.
- (H) Flow velocities shall meet ANSI/APSP-16 2011, or successor standard, based on a 100 percent design flow through each main drain cover.

**2-502.6** Piping

- (A) Piping system components in contact with AQUATIC VENUE water shall be of non-toxic material, resistant to corrosion, able to withstand operating pressures, chemicals, and temperatures.
- (B) RECIRCULATION SYSTEM piping shall be designed so that water velocities do not exceed eight feet per second (8ft/s) on the discharge side of the recirculation pump unless alternative values have proper engineering justification.
  - (1) Suction piping shall be sized so that the water velocity does not exceed six feet per second (6ft/s) unless alternative values have proper engineering justification.
  - (2) Gravity piping shall be sized with consideration of available system head or as demonstrated by detailed hydraulic calculations at the design recirculation flow rate.
- (C) Provisions shall be made for the expansion and contraction of pipes due to temperature variations.
  - (1) Provisions shall be made for the complete drainage of all AQUATIC VENUE piping and designed with no less than a 2% slope.
  - (2) All piping shall be supported continuously or at sufficiently close intervals to prevent the sagging and settlement of pipes.
- (D) All exposed piping shall be clearly marked to indicate function.
  - (1) All piping shall be clearly marked to indicate type or source of water and direction of flow with clear labeling and/or color coding.
  - (2) All valves shall be clearly marked to indicate function with clear labeling and/or color coding.
  - (3) A complete, easily readable schematic of the entire AQUATIC VENUE RECIRCULATION SYSTEM shall be openly displayed in the mechanical room or available to maintenance and inspection personnel.
- (E) Suction and supply AQUATIC VENUE piping shall be subjected to a static hydraulic water pressure test for the duration specified by an engineer and/or the HEALTH AUTHORITY.

**2-502.7** Strainers and Pumps

- (A) All pumps, except those for vacuum filter installations, shall have a strainer/screen device on the suction side to protect the filtration and pumping equipment and have a spare strainer basket present for each pump.
- (B) All material used in the construction of strainers and screens shall be corrosion resistant.
- (C) VFDs may be installed to control all recirculation and feature pumps.

- (1) The recirculation pump(s) shall have adequate capacity to meet the recirculation flow design requirements in accordance with the maximum TDH required by the entire RECIRCULATION SYSTEM under the most extreme operating conditions. The system design shall include an increase of 23.1 feet of head between a clean and dirty filter condition.
- (2) The pump shall be designed to maintain design recirculation flows under all conditions.
- (3) Where vacuum filters are used, a vacuum limit switch shall be provided on the pump suction line.
- (4) The vacuum limit switch shall be set for a maximum vacuum of 18 inches of mercury.
- (5) All recirculation pumps shall be self-priming or flooded-suction.
- (D) All pumps and associated motors must have equivalent horsepower ratings.
- (E) A compound vacuum-pressure gauge shall be installed on the pump or on the suction line as close to the pump as possible when a pump port is unavailable or inaccessible.
  - (1) A pressure gauge shall be installed on the pump or on the discharge line adjacent to the pump when the pump port is unavailable or inaccessible.
  - (2) Gauges shall be installed so they can be easily read.
  - (3) All gauges shall be equipped with valves to allow for servicing under operating conditions.

**2-502.8** Flow Measurement and Control

- (A) A flow meter accurate to within +/- 5 percent of the actual design flow shall be provided for each filtration system. When a VFD is in use a flow meter must be accurate to within +/- 2 percent.
- (B) Flow meters shall be installed in accordance with the manufacturer's instructions.
- (C) All pumps shall be installed with a manual adjustable discharge valve to provide for system isolation.

**2-502.9** Flow Rates/Turnover Time

**Table 2-502.9: Aquatic Venue Maximum Allowable Turnover Times**

Type of Aquatic Venue	Turnover Maximum
Activity Pools	4 hours
Diving Pools	6 hours
Interactive Water Play Venues*	0.5 hours
Isolation/Floatation Units*	4 Turnovers between users
Lazy Rivers	4 hours
Runout Slides	4 hours
Wading Pools*	0.5 hours
Child Amusement Lagoons*	0.5 hours
Wave Pools	4 hours
All Other Pools	6 hours
All Spas	0.5 hours
Surf Pools	Submit Engineering Justification from Equipment Manufacturer
<b>*Shall have secondary disinfection systems</b>	

- (A) All AQUATIC VENUES shall comply with the above maximum allowable TURNOVER times shown in **Table 2-502.9**.
- (B) The TURNOVER time shall be calculated based on the total volume of water divided by the flow rate through the filtration process.
  - (1) Unfiltered water such as water that may be withdrawn from and returned to the AQUATIC VENUE for such AQUATIC FEATURES as SLIDES by a pump separate from the filtration system, shall not factor into TURNOVER time.
- (C) The HEALTH AUTHORITY may grant a TURNOVER time WAIVER for AQUATIC VENUES with extreme volume or operating conditions based on a proper engineering justification.
- (D) TURNOVER times shall be calculated based solely on the flow rate through the filtration system as specified in **Table 2-502.9**.
- (E) The total volume of the AQUATIC VENUE system shall include the AQUATIC VENUE and any surge/balance tank.
- (F) Where water is drawn from the AQUATIC VENUE to supply water to AQUATIC FEATURES (e.g., SLIDES, tube rides), the water may be reused prior to filtration provided the DISINFECTANT and PH levels of the supply water are maintained at required levels.
- (G) The ratio of INTERACTIVE WATER PLAY AQUATIC VENUE feature water to filtered water shall be no greater than 3:1 in order to maintain the efficiency of the FILTRATION SYSTEM.
- (H) For AQUATIC FACILITIES that intend to reduce the recirculation flow rate below the minimum required design values when the AQUATIC VENUE is closed, the flow turndown system shall be designed as follows:
  - (1) The system flowrate shall not be reduced more than 50 percent lower than the minimum design requirements and only reduced when the AQUATIC VENUE is closed.
  - (2) The system flowrate shall be based on ensuring the minimum water clarity required under Section 3-506 is met before opening to the public.
  - (3) The system shall be required to maintain required DISINFECTANT and PH levels at all times.
  - (4) When the system is used to increase the recirculation flow rate above the minimum requirement (e.g., in times of peak use to maintain water quality goals more effectively) the following requirements shall not be exceeded:
    - (a) Velocity requirements inside of pipes (per Section 2-502.6(B));
    - (b) Maximum filtration system flow rate; and
    - (c) Maximum suction outlet cover rating.

**2-503 Filtration**

**2-503.1** Filtration shall be required for all AQUATIC VENUES that recirculate water.

**2-503.2** The granular media filter system shall have valves and piping to allow isolation, venting, complete drainage (for maintenance or inspections), and backwashing of filters.

- (A) Filtration accessories shall include the following items:
  - (1) Influent pressure gauge;
  - (2) Effluent pressure gauge;
  - (3) Backwash sight glass or other means to view backwash water clarity; and

- (4) Manual air relief system.
- (B) Filters shall be installed with adequate clearance and facilities for ready and safe inspection, maintenance, disassembly, and repair. A means and access for easy removal of filter media shall be required.
- (C) High-rate granular media filters shall be designed to operate at no more than the rate specified in the NSF/ANSI 50 listing or as provided per manufacturer, whichever rating is lower.
- (D) The granular media filter system shall be designed to backwash each filter at a rate of at least 15 gallons per minute per square foot of filter bed surface area, unless explicitly prohibited by the filter manufacturer and APPROVED at an alternate rate as specified in the NSF/ANSI 50 listing.
- (E) The minimum depth of filter media cannot be less than the depth specified by the manufacturer.
- (F) Influent and effluent pressure gauges shall have the capability to measure up to 20 pounds per square inch increase in the differential pressure across the filter bed in increments of one pound per square inch or less.
- (G) If coagulant feed systems are used, they shall be installed with the injection point located before the filters as far ahead as possible, with electrical interlocks in accordance with Sections 2-504.2(B) and (J).

**2-503.3** Precoat Filters

- (A) Filters should be used with the appropriate filter media as recommended by the filter manufacturer for maximum clarity and cycle length for AQUATIC VENUE use.
  - (1) Filter media shall be listed and labeled to NSF/ANSI Standard 50 by an ANSI-accredited certification organization and within the size specifications provided by the filter manufacturer and NSF/ANSI 50.
  - (2) Alternate types of filter media shall be permitted in accordance with the filter manufacturer's recommendation for AQUATIC VENUE use.
  - (3) Alternate types of filter media shall be listed and labeled to NSF Standard 50 by an ANSI-accredited certification organization.
- (B) The design filtration rate for vacuum precoat filters shall not be greater than either:
  - (1) 2 gallons per minute per square foot, or
  - (2) 2.5 gallons per minute per square foot when used with a continuous precoat media feed.
- (C) The design filtration rate for pressure precoat filters shall not be greater than the rate specified in the NSF/ANSI 50 listing or as provided per manufacturer, whichever rating is lower.
- (D) The filtration surface area shall be based on the outside surface area of the media with the manufacturer's recommended thickness of precoat media. If equipment is provided for the continuous feeding of filter media to the filter influent, the equipment shall be used in accordance with the manufacturer's specifications.
- (E) All discharged filter media shall be disposed of according to the law.

**2-503.4 Cartridge Filters**

- (A) The design filtration rate for surface-type cartridge filter shall not exceed the rate specified in the NSF/ANSI 50 listing or as provided per manufacturer, whichever rating is lower.
- (B) Filter cartridges shall be supplied and sized in accordance with the filter manufacturer's recommendation for AQUATIC VENUE use.

**2-504 Disinfection and pH Control**

**2-504.1 Chemical Addition Methods**

- (A) DISINFECTION and PH control chemicals shall be automatically introduced through the RECIRCULATION SYSTEM.
- (B) A chemical controller, as specified in Section 2-504.2(V) shall be provided and used for MONITORING and control of disinfectant and PH feed equipment.
- (C) DISINFECTION and PH control chemicals shall be added using a feeder that meets the requirements outlined in Section 2-504.2.

**2-504.2 Feed Equipment**

- (A) Chemical feeders shall be required on all new construction or at the SUBSTANTIAL ALTERATION of all AQUATIC VENUES following the adoption of these Regulations.
- (B) The AQUATIC FACILITY shall be equipped with chemical feed equipment such as, flow-through chemical feeders, electrolytic chemical generators, mechanical chemical feeders, chemical feed pumps, AUTOMATED CONTROLLERS, or other components, including but not limited to, WiFi monitoring systems; as approved by the HEALTH AUTHORITY. All chemical feeders shall be provided with an automatic means to be disabled through an electrical interlock with at least two of the following:
  - (1) Recirculation pump power;
  - (2) Flow meter/flow switch in the return line; and/or
  - (3) Chemical control power and paddle wheel or flow cell on the chemical controller if a safety test confirms feed systems are disabled through the controller when the pump is turned off, loses prime, or filters are backwashed.
- (C) The chemical feeders shall be installed according to the manufacturer's instructions.
- (D) A physical BARRIER shall be installed between chemical feed pumps supplying acid or liquid hypochlorite solution and other AQUATIC VENUE components to shield staff and equipment from chemical sprays and leaking connections.
- (E) Feeders shall be capable of supplying disinfectant and PH control chemicals to the AQUATIC VENUE to maintain the minimum required DISINFECTION levels at all times in accordance with these Regulations.
- (F) All CHLORINE dosing and generating equipment including erosion feeders, or in line electrolytic and brine/batch generators, shall be designed with a capacity to provide the following:
  - (1) Outdoor AQUATIC VENUES: 3.0 lbs of FAC/day/10,000 gal of AQUATIC VENUE water;
  - (2) Indoor AQUATIC VENUES: 1.0 lbs FAC/day/10,000 gal of AQUATIC VENUE water.
- (G) The rates above are suggested minimums and in all cases the engineer shall validate the feed and production equipment specified.

- (H)** The injection point of DISINFECTION chemicals shall be located before any PH control chemical injection point with sufficient physical separation of the injection points to reduce the likelihood of mixing of these chemicals in the piping during periods of interruption of the RECIRCULATION SYSTEM flow.
- (I)** Means of injection shall not allow BACKFLOW into the chemical system from the AQUATIC VENUE system.
- (J)** Coagulants shall be metered and injected through a pump system prior to the filters per the manufacturer's recommended rate.
- (K)** Use of compressed CHLORINE gas shall be prohibited for new construction and after SUBSTANTIAL ALTERATION to existing AQUATIC FACILITIES.
- (L)** Use of compressed CHLORINE gas in existing AQUATIC FACILITIES is covered in Section 3-503.1(D).
- (M)** Liquid solution feeders shall include positive displacement pumps such as peristaltic pumps, diaphragm pumps, venturi feeders, and piston pumps.
- (N)** Feed rates shall be locally adjusted on the pumps and also on/off controlled using an AUTOMATED CONTROLLER.
- (O)** Erosion feeders may be pressure, pressure differential, or spray erosion types.
  - (1)** Dry chemicals shall be granules or tablets.
  - (2)** Feeders shall have isolation valves on each side of the feeder to be closed before opening the unit.
  - (3)** Erosion feeders shall use AQUATIC VENUE water post-filtration as the source water unless APPROVED by the feeder manufacturer.
- (P)** Carbon dioxide and ozone are the only gas feed systems permitted in AQUATIC FACILITIES.
- (Q)** Proper ventilation shall be required for all gas systems.
- (R)** Where CO<sub>2</sub> cylinders are located indoors, a monitor and alarm shall be provided to alert of high CO<sub>2</sub> and/or low O<sub>2</sub> levels.
- (S)** Where used, UV light systems shall be installed in the RECIRCULATION SYSTEM after the filters.
  - (1)** A bypass pipe that is valved on both ends shall be installed to allow maintenance of the UV unit while the AQUATIC VENUE is in operation.
  - (2)** UV system operation shall be interlocked with the recirculation pump so that power to the UV system is interrupted when there is no water flow to the UV unit.
- (T)** In-line generator(s) or brine (batch) generator(s) shall be permitted on AQUATIC VENUES.
  - (1)** In-line generators shall use POOL-grade salt dosed into the AQUATIC VENUE to produce and introduce CHLORINE into the AQUATIC VENUE treatment loop through an electrolytic chamber.
  - (2)** Brine (Batch) generators shall produce CHLORINE through an electrolytic cell.
  - (3)** CHLORINE shall be produced from brines composed of POOL-grade salt.
  - (4)** Electrolytic generators shall have a TDS or salt (NaCl) readout and a low salt indicator.
  - (5)** The feed rate shall be adjustable from zero (0) to full range.



- (6) The generator unit shall be listed and labeled to UL 1081 (for electrical, fire and shock safety) by an ANSI-accredited certification organization.
- (7) The generator(s) shall be interlocked.
- (8) The saline content of the AQUATIC VENUE water shall be maintained in the required range specified by the manufacturer.
- (U) Feeders for PH adjustment shall:
  - (1) Utilize APPROVED substances for PH adjustment shall include but not be limited to muriatic (hydrochloric) acid, sodium bisulfate, carbon dioxide, sulfuric acid, sodium bicarbonate, and soda ash;
  - (2) Be adjustable from zero (0) to full range; and
  - (3) Have reservoirs clearly marked and labeled with its contents.
- (V) AUTOMATED CONTROLLERS shall be installed for MONITORING and turning on or off chemical feeders used for PH and disinfectants. A set point shall be used to target the disinfectant level and the PH level.

**2-504.3 SECONDARY DISINFECTION SYSTEMS**

- (A) The new construction or SUBSTANTIAL ALTERATION of the following INCREASED RISK AQUATIC VENUES shall be required to use a SECONDARY DISINFECTION SYSTEM after adoption of these Regulations:
  - (1) AQUATIC VENUES designed primarily for children under 5 years old; such as:
    - (a) WADING POOLS,
    - (b) CHILD AMUSEMENT LAGOONS, and
    - (c) INTERACTIVE WATER PLAY VENUES with no standing water;
  - (2) THERAPY POOLS; and
  - (3) ISOLATION AND FLOTATION UNITS.
- (B) If installed and labeled as SECONDARY DISINFECTION SYSTEMS, then they shall conform to all requirements specified under Section 2-504.3(C).
- (C) 3-log inactivation and OOCYST Reduction  
 SECONDARY DISINFECTION SYSTEMS shall be designed to achieve a minimum 3-log (99.9 percent) reduction in the number of infective *Cryptosporidium parvum* OOCYSTS per pass through the SECONDARY DISINFECTION SYSTEM.
  - (1) The SECONDARY DISINFECTION SYSTEM shall be located in the treatment loop (post filtration) and treat a portion (up to 100 percent) of the filtration flow prior to return of the water to the AQUATIC VENUE or AQUATIC FEATURE.
  - (2) The flow rate (Q) through the SECONDARY DISINFECTION SYSTEM shall be determined based upon the total volume of the AQUATIC VENUE or AQUATIC FEATURE (V) and a prescribed dilution time (T) for theoretically reducing the number of assumed infective *Cryptosporidium* OOCYSTS from an initial total number of 100 million ( $10^8$ ) OOCYSTS to a concentration of one OOCYST/100 mL.
  - (3) Accounting for a 3-log (99.9 percent) reduction of infective *Cryptosporidium* OOCYSTS through the SECONDARY DISINFECTION SYSTEM with each pass, the SECONDARY DISINFECTION SYSTEM flow rate (Q) shall be:
 
$$Q = V \times \{[14.8 - \ln(V)] / (60 \times T)\}, \text{ where:}$$
    - Q = SECONDARY DISINFECTION SYSTEM flow rate (GPM)

- $V$  = Total water volume of the AQUATIC VENUE or AQUATIC FEATURE, including surge tanks, piping, equipment, etc. (gals)
  - $T$  = Dilution time (hrs.)
- (4) The dilution time shall be the lesser of nine hours or 75 percent of the uninterrupted time an AQUATIC VENUE is closed in a 24 hour period.
- (5) Where a SECONDARY DISINFECTION SYSTEM is installed, a means shall be installed to confirm the required flow rate to maintain a minimum 3-log (99.9 percent) reduction of infective *Cryptosporidium* OOCYSTS at the minimum flow rate.
- (D) UV Light Systems
- UV equipment shall be third party validated in accordance with the practices outlined in the US EPA Ultraviolet Disinfectant Guidance Manual dated November, 2006, publication number EPA 815-R-06-007.
- (1) The US EPA Ultraviolet Disinfectant Guidance Manual shall be considered a recognized national standard in these Regulations.
- (2) UV systems and all materials used therein shall be suitable for their intended use.
- (3) The UV equipment shall be installed after the filtration and before the addition of primary disinfectant.
- (a) UV equipment shall be labeled with the following design specifications: maximum flow rate, minimum TRANSMISSIVITY, minimum intensity, and minimum dosage.
- (b) An inline strainer shall be installed after the UV unit to capture broken lamp glass or sleeves.
- (4) The equipment shall be electrically interlocked with feature pump(s) or automated feature supply valves, such that when the UV equipment fails to produce the required dosage as measured by an automated sensor(s), the water features do not operate.
- (5) UV systems shall not operate when the RECIRCULATION SYSTEM is not operating.
- (6) The UV equipment shall be complete with calibrated UV sensors, which record the output of all the UV lamps installed in a system.
- (a) Where multiple lamps are fitted, sufficient sensors shall be provided to measure each lamp.
- (b) If the design utilizes fewer sensors than lamps, the location of lamps and sensors shall be such that the output of all lamps is adequately measured.
- (7) The automated shut down of the UV equipment for any reason shall initiate a visual alarm or other indication which will alert staff on-site or remotely.
- (a) Signage instructing staff or PATRONS to notify facility management shall be posted adjacent to the visual indication.
- (b) If the AQUATIC FACILITY is not staffed, the sign shall include a means to contact management whenever the AQUATIC FACILITY is in use.
- (8) The UV equipment shall be supplied with the appropriate validation reports and documentation for that equipment model.

- (9) This documentation will include a graph or chart indicating the dose at which a 3-log inactivation is guaranteed for the system in question.
    - (a) This dose shall be inclusive of validation factors and RED BIAS.
    - (b) System performance curves that do not include such factors are not considered validated systems.
  - (10) Validation records shall include the graph indicating the minimum intensity reading required at the operational flow for the minimum RED required to achieve 3-log reduction. Where systems are validated to a specific dose, the graph shall show the minimum intensity reading required at the operational flow for that dose.
  - (11) Based on the recommended validation protocol presented in the US EPA Disinfection Guidance Manual, UV reactors certified by ÖNORM and DVGW for a *Bacillus subtilis* RED of 40mJ/cm<sup>2</sup> shall be granted 3-log *Cryptosporidium* and 3-log *Giardia* inactivation credit as required in these Regulations.
- (E) Ozone DISINFECTION
- SECONDARY DISINFECTION SYSTEMS using ozone shall provide the required inactivation of *Cryptosporidium* in the full flow of the SECONDARY DISINFECTION SYSTEM after any side-stream has remixed into the full flow of the SECONDARY DISINFECTION SYSTEM.
- (1) Ozone systems shall be validated by an ANSI-accredited third party testing and certification organization to confirm that they provide a minimum 3-log (99.9 percent) inactivation of *Cryptosporidium* in the full SECONDARY DISINFECTION SYSTEM flow after any side-stream has remixed into the full SECONDARY DISINFECTION SYSTEM flow and prior to return of the water to the AQUATIC VENUE or AQUATIC FEATURE recirculation treatment loop.
  - (2) Ozone systems and all materials used therein shall be suitable for their intended use and shall be installed:
    - (a) In accordance with all applicable requirements,
    - (b) As listed and labeled to a specific standard by an ANSI-accredited certification organization, and
    - (c) As specified by the manufacturer.
  - (3) An ozone system shall be a complete system consisting of the following (either skid-mounted or components):
    - (a) Ozone generator;
    - (b) Injector / injector manifold;
    - (c) Reaction tank (contact tank) / mixing tank / degas tower;
    - (d) Degas valve (if applicable, to vent un-dissolved gaseous ozone);
    - (e) Ozone destruct (to destroy un-dissolved gaseous ozone);
    - (f) ORP monitor / controller;
    - (g) Ambient ozone monitor / controller;
    - (h) Air flow meter / controller; and
    - (i) Water BACKFLOW prevention device in gas delivery system.
  - (4) These components (or skid) shall be installed as specified by the manufacturer to maintain the required system validation as noted above.

- (5)** The ozone generating equipment shall be designed, sized, and controlled utilizing an ORP monitor/controller (independent of and in addition to any halogen ORP monitor/controller).

  - (a)** The device shall be placed in the AQUATIC VENUE and AQUATIC FEATURE recirculation water downstream of the ozone side-stream loop and before the halogen feed location.
  - (b)** The minimum ORP reading shall be no less than 600 mV measured directly after (one to five feet (1ft. to 5 ft.)) the ozone side-stream remixes into the full flow of the RECIRCULATION SYSTEM.
  - (c)** The maximum ORP reading shall be no greater than 900 mV.
- (6)** The ozone system injection point shall be located in the AQUATIC VENUE return line after the filtration and heating equipment, prior to the primary DISINFECTANT injection point.

  - (a)** The injection and mixing system shall not prevent the attainment of the recirculation rate required elsewhere in these Regulations.
  - (b)** An ambient ozone gas monitor/controller located adjacent to the ozone reactor/contact tank shall be utilized to disable the ozone system in the event of an ozone gas leak.
- (7)** At the time the ozone generating equipment is installed, again after 24 hours of operation, and annually thereafter, the air space within six (6) inches of the AQUATIC VENUE water shall be tested to determine compliance of less than 0.1 PPM gaseous ozone. Results of the test shall be maintained on site for review by the HEALTH AUTHORITY.
- (8)** Automatic shutdown shall occur under any condition that would result in the ozone system not operating within the established parameters needed to achieve a 3-log inactivation of *Cryptosporidium*.
- (9)** The equipment shall be electrically interlocked with AQUATIC VENUE pump(s) or automated feature supply valves, such that when the ozone equipment fails to produce the required dosage as measured by ORP, the AQUATIC VENUE does not operate.
- (10)** If the ORP reading for the ozone system drops below 600 mV, a visual alarm or other indication shall be initiated that will alert staff on-site or remotely. Signage to notify facility management shall be adjacent to the visual alarm.
- (11)** In order to ensure that the supplied ozone system meets all the requirements of the standard, the manufacturer shall maintain a quality system audited on a regular basis to a recognized quality standard. The ozone system shall be supplied with the appropriate validation reports and documentation for that equipment model.

  - (a)** Ozone validation reports shall include a graph, chart, or other documentation which clearly indicates the required operating parameters for which a 3-log inactivation is guaranteed for the system in question.
  - (b)** This dose shall be inclusive of validation factors.

- (c) System performance curves that do not include such factors are not considered validated systems.

**2-504.4 SUPPLEMENTAL DISINFECTION SYSTEMS**

- (A) AQUATIC VENUES that do not require SECONDARY DISINFECTION SYSTEMS may install SUPPLEMENTAL DISINFECTION SYSTEMS for the purpose of enhancing overall system performance and improving water quality.
  - (1) SUPPLEMENTAL DISINFECTION SYSTEMS shall not be required on any AQUATIC VENUE.
  - (2) SUPPLEMENTAL DISINFECTION SYSTEMS are not required to meet the following requirements of a SECONDARY DISINFECTION SYSTEM:
    - (a) They do not need to achieve a 3-log (99.9 percent) inactivation of *Cryptosporidium parvum*; and
    - (b) They do not need to be able to reduce the total number of infective OOCYSTS to one OOCYST per 100 mL; and
  - (3) Each system shall be clearly labeled, "Supplemental Disinfection System."
- (B) When UV is used as a SUPPLEMENTAL DISINFECTION SYSTEM, all requirements of Section 2-504.3(D)(2) through 2-504.3(D)(5) shall be met. Water features shall not require shut off if the supplemental UV system does not produce the required dosage.
- (C) When ozone is used as a SUPPLEMENTAL DISINFECTION SYSTEM, all requirements of Section 2-504.3(E)(2) through 2-504.3(E)(7) shall be met. The maximum ORP reading shall be no greater than 900 mV.
- (D) Only those systems that are EPA-registered for use as disinfectants in AQUATIC VENUES shall be permitted.
  - (1) Copper/silver systems, and all materials used therein, shall be suitable for their intended use.
  - (2) Copper/silver systems, and all materials used therein, shall be installed in accordance with all applicable requirements and manufacturer's instructions.
- (E) UV light / hydrogen peroxide combination systems shall be prohibited for use in AQUATIC FACILITIES.

**2-504.5 Microbiological Testing Equipment**

Microbiological testing equipment and methods shall be:

- (A) EPA-Approved, EPA-Accepted, EPA-Equivalent;
- (B) Conforming to the latest edition of Standard Methods for the Examination of Water and Wastewater; and/or
- (C) Listed and labeled to NSF/ANSI 50 by an ANSI-accredited certification organization.

<b>2-6</b>	<b>Decks and Equipment</b>
<b>Subparts</b>	
<b>2-601</b>	<b>Decks</b>
<b>2-602</b>	<b>Diving Boards and Platforms</b>
<b>2-603</b>	<b>Starting Platforms</b>
<b>2-604</b>	<b>Enclosures and Barriers</b>
<b>2-605</b>	<b>Aquatic Venue Cleaning Systems</b>

**2-601 Decks**

- 2-601.1** DECKS shall be constructed in conformance with all applicable provisions of this Section.
- (A) DECKS shall be designed to allow for required LIFEGUARD placement for BATHER surveillance and safety equipment.
  - (B) DECKS shall have a minimum of four (4) feet of clearance from the AQUATIC VENUE edge to fencing or other obstructions to allow for LIFEGUARD transit, roaming, or change of positioning, to maximize viewing the zone of BATHER surveillance as well as the execution of water extrication.
  - (C) Access points must be provided for LIFEGUARDS to transit between LIFEGUARD positions.
  - (D) The designer and OWNER shall consider the impact on BATHER surveillance when determining placement of structural, operational, and theme elements. These elements may include, but are not limited to:
    - (1) Chairs,
    - (2) Fencing,
    - (3) Landscaping elements,
    - (4) ADA access equipment, and
    - (5) AQUATIC FEATURES.
  - (E) Conditions between adjacent DECK materials, components, and concrete pours shall not have open joints or gaps larger than 3/16 inch wide, nor a maximum difference in vertical elevation of 1/4 inch.
    - (1) Any change in vertical elevation shall be considered an edge condition.
    - (2) Open joints or gaps larger than 3/16 inch wide or with vertical elevations exceeding 1/4 inch shall be rectified using appropriate fillers.
    - (3) The use of fillers such as caulk or sealant in joints or gaps shall be permitted for expansion and contraction.
  - (F) All DECK edges shall be beveled, rounded, or otherwise relieved to eliminate sharp corners.
  - (G) Joints in DECKING shall be provided to minimize the potential for cracks due to a change in elevation, for movement of the slab and for shrinkage control.
- 2-601.2** Finish materials for the PERIMETER DECK shall be suitable for the AQUATIC VENUE environment, non-toxic, and substantially impervious.
- (A) Continuous watertight EXPANSION JOINT material shall be provided between PERIMETER DECKS and AQUATIC VENUE coping. Where applicable, the EXPANSION JOINT shall be designed and constructed so as to protect the coping and its mortar bed from damage as a result of movement of the adjoining DECK.
  - (B) All conditions between adjacent concrete PERIMETER DECK pours shall be constructed with watertight EXPANSION JOINTS.
    - (1) Joints shall be at least 3/16 inch in continuous width.
    - (2) The maximum allowable vertical differential across a joint shall be 1/4 inch.
- 2-601.3** DECKS shall be sloped away from the AQUATIC VENUE and in accordance with the following: Smooth finishes sloped at 1/8 inch per foot; moderately textured finishes sloped at 1/4 inch per foot; and heavily textured finishes sloped at 3/8 inch per foot.

- (A) The slope of all DECK areas shall be in accordance with the law.
  - (1) All water that touches areas defined as DECK, including water originating in the AQUATIC VENUE, shall drain effectively to either perimeter areas or to DECK drains.
  - (2) Drainage shall remove AQUATIC VENUE water that splashes outside of the AQUATIC VENUE and beyond a PERIMETER GUTTER SYSTEM, DECK cleaning water, and rain water without leaving standing water.
- (B) The placement of DECK drains, where provided, shall effectively carry water away from the AQUATIC VENUE and off the DECK without ponding.
- (C) There shall be no direct connection between the DECK drains and the sanitary sewer system.
  - (1) DECK drains shall not drain to the AQUATIC VENUE, PERIMETER GUTTER SYSTEM, or any component of the RECIRCULATION SYSTEM.
- (D) Drain receptacles shall consist of non-corrosive or corrosion-resistant materials.
- (E) Drain covers shall be suitable for bare foot traffic with openings no greater than 1/2 inch and be easily removable with a simple tool to facilitate regular cleaning.

**2-601.4** Materials/Slip Resistance

- (A) PERIMETER DECK and POOL DECK shall be constructed with a uniform and easily cleaned surface such as concrete, tile, manufactured or acrylic surfaces.
- (B) All DECKS shall have slip-resistant, textured finishes, which are not conducive to slipping under contact of bare feet in wet or dry conditions. All surfaces required to be slip-resistant shall have a minimum dynamic coefficient of friction at least equal to the requirements of ANSI A137.1-2012 for that installation as measured by the DCOF AcuTest.
- (C) Carpet and artificial turf shall be prohibited materials for PERIMETER DECK and POOL DECK.
- (D) Wood shall be a prohibited material for use as PERIMETER DECK.
- (E) DRY DECK shall be easily maintained and not create an IMMINENT HEALTH HAZARD.
  - (1) DRY DECK shall not be required to be hard-paved or impervious.
  - (2) Wood DECKING may be permitted for DRY DECK.
- (F) Loose plant material or bedding shall not be permitted within PERIMETER DECKS. Stable materials are permitted.

**2-601.5** DECK Dimensions

- (A) PERIMETER DECKS shall be four (4) feet minimum of unobstructed width around the AQUATIC VENUE perimeter.
  - (1) PERIMETER DECK may serve as part of the DESIGNATED WALKWAY.
  - (2) PERIMETER DECK areas shall be flush with AQUATIC VENUE walls or copings except where special conditions exist, such as elevated beam or parapet, raised transfer walls, or as permitted by other sections of these Regulations.
- (B) PERIMETER DECKS shall be provided around 90 percent of the AQUATIC VENUE perimeter except where special conditions exist as permitted by other sections of these Regulations.

- (1) Narrow AQUATIC VENUES where the entire perimeter and depth of the AQUATIC VENUE are readily reachable by a reaching pole and attached shepherd's crook from the PERIMETER DECK may obstruct up to 50 percent of the perimeter.
- (2) A WAIVER may be submitted addressing all access concerns regarding BATHER rescue due to DECK obstructions.
- (C) An unobstructed DECK area four (4) feet minimum in width shall be provided for access around:
  - (1) Diving equipment;
  - (2) Special feature stairways (such as a WATERSLIDE);
  - (3) Lifeguard stands;
  - (4) Diving boards;
  - (5) Similar DECK equipment;
  - (6) ADA access equipment;
  - (7) Structural columns; and
  - (8) Raised edge perimeters.
- (D) This unobstructed area may overlap the DESIGNATED WALKWAY.
  - (1) Where reasonably anticipated, queuing space shall be provided at applicable equipment to minimize encroachment into the DESIGNATED WALKWAY.
  - (2) Free area around equipment may consist of PERIMETER DECK and/or POOL DECK, as applicable.
- (E) A continuous and unobstructed DESIGNATED WALKWAY shall be provided in conformance with the law.
  - (1) DECK furniture locations shall be designed not to intrude upon any DESIGNATED WALKWAY.
  - (2) DESIGNATED WALKWAYS shall connect all site amenities, entrances and exits.
  - (3) DESIGNATED WALKWAYS may consist of any combination of permitted DECK types.

**2-601.6** WING WALLS or PENINSULAS

- (A) WING WALLS or PENINSULAS less than 18 inches in width shall not be considered a part of the PERIMETER DECK.
  - (1) A WING WALL or PENINSULA greater than 18 inches wide, but less than 48 inches wide, may be used by LIFEGUARD personnel, but shall not be considered as part of the PERIMETER DECK.
  - (2) Any WING WALL or PENINSULA intended to be accessed by LIFEGUARDS shall be constructed of slip-resistant materials.
- (B) If it is impractical to design a perimeter overflow system into the WING WALL or PENINSULA due to width or height, then the overflow system may bypass the WING WALL or PENINSULA.
- (C) WING WALLS and PENINSULAS shall be considered part of the AQUATIC VENUE. WING WALLS and PENINSULAS shall not be accounted for in calculating the AQUATIC VENUE perimeter.
- (D) WING WALLS and PENINSULAS shall be at or above the normal operating water level of the AQUATIC VENUE.
- (E) DECK drainage shall not be required for WING WALLS or PENINSULAS as they are considered part of the AQUATIC VENUE. The tops shall be crowned to prevent standing water and sloped to the AQUATIC VENUE or PERIMETER GUTTER SYSTEM.
- (F) Vertical depth markers shall be provided around WING WALLS and PENINSULAS in accordance with these Regulations.



- 2-601.7 ISLANDS**
- (A) An ISLAND not more than 18 inches in width shall be designed to discourage a person from walking on the ISLAND by not providing stairs, ladders, or bridges to the ISLAND.
  - (B) The surface of ISLANDS intended for foot traffic shall be slip-resistant.
  - (C) An ISLAND 18 inches to 48 inches wide may be allowed for use only by LIFEGUARDS.
  - (D) Vertical depth markers shall be provided around ISLANDS in accordance with Section 2-3018.1 and visible from all sides.
  - (E) Horizontal depth markings and warning signs shall also be required per Section 2-3018.1 if the ISLAND is designed for BATHER use. If the ISLAND is not designed for BATHER use, warning signs stating "No Entry" shall be required.
  - (F) An ISLAND designed for BATHER traffic shall be accessible by bridge, ramp, ladder, or stairway from the AQUATIC VENUE.
  - (G) All bridges spanning an AQUATIC VENUE or any other structures not intended for interactive play shall have a minimum clearance of eight (8) feet from the bottom of the AQUATIC VENUE and not less than four (4) feet from the top of the water to any structure overhead.
  - (H) Any bridge shall have a minimum 42 inch high BARRIER on both sides.
- 2-601.8** Domestic water hose bibs shall be provided in sufficient quantity, spacing, and type to wash down PERIMETER DECK and POOL DECK areas using a hose. All hose bibs shall be equipped with appropriate BACKFLOW prevention devices.

**2-602 Diving Boards and Platforms**

- 2-602.1** Diving boards and platforms shall be permitted only when the diving envelope and equipment conforms to the standards of one of the certifying agencies that regulate competitive diving. Such certifying agencies include FINA, NCAA, USA Diving, and NFSHSA.

**2-603 Starting Platforms**

- 2-603.1** Starting platforms shall be installed and conform to applicable safety standards established by FINA, USA Swimming, NCAA, NFSHSA, YMCA, or other sanctioning bodies.
- 2-603.2** Starting platforms shall be installed in a minimum water depth of four (4) feet.
- 2-603.3** The leading edge of starting platforms shall have a maximum height of 30 inches above the water surface.
- 2-603.4** Starting platforms shall have slip-resistant tread surfaces.
- 2-603.5** Starting platforms shall be installed and secured per manufacturer's recommendations at all times when in use.

**2-604 Enclosures and Barriers**

- 2-604.1** The ENCLOSURE may consist of any combination of building envelopes, site walls, or fencing as provided for in this Section.
- (A) ENCLOSURES shall be provided between CHEMICAL STORAGE SPACES, AQUATIC VENUE, mechanical spaces, and areas accessible to the public, in accordance with local building codes.
- 2-604.2** Construction Requirements
- (A) ENCLOSURES for AQUATIC VENUES shall not block or encumber a required emergency egress path from other structures.

- (B)** Windows on a building that form part of an ENCLOSURE around an AQUATIC VENUE shall have a maximum opening width not to exceed four (4) inches.
- (C)** Living or lodging units shall not enter directly into a common AQUATIC VENUE ENCLOSURE.
- (D)** For the purposes of this Section, height shall be measured from finished grade to the top of the ENCLOSURE on the side outside of the ENCLOSURE surrounding an AQUATIC VENUE.
  - (1)** Where a change in grade occurs at an ENCLOSURE, height shall be measured from the uppermost grade to the top of the ENCLOSURE.
  - (2)** AQUATIC FACILITY ENCLOSURES shall not be less than six (6) feet in height for all new construction, SUBSTANTIAL ALTERATION, or any ENCLOSURE alterations.
  - (3)** Any vertical members in the ENCLOSURE must not be more than four (4) inches apart. Any opening at the bottom of the ENCLOSURE must not be more than four (4) inches in height. Mesh style fencing must not exceed 1 3/4 inch openings.
  - (4)** The ENCLOSURE must be installed above a fixed, permanently installed solid surface.
  - (5)** Except where otherwise noted, all other BARRIERS not serving as part of an AQUATIC FACILITY ENCLOSURE shall not be less than 42 inches in height.

**2-604.3** Gates and Doors

- (A)** Egress from a publicly accessible space within a building shall not open directly into the ENCLOSURE of the AQUATIC VENUE.
- (B)** All primary public access gates or doors serving as part of an AQUATIC FACILITY ENCLOSURE or required AQUATIC VENUE ENCLOSURE must be self-closing and self-latching from any open position.
- (C)** All gates or doors shall be capable of being locked from the exterior. Electronically locked gates must be equipped with a back up battery to maintain function when power is interrupted.
- (D)** Gates or doors shall be designed in such a way that they do not prevent egress in the event of an emergency.
- (E)** Gates shall be at least equal in height at top and bottom to the ENCLOSURE of which they are a component.
- (F)** Unattended turnstiles shall not form a part of an AQUATIC FACILITY ENCLOSURE.
- (G)** EXIT GATES shall swing away from the AQUATIC VENUE ENCLOSURE except where emergency egress codes require them to swing into the AQUATIC VENUE ENCLOSURE.
- (H)** Self-latching mechanisms:
  - (1)** Must be located not less than 3 1/2 feet above finished grade and
  - (2)** Shall not be operable by small children on the outside of the ENCLOSURE around the AQUATIC VENUE.
- (I)** For all other AQUATIC VENUES, EXIT GATES or doors shall be constructed so as to prevent unauthorized entry from outside of the ENCLOSURE around the AQUATIC VENUE.
- (J)** In lieu of meeting the requirements of Section 2-604, AQUATIC FACILITIES with 24-hour security by one or more persons with a

physical presence at all AQUATIC VENUES within an ENCLOSURE may apply for a WAIVER to this Section.

- 2-604.4** INDOOR AQUATIC VENUES
- (A) Building walls enclosing an INDOOR AQUATIC FACILITY may be designated as the AQUATIC FACILITY ENCLOSURE.
  - (B) INDOOR AQUATIC VENUES shall be securable from unauthorized entry from other building areas and the exterior.
  - (C) Where separate indoor and outdoor AQUATIC VENUES are located on the same site, an AQUATIC VENUE ENCLOSURE shall be provided between them. **Exception:** Where all AQUATIC VENUES are operated continuously 12 months a year on the same schedule.
- 2-604.5** Except as otherwise required in these Regulations, one ENCLOSURE may surround multiple AQUATIC VENUES at one facility.
- (A) WADING POOLS and CHILD AMUSEMENT LAGOONS shall not require separation from other WADING POOLS and CHILD AMUSEMENT LAGOONS by a BARRIER. Refer to Section 2-1008 for additional guidance about WADING POOLS.

**2-605 Aquatic Venue Cleaning Systems**

- 2-605.1** The cleaning system provided shall not create an entanglement or suction entrapment hazard or interfere with the operation or use of the AQUATIC VENUE.
- 2-605.2** If there are multiple AQUATIC VENUES at one AQUATIC FACILITY, the AQUATIC FACILITY may use common cleaning equipment.
- 2-605.3** Use of integral vacuum systems, meaning a vacuum system that uses the main circulating pump or a dedicated vacuum pump connected to the AQUATIC VENUE with PVC piping and terminating at the AQUATIC VENUE with a flush-mounted vacuum port fitting, shall be prohibited.
- 2-605.4** Where used, portable vacuum cleaning equipment shall be powered by circuits having GFCIs.
- 2-605.5** Any ROBOTIC CLEANERS shall utilize low voltage for all components that are immersed in the AQUATIC VENUE water and be connected to a GFCI equipped circuit.

<b>2-7 Recirculation Equipment Room</b>
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<b>Subparts</b>
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| <b>2-701 Equipment Room</b>          |
| <b>2-702 Chemical Storage Spaces</b> |

**2-701 Equipment Room**

- 2-701.1** Indoor equipment room floors shall be of concrete or other suitable material having a smooth slip-resistant finish and shall have positive drainage, including a sump drain pump if necessary. Walls shall be finished in nonabsorbent material from floor level to four (4) feet in height.
- 2-701.2** The following applies to all EQUIPMENT ROOMS:
- (A) Floors shall have a slope toward the floor drain and/or sump drain pump adequate to prevent standing water at all times.
  - (B) Wall-floor junctures shall include curb construction of minimum height of four (4) inches.

- (C) The opening to the EQUIPMENT ROOM or area shall be designed to provide access for all anticipated equipment.
  - (D) At least one hose bib with an appropriate BACKFLOW preventer shall be located in the EQUIPMENT ROOM or shall be accessible within an adequate distance of the EQUIPMENT ROOM so that a hose can service the entire EQUIPMENT ROOM.
- 2-701.3** The size of the EQUIPMENT ROOM or area shall provide working space to perform routine operations and equipment service.
- (A) EQUIPMENT ROOMS also intended for storage shall have adequate space provided for such storage, without reducing the working spaces.
  - (B) EQUIPMENT ROOMS or areas shall be lighted to provide 30 FOOT CANDLES (323 lux) of illumination at floor level.
- 2-701.4** All electrical wiring shall conform to the current edition of the NEC. Equipment, components, and their application and installation must conform to the NRTL listing.
- 2-701.5** EQUIPMENT ROOM ventilation shall address:
- (A) Combustion requirements;
  - (B) Heat dissipation from equipment;
  - (C) Humidity from surge or balance tanks;
  - (D) Ventilation to the outside; and
  - (E) Air quality.
- 2-701.6** All piping in the EQUIPMENT ROOM shall be permanently identified by its use and the AQUATIC VENUE and AQUATIC FEATURE it serves.
- (A) Identification shall be provided for:
    - (1) Main drains and SKIMMERS;
    - (2) Filtered water;
    - (3) Make-up water;
    - (4) Backwash water;
    - (5) Disinfectant feeds;
    - (6) Acid (or PH) feeds;
    - (7) Compressed air lines;
    - (8) Gutters;
    - (9) Chemical sample piping; and
    - (10) AQUATIC VENUE heating lines.
  - (B) All piping shall be marked with directional arrows as necessary to determine flow direction.
    - (1) A water-resistant, easily read, wall-mounted piping diagram shall be furnished and installed inside the EQUIPMENT ROOM.
- 2-701.7** Separation from CHEMICAL STORAGE SPACES
- (A) Combustion equipment, air-handling equipment, and electrical equipment shall not be exposed to air contaminated with corrosive chemical vapors.
  - (B) Doors between an EQUIPMENT ROOM and an INDOOR AQUATIC FACILITY shall be equipped with an automatic closer. The door, frame, and automatic closer shall be installed and maintained to ensure that the door closes completely, latches, and locks without human assistance.
    - (1) The locks shall require a key or combination to open from the INDOOR AQUATIC FACILITY side.
    - (2) The locks shall be designed and installed to be opened by one hand from the inside of the room under all circumstances, without the use of a key or tool.

- (C) Doors shall be equipped with permanent signage warning against unauthorized entry.
- (D) All sides of the doors shall be equipped with a gasket. The gasket shall be installed to prevent the passage of air, or vapors when the door is closed.

**2-701.8** Other EQUIPMENT ROOM Requirements

- (A) Where ventilation, air filtration, or space dehumidification, heating, or cooling for an INDOOR AQUATIC FACILITY is by mechanical equipment located in an EQUIPMENT ROOM, adequate access space must be provided to allow for inspection and service.
- (B) Equipment may be installed in an outdoor ENCLOSURE provided the following conditions are met:
  - (1) Equipment must be securely installed on level concrete pads.
  - (2) Exposed plumbing must be protected from UV.
  - (3) Overhead UV protection must be provided.
  - (4) Unpaved areas within the ENCLOSURE shall be graded to allow for proper drainage with suitable ground cover to prevent the generation of mud in areas between equipment.
- (C) Equipment installed below grade shall be equipped with stairs and an associated handrail that meets applicable building code standards.

**2-702** Chemical Storage Spaces

Nothing in this Section shall be construed as providing relief from applicable requirements of fire codes, mechanical codes, electrical codes, etc.

**2-702.1** If AQUATIC VENUE chemicals, acids, salt, oxidizing cleaning materials, or other corrosive or oxidizing chemicals are stored outdoors, they must be stored in a well-ventilated protective area with an installed ENCLOSURE to prevent unauthorized access as per Section 2-702.2.

- (A) At least one space dedicated to chemical storage space shall be provided to allow safe storage of the chemicals present.

**2-702.2** Equipment listed for outdoor use may be located in exterior CHEMICAL STORAGE SPACES as permitted.

- (A) Exterior CHEMICAL STORAGE SPACES not joined to a wall of a building shall be completely enclosed by fencing that is at least six (6) feet high and meets the ENCLOSURE requirements.
- (B) Fencing shall be equipped with a self-closing and self-latching gate having a permanent locking device.

**2-702.3** Exterior CHEMICAL STORAGE SPACES shall be equipped with overhead UV protection.

**2-702.4** Combustion Equipment in Interior CHEMICAL STORAGE SPACES

- (A) No COMBUSTION DEVICE or appliance shall be installed in a CHEMICAL STORAGE SPACE, or in any other place where it will be exposed to the air from a CHEMICAL STORAGE SPACE.
- (B) **Exception:** A COMBUSTION DEVICE or appliance which meets all of the following requirements shall be acceptable:
  - (1) The device or appliance is required for one or more processes integral to the function of the room, such as space heat;
  - (2) The device is listed for such use; and
  - (3) The device as installed is APPROVED by the HEALTH AUTHORITY.

**2-702.5** Ozone Rooms

- (A) An ozone EQUIPMENT ROOM shall not be used for storage of chemicals, solvents, or any combustible materials, other than those required for the operation of the recirculation and ozone generating equipment.
- (B) Rooms which are designed to include ozone equipment shall be equipped with an emergency ventilation system capable of six air changes per hour.
  - (1) The exhaust intake shall be located approximately six (6) inches from the floor, on the opposite side of the room from the make-up air intake.
  - (2) The emergency ventilation system shall be so arranged as to run on command of an ozone-leak alarm or on command of a manual switch.
  - (3) The manual emergency ventilation switch shall be located outside the room and near the door to the ozone room.
- (C) Ozone rooms which are below grade shall be equipped with forced-draft ventilation capable of six (6) air changes per hour.
  - (1) The exhaust intake shall be located approximately six (6) inches from the floor, on the opposite side of the room from the make-up air intake.
  - (2) The ventilation system shall be arranged to:
    - (a) Run automatically concurrent with the ozone equipment and for at least a time allowing for 15 air changes after the ozone equipment is stopped;
    - (b) Run upon activation of the ozone detection and alarm system; and
    - (c) Run on command of a manual switch.
  - (3) The manual ventilation switch shall be located outside the room and near the door to the ozone room.
- (D) In addition to the signs required on all chemical storage areas, a sign shall be posted on the exterior of the entry door, stating "DANGER - GASEOUS OXIDIZER – OZONE" in lettering not less than four (4) inches high.
- (E) Rooms containing ozone generation equipment shall be equipped with an audible and visible ozone detection alarm system.
  - (1) The alarm system shall consist of both an audible alarm capable of producing at least 85 decibels at ten (10) feet distance, and a visible alarm consisting of a flashing light mounted in plain view of the entrance to the ozone-EQUIPMENT ROOM.
  - (2) The ozone sensor shall be located at a height of 18-24 inches above floor level and shall be capable of measuring ozone in the range of 0-2 PPM.
  - (3) The alarm system shall activate when the ozone concentration equals or exceeds 0.1 PPM in the room.
  - (4) Activation of the alarm system shall shut off the ozone generating equipment and turn on the emergency ventilation system.
- (F) Use of compressed CHLORINE gas shall be prohibited for new construction and after SUBSTANTIAL ALTERATION to existing AQUATIC FACILITIES.

## **2-8 Hygiene Facilities**

### **Subparts**

**2-801 General**

**2-802 Location**

**2-803 Design and Construction**

**2-804 Plumbing Fixture Requirements**

**2-805 Provisions of Suits; Towels and Shared Equipment**

**2-806 Foot Baths are Prohibited**

### **2-801 General**

**2-801.1** All design provisions shall be required for new construction or SUBSTANTIAL ALTERATION to an existing AQUATIC FACILITY.

**2-801.2** AQUATIC FACILITIES shall provide HYGIENE FACILITIES that include, at a minimum, toilets, urinals, SHOWERS, hand washing sinks and other HYGIENE FIXTURES, as specified herein.

**2-801.3** HYGIENE FACILITIES shall be constructed in accordance with relevant law or as modified herein.

**2-801.4** The minimum numbers of toilets, urinals, hand washing sinks and other HYGIENE FIXTURES provided, excluding SHOWERS, shall be in accordance with the current building codes and standards.

### **2-802 Location**

Except as required in Section 2-802.1 and 2-802.2, a drinking fountain, toilet, and hand washing sink shall be located no greater than 300 feet walking distance (along a path designated for pedestrian traffic) from each AQUATIC VENUE.

**Exemption:** Unless otherwise specified, AQUATIC VENUES located within 300 feet walking distance of all lodging or residential settings are exempt from this Section.

**2-802.1** An AQUATIC VENUE designed primarily for use by children less than five (5) years of age shall have a drinking fountain, toilet, and HAND WASH STATION located no greater than 200 feet walking distance and in clear view from the nearest entry/exit of the AQUATIC VENUE.

**2-802.2** SPAS shall have a drinking fountain located no greater than 100 feet walking distance from the SPA.

### **2-803 Design and Construction**

**2-803.1** The floors of HYGIENE FACILITIES and dressing areas serving AQUATIC FACILITIES shall have a smooth, easy-to-clean, impervious-to-water, slip-resistant surface. All surfaces required to be slip-resistant shall have a minimum dynamic coefficient of friction at least equal to the requirements of ANSI A137.1-2012 for that installation as measured by the DCOF AcuTest.

**2-803.2** A hard, smooth, impervious-to-water, easy-to-clean base shall provide a sealed, coved juncture between the wall and floor and extend upward on the wall at least six (6) inches.

**2-803.3** Floor drains shall be installed in HYGIENE FACILITIES and dressing areas where PLUMBING FIXTURES are located.

**(A)** Floor drain opening grill covers shall be 1/2-inch or less in width or diameter.

**(B)** Floors shall be sloped to drain water or other liquids.

**2-803.4** Partitions and ENCLOSURES adjacent to HYGIENE FACILITIES shall have a smooth, easy-to-clean, impervious surface.

**2-803.5** At least one hose bibb or other potable water source capable of connecting a hose shall be located in each HYGIENE FACILITY to facilitate cleaning.

## 2-804 Plumbing Fixture Requirements

- 2-804.1** PLUMBING FIXTURES shall be installed and operated in a manner to adequately protect the potable water supply from BACKFLOW in accordance with applicable law.
- (A) PLUMBING FIXTURES shall be designed so that they may be readily and frequently cleaned, SANITIZED, and disinfected.
  - (B) Drinking fountains must be installed outside of HYGIENE FACILITIES.
- 2-804.2** CLEANSING SHOWERS
- (A) The minimum number of CLEANSING SHOWERS shall be one (1) per gender for AQUATIC FACILITIES less than 4,000 square feet in collective AQUATIC VENUE surface area. An additional CLEANSING SHOWER per gender shall be added for each additional 4,000 square feet of AQUATIC VENUE surface area or portion thereof.
  - (B) CLEANSING SHOWERS shall be evenly distributed between genders.
  - (C) CLEANSING SHOWERS shall be located in a HYGIENE FACILITY near the entrance and within clear view of the AQUATIC VENUE.
  - (D) Entryway to private or group CLEANSING SHOWER areas shall be enclosed by a door or curtain.
    - (1) SHOWER doors shall be of a smooth, hard, easy-to-clean material.
    - (2) SHOWER curtains shall be of a smooth, easy-to-clean material.
  - (E) CLEANSING SHOWERS shall be supplied with soap in a soap dispenser adjacent to the SHOWER.  
**Exemption:** AQUATIC VENUES located in lodging or residential settings shall be exempt from Section 2-804.2.
- 2-804.3** RINSE SHOWERS
- (A) A minimum of one RINSE SHOWER shall be provided on the DECK near an entry point to the AQUATIC VENUE.
  - (B) Floors of RINSE SHOWERS shall be sloped to drain wastewater away from the AQUATIC VENUE and meet local applicable codes.
  - (C) RINSE SHOWER drains shall discharge to the sanitary sewer.
  - (D) RINSE SHOWERS in AQUATIC FACILITIES greater than 7,500 square feet of water surface area shall be situated adjacent to each AQUATIC VENUE entry point or arranged to encourage BATHERS to use the RINSE SHOWER prior to entering the AQUATIC VENUE.
  - (E) A minimum of four (4) showerheads per 50 feet of beach entry AQUATIC VENUES shall be provided as a RINSE SHOWER located not more than 30 feet from the AQUATIC VENUE or queuing area.
  - (F) A minimum of one RINSE SHOWER shall be provided at each entrance to a LAZY RIVER AQUATIC VENUE.
  - (G) A minimum of one RINSE SHOWER shall be provided at each entrance to a WATERSLIDE queue line.
- 2-804.4** AQUATIC FACILITIES with 7,500 square feet of water area or more may be flexible in the number of CLEANSING SHOWERS they provide based on the THEORETICAL PEAK OCCUPANCY:
- (A) 25 percent of the required SHOWERS shall be CLEANSING SHOWERS,
  - (B) 25 percent of the required SHOWERS shall be RINSE SHOWERS, and
  - (C) The remaining 50 percent may be either CLEANSING or RINSE SHOWERS.
- 2-804.5** Non-PLUMBING FIXTURE Requirements



- (A) All HYGIENE FIXTURES and appurtenances in the dressing area shall have a smooth, hard, easy-to-clean, impervious-to-water surface and be installed to allow thorough cleaning.
- (B) Glass, excluding mirrors and lighting fixtures, shall not be permitted in HYGIENE FACILITIES.
- (C) Mirrors and light fixtures shall be shatter resistant.
- (D) If lockers are provided, they shall be installed at least 3.5 inches above the finished floor or on legs or a base at least 3.5 inches high and far enough apart to allow for cleaning and drying underneath the locker.
- (E) Soap dispensers shall be securely attached adjacent to hand washing sinks and at each CLEANSING SHOWER. The dispensers shall be of all metal, plastic, or other shatterproof materials that can be readily and frequently cleaned.
- (F) Hand dryers or paper towel dispensers shall be provided and securely attached adjacent to hand washing sinks. Hand dryers and paper towel dispensers shall be of all metal, plastic or other shatterproof materials that can be readily and frequently cleaned.
- (G) Toilet paper dispensers shall be securely attached to wall or partition adjacent to each toilet.
- (H) In female HYGIENE FACILITIES, covered receptacles adjacent to each toilet shall be provided for disposal of used feminine hygiene products.
- (I) A minimum of one (1) hands-free trash receptacle shall be provided in areas adjacent to hand washing sinks.

**2-805 Provisions of Suits, Towels, and Shared Equipment**

AQUATIC FACILITIES supplying reusable suits, towels, and/or shared equipment shall provide adequate equipment and space for cleaning, sanitizing, drying, and storing of these materials.

**2-806 Foot Baths are Prohibited**

Foot Baths are standing water in which BATHERS or aquatics staff rinse their feet. Foot baths are prohibited.

<b>2-9</b>	<b>Water Supply and Wastewater Disposal</b>
<b>Subparts</b>	
<b>2-901</b>	<b>Water Supply</b>
<b>2-902</b>	<b>Fill Spout</b>
<b>2-903</b>	<b>Cross-Connection Control</b>
<b>2-904</b>	<b>Sanitary Wastes</b>
<b>2-905</b>	<b>Pool Wastewater</b>

**2-901 Water Supply**

**2-901.1** Water serving an AQUATIC FACILITY shall be supplied from a potable water source.

- (A) Other water sources such as lakes or springs may be APPROVED to serve an AQUATIC FACILITY by the HEALTH AUTHORITY.
- (B) Use of condensate water, collected rain water, or other reclaimed water for water serving an AQUATIC VENUE is prohibited.

- 2-901.2** The water supply shall have sufficient capacity to simultaneously serve all PLUMBING FIXTURES.
  - 2-901.3** The water supply shall have sufficient capacity and pressure to refill the AQUATIC VENUE to the operating water level after backwashing filters and after any splashing or evaporative losses within one hour if the AQUATIC VENUE is operational at the time of the backwash.
  - 2-901.4** AQUATIC FACILITIES not having dependable DISINFECTION and filtration systems or failing to maintain such systems in accordance with these Regulations shall provide weekly bacteriological testing results from a State certified laboratory of water samples taken from each AQUATIC VENUE. Not more than 15 percent of the samples must either:
    - (A)** Contain more than 200 bacteria per milliliter, as determined by the standard (35°C) agar plate count; or
    - (B)** Show a positive test (confirmed test) for total coliform organisms in any of the five 10 milliliter portions of a sample or more than 1.0 coliform organisms per 50 milliliters if the membrane filter test is used.
- 2-902 Fill Spout**
- 2-902.1** A fill spout used at an AQUATIC VENUE shall be located so it is not a safety hazard to BATHERS.
  - 2-902.2** The open end of a fill spout shall not have sharp edges or protrude more than two (2) inches beyond the edge of the AQUATIC VENUE.
  - 2-902.3** The open end of a fill spout shall be separated from the water by an air gap of at least 1.5 pipe diameters measured from the pipe outlet to the AQUATIC VENUE.
- 2-903 Cross-Connection Control**
- 2-903.1** The potable water supply serving an AQUATIC VENUE shall be protected against BACKFLOW by one of the following:
    - (A)** An acceptable air gap consisting of a vertical distance of not less than two pipe diameters of the water supply pipe or six (6) inches, whichever is greater, over the lowest free-flowing discharge point of the receiving pipe, tank, or vessel. Splash guards that are open to the atmosphere may be used around the air gap; or
    - (B)** An APPROVED RPZ or a pressurized vacuum breaker (PVB) BACKFLOW preventer installed according to the plumbing code and the HEALTH AUTHORITY. All BACKFLOW prevention devices installed must be tested on an annual basis.
- 2-904 Sanitary Wastes**
- Wastewater from all PLUMBING FIXTURES in the entire AQUATIC FACILITY shall be discharged to a sanitary sewer system.
- 2-905 Pool Wastewater**
- 2-905.1** Wastewater from an AQUATIC VENUE, including filter backwash water, shall be discharged indirectly, via a sump pit through an air-gap to a sanitary sewer system having sufficient capacity to collect and treat wastewater.
    - (A)** Wastewater shall not be directed to storm water systems or surface waters.
    - (B)** A water recovery and reuse system may be submitted to the HEALTH AUTHORITY for review and approval.

- 2-905.2** The wastewater disposal system shall have sufficient capacity to receive wastewater without flooding when filters are cleaned or when the AQUATIC VENUE is drained.
- 2-905.3** A separate line equipped with a valve shall be installed to bypass the filter and discharge to waste indirectly for the purpose of draining the AQUATIC VENUE.
- 2-905.4** The sump pit must be located where it does not impede access to equipment or present a hazard. Access to the sump pit must not be obstructed. Any cover placed over the sump pit shall allow for regular inspection and maintenance, and shall not impede the flow of wastewater into the pit.

<b>2-10</b>	<b>Special Use Aquatic Venues</b>		
<b>Subparts</b>			
<b>2-1001</b>	<b>General Requirements</b>	<b>2-1009</b>	<b>Artificial Swimming Lagoons</b>
<b>2-1002</b>	<b>Spas</b>	<b>2-10010</b>	<b>Surf Pools</b>
<b>2-1003</b>	<b>Waterslides and Landing Pools</b>	<b>2-10011</b>	<b>Isolation and Flotation Unit</b>
<b>2-1004</b>	<b>Wave Pools</b>	<b>2-10012</b>	<b>Natural Bathing Places</b>
<b>2-1005</b>	<b>Therapy Pools</b>	<b>2-10013</b>	<b>Deluge Showers</b>
<b>2-1006</b>	<b>Lazy Rivers</b>	<b>2-10014</b>	<b>Innovative Designs</b>
<b>2-1007</b>	<b>Interactive Water Play Venues</b>		
<b>2-1008</b>	<b>Wading Pools and Child Amusement Lagoons</b>		

**2-1001 General Requirements**

- 2-1001.1** SPECIAL USE AQUATIC VENUES shall comply with the applicable requirements stated in these Regulations as well as the additional provisions or reliefs of this Section.
- 2-1001.2** The DESIGN PROFESSIONAL or licensed contractor, shall provide information to adequately support why the SPECIAL USE AQUATIC VENUE does not meet the definition and use characteristics of other categories of AQUATIC VENUES or POOLS listed in these Regulations.
- 2-1001.3** A WAIVER must be submitted when the design specifications do not meet the standards outlined in Section 2. When submitting a WAIVER, the DESIGN PROFESSIONAL or licensed contractor, shall provide justification for design parameters that do not meet the design standards and construction requirements listed in these Regulations. See Section 5-3 for WAIVER requirements.

**2-1002 Spas**

- 2-1002.1** The maximum water depth in SPAS shall be four (4) feet measured from the designed static water line unless designed for special use and purposes APPROVED by the HEALTH AUTHORITY.
  - (A)** The water depth for exercise SPAS shall not exceed six feet six inches (6 ft. 6 in) measured from the designed static water line.
  - (B)** The maximum submerged depth of any seat or sitting bench shall be 28 inches measured from the water line.
- 2-1002.2** A SPA shall have one or more suitable, slip-resistant handhold(s) around the perimeter and not over 12 inches above the water line. The handhold(s) may consist of bull-nosed coping, ledges or DECKS along the immediate top edge of the SPA; ladders, steps, or seat ledges; or railings.

- 2-1002.3** Where SPA depths are greater than 24 inches, interior steps or stairs shall be provided in accordance with Section 2-304.
- (A)** Each set of steps shall be provided with at least one handrail to serve all treads and risers.
    - (1)** A point of egress equipped with a handrail must be provided for every 50 feet of perimeter or major portion thereof.
  - (B)** Seats or benches may be provided as part of these steps.
  - (C)** Approach steps on the exterior of a SPA wall extending above the DECK shall also be required unless the raised SPA wall is 19 inches or less in height above the DECK and it is used as a transfer tier or pivot-seated entry.
- 2-1002.4** A four (4) foot wide, continuous, unobstructed PERIMETER DECK shall be provided on two consecutive or adjacent sides of the SPA. A minimum of fifty percent (50%) of the SPA perimeter must remain unobstructed.
- (A)** SPAS located adjacent to other AQUATIC VENUES must meet the PERIMETER DECK requirements and provide an effective means to prevent cross contamination of water between the AQUATIC VENUES.
  - (B)** Elevated SPAS may be located adjacent to another AQUATIC VENUE as long as there is an effective BARRIER between the SPA and the adjacent AQUATIC VENUE.
    - (1)** If an effective BARRIER is not provided, a minimum distance of four (4) feet between the AQUATIC VENUE and SPA is required.
- 2-1002.5** Water temperatures shall not exceed 104°F.
- 2-1002.6** A means to drain the SPA shall be provided to allow frequent draining and cleaning.
- 2-1002.7** All plumbing associated with the jet system must be independent from the plumbing for the filtration system.
- 2-1002.8** Suction outlets associated with the jet system must be of an UNBLOCKABLE DRAIN COVER design or have a minimum of two outlets separated by not less than three (3) feet that meet the following requirements:
- (A)** The outlets may be located on separate planes;
  - (B)** The outlets shall be connected to a single branch line piped to provide hydraulic balance between the outlets; and
  - (C)** The branch lines shall not be valved so as to be capable of operating independently.
- 2-1002.9** An air induction system, when provided, shall prevent water back up that could cause electrical shock hazards. Air intake sources shall not permit the introduction of toxic gases or other contaminants.
- 2-1002.10** The agitation system shall be connected to a minute timer that does not exceed 15 minutes and shall be located out of reach of a BATHER in the SPA.
- 2-1002.11** All SPAS shall have a clearly labeled emergency shutoff or control switch for the purpose of stopping the motor(s) that provide power to the RECIRCULATION, hydrotherapy, or agitation systems. The emergency shutoff or control switch shall be installed and readily accessible to BATHERS in accordance with the NEC.

## **2-1003 Waterslides and Landing Pools**

- 2-1003.1** The following recognized design and construction standards for WATERSLIDES shall be adhered to:

- (A) The design engineer shall address compliance with these standards and must provide documentation and/or certification that the WATERSLIDE design is in conformance with these standards:
    - (1) ASTM F2376-13 Standard Practice for Classification, Design, Manufacture, Construction, and Operation of Water Slide Systems; and
    - (2) ASTM F2469-09 Standard Practice for Manufacturer, Construction, Operation, and Maintenance of AQUATIC Play Equipment.
  - (B) Signs indicating riding instructions, warnings, and requirements in accordance with the manufacturer's recommendations shall be posted at the WATERSLIDE entry.
- 2-1003.2** FLUMES
- (A) FLUME surfaces shall be inert, nontoxic, smooth, and easily cleaned.
  - (B) All FLUME valleys and dips shall have proper drainage, safety measures that insure a rider cannot fall from the FLUME, and a means of egress in the event the ride malfunctions or a rider stops on the ride.
- 2-1003.3** FLUME Exits
- (A) The exit of any FLUME must be designed to ensure that BATHERS enter the LANDING POOL or SLIDE RUNOUT at a safe speed and angle of entry.
  - (B) If a WATERSLIDE has two or more FLUMES and there is a point of intersection between the centerlines of any two FLUMES, the distance between that point and the point of exit for each intersecting FLUME must not be less than the SLIDE manufacturer's recommendations and ASTM F2376.
- 2-1003.4** Exit into LANDING POOLS
- (A) WATERSLIDES shall be designed to terminate at or below water level, except for DROP SLIDES unless otherwise permitted by the WATERSLIDE manufacturer and ASTM F2376.
  - (B) WATERSLIDES shall be perpendicular to the wall of the AQUATIC VENUE at the point of exit unless otherwise permitted by the WATERSLIDE manufacturer.
  - (C) WATERSLIDES shall be designed with an exit system which shall be in accordance with the WATERSLIDE manufacturer's recommendations and ASTM F2376 and provides for safe entry into the LANDING POOL or WATERSLIDE RUNOUT.
  - (D) The FLUME exits shall be in accordance with the WATERSLIDE manufacturer's recommendations and ASTM F2376.
  - (E) The distance between the point of exit and the side of the AQUATIC VENUE opposite the BATHERS as they exit, excluding any steps, shall not be less than the WATERSLIDE manufacturer's recommendations and in accordance with ASTM F2376.
- 2-1003.5** LANDING POOLS
- (A) If steps are provided instead of exit ladders or RECESSED STEPS with grab rails, they shall be installed at the opposite end of the LANDING POOL from the FLUME exit and a handrail shall be provided in accordance with Sections 2-304 to 2-308.
  - (B) If the WATERSLIDE FLUME ends in an AQUATIC VENUE used for swimming, the landing area shall be divided from the rest of the AQUATIC VENUE by a float line, WING WALL, PENINSULA or other similar feature to prevent collisions with other BATHERS.

- 2-1003.6** A PERIMETER DECK shall be provided along the exit side of the LANDING POOL.
- 2-1003.7** A walkway, steps, stairway or ramp shall be provided between the LANDING POOL and the top of the FLUME.
- 2-1003.8** WATERSLIDE RUNOUTS, if used, shall have a planned means of egress, unless one of the walls of the RUNOUT is not more than 19 inches in height. WATERSLIDE RUNOUTS shall be designed in accordance with the SLIDE manufacturer's recommendations and ASTM F2376.
- 2-1003.9** DROP SLIDES
  - (A)** There shall be a SLIDE landing area in accordance with the SLIDE manufacturer's recommendations and ASTM F2376.
  - (B)** This area shall not infringe on the landing area for any other SLIDE, diving equipment, or any other minimum AQUATIC VENUE clearance requirements.
  - (C)** Steps shall not infringe on this area.
  - (D)** The minimum required water depth shall be a function of the vertical distance between the terminus of the SLIDE surface and the water surface of the LANDING POOL.
  - (E)** The minimum required water depth shall be in accordance with the SLIDE manufacturer's recommendations and ASTM F2376.
- 2-1003.10** POOL SLIDES
  - (A)** All SLIDES installed as an appurtenance to an AQUATIC VENUE shall be designed, constructed, and installed to provide a safe environment for all BATHERS utilizing the AQUATIC VENUE in accordance with applicable ASTM and CPSC standards.
  - (B)** Components used to construct a POOL SLIDE shall be non-toxic and compatible with the environment contacted under normal use.
  - (C)** Water depth at the SLIDE terminus shall be determined by the SLIDE manufacturer.
  - (D)** Clear space shall be maintained to the POOL edge and other features per manufacturer requirements.
    - (1)** The landing area of the SLIDE shall be protected through the use of a float line, WING WALL, PENINSULA or other similar impediment to prevent collisions with other BATHERS.
    - (2)** Netting or other BARRIERS shall be provided to prevent BATHER access underneath POOL SLIDES where sufficient clearance is not provided.
    - (3)** Such netting or other BARRIER shall be designed such that any underwater opening does not allow for the passage of a four (4) inch ball and no opening can create a finger entrapment.

**2-1004 Wave Pools**

**2-1004.1** Access

- (A)** BATHERS must gain access to the WAVE POOL at the shallow or beach end with the exception of an allowable ADA designated entry point.
  - (1)** The sides of the WAVE POOL shall be protected from unauthorized entry into the WAVE POOL by the use of a fence or other comparable BARRIER.
  - (2)** Handrails associated with ADA accessible entries shall be designed in such a way that they do not present a potential for injury or entrapment with WAVE POOL BATHERS.

- (B) A PERIMETER DECK shall not be required around 100 percent of the WAVE POOL perimeter. A PERIMETER DECK shall be provided where BATHERS gain access to the WAVE POOL at the shallow or beach end and in locations where access is required for LIFEGUARDS.
- (C) WAVE POOLS shall be provided with handholds at the static water level or not more than six (6) inches above the static water level that shall be:
  - (1) Continuous around the WAVE POOL'S perimeter except at zero depth beach entries, water depths less than 24 inches, or areas roped off, not allowing BATHER access;
  - (2) Self-draining;
  - (3) Installed so that the outer edge is flush with the WAVE POOL wall; and
  - (4) Designed to ensure that body extremities will not become entangled during wave action.
- (D) RECESSED STEPS and handrails shall be provided at one or more locations along the wall of the WAVE POOL. The RECESSED STEPS and handrails must extend down the wall so that they will be easily accessible during wave generation at the lowest water level. The distance between the handrail and the wall must not exceed six (6) inches.
- (E) Ladders shall not be allowed along the walls of the WAVE POOL due to the entrapment potential.
- (F) WAVE POOLS shall be fitted with a float line located to restrict access to the caisson wall. Safety rope and float lines typically required at shallow to DEEP WATER transitions shall not apply to WAVE POOLS.

**2-1004.2 Safety**

- (A) Proper storage shall be provided for life jackets and all other equipment used in the WAVE POOL that will allow for thorough drying to prevent mold and other biological growth.
- (B) A minimum of two (2) emergency shut-off switches to disable the wave action shall be provided, one on each side of the WAVE POOL. These switches shall be clearly labeled and readily accessible to LIFEGUARDS.
- (C) A sign stating "NO DIVING" in contrasting letters not less than four (4) inches in height must be posted in a conspicuous place.
- (D) Caisson BARRIERS shall be provided for all WAVE POOLS that prevent the passage of a ball two (2) inches in diameter.

**2-1005 Therapy Pools**

- 2-1005.1** Floor slope may exceed one (1) foot in 12 feet for water shallower than five (5) feet. Break points in floor slope shall be identified with a contrasting band consistent with Section 2-3018.4(A).
- 2-1005.2** Hydrotherapy or jet systems shall be independent of the recirculation, filtration, and heating systems.
- 2-1005.3** Special equipment may be allowed by the HEALTH AUTHORITY with proper justification.

**2-1006 Lazy Rivers**

- 2-1006.1** Handrails, steps, stairs and propulsion jets for LAZY RIVERS shall not protrude into the river.

- 2-1006.2** Means of access/egress shall be provided at 150 foot intervals around the LAZY RIVER.
- (A) A handhold in compliance with Section 2-3013 shall be required on at least one side of the LAZY RIVER.
  - (B) A DECK shall be provided along the entire length of the LAZY RIVER.
  - (C) The DECK shall be allowed to alternate sides of the LAZY RIVER.
  - (D) Obstructions around the perimeter of the LAZY RIVER, such as bridges or landscaping, shall be allowed provided they do not impact lifeguarding sight lines or rescue operations.
  - (E) All bridges spanning a LAZY RIVER shall have a minimum clearance of both eight (8) feet from the bottom of the LAZY RIVER and four (4) feet above the entire water surface with any structure overhead.

**2-1007 Interactive Water Play Venues**

- 2-1007.1** INTERACTIVE WATER PLAY VENUES shall have a slip-resistant and easily cleanable surface. Any manufactured surfacing shall be deemed suitable by the manufacturer for aquatic and chlorinated environments.
- 2-1007.2** The INTERACTIVE WATER PLAY VENUE shall be properly sloped so that only water from the AQUATIC FEATURES flows back to the INTERACTIVE WATER PLAY VENUE collection tank.
- (A) Areas adjacent to the INTERACTIVE WATER PLAY VENUE shall be sloped away from the collection drains.
  - (B) The slope of the INTERACTIVE WATER PLAY VENUE shall be sufficient to prevent standing water from collecting on the pad.
- 2-1007.3** The size, number and locations of the INTERACTIVE WATER PLAY VENUE drains shall be determined and specified so as to assure water does not accumulate on the INTERACTIVE WATER PLAY VENUES.
- (A) Flow through the drains to the INTERACTIVE WATER PLAY VENUE collection tank shall be under gravity.
  - (B) Direct suction outlets from the INTERACTIVE WATER PLAY VENUE shall be prohibited.
- 2-1007.4** Openings in the grates covering the drains shall not exceed 1/2 inches wide. Gratings shall not be removable without the use of tools.
- 2-1007.5** The INTERACTIVE WATER PLAY VENUE collection tank shall be designed to provide ready access for cleaning and inspections, and
- (A) The INTERACTIVE WATER PLAY VENUE collection tank shall be capable of complete draining.
  - (B) The access hatch or lid shall be locked or require a tool to open.
- 2-1007.6** DECK Area
- (A) INTERACTIVE WATER PLAY VENUES shall be kept free of landscape debris by either:
    - (1) Eight (8) feet of DECK area,
    - (2) Raised curbs, or
    - (3) Raised planters.
  - (B) The DECK shall be of a uniform, easily cleaned, impervious material.
  - (C) The DECK shall be protected from surface runoff.
- 2-1007.7** A BARRIER shall be provided to separate an INTERACTIVE WATER PLAY VENUE from another body of water within the same facility. **Exception:** The INTERACTIVE WATER PLAY VENUE is separated by a distance of at least 15 feet from other bodies of water.



- 2-1007.8** If an AQUATIC FACILITY only consists of an INTERACTIVE WATER PLAY VENUE, then the requirements for an ENCLOSURE shall not apply unless otherwise deemed necessary by the HEALTH AUTHORITY.
- 2-1007.9** Spray features shall be designed and installed to be seen clearly, so as not to be a hazard to BATHERS due to water velocity from the spray feature discharge, or other safety hazards.
- 2-1007.10** Maximum velocity at the orifice of the spray feature nozzle shall not exceed 20 feet per second.
- 2-1007.11** Depth markings and warning signs are not required for INTERACTIVE WATER PLAY VENUES.
- 2-1007.12** NEC swimming POOL requirements shall apply to INTERACTIVE WATER PLAY VENUES.

**2-1008 Wading Pools and Child Amusement Lagoons**

- 2-1008.1** A BARRIER shall be provided to separate a WADING POOL or CHILD AMUSEMENT LAGOON from other AQUATIC VENUES.
  - (A)** The BARRIER shall not be required to completely surround the WADING POOL or CHILD AMUSEMENT LAGOON if the shortest distance of travel between the WADING POOL or CHILD AMUSEMENT LAGOON around the BARRIER to the other AQUATIC VENUE is a minimum of 15 feet.
  - (B)** WADING POOLS and CHILD AMUSEMENT LAGOONS near other WADING POOLS or CHILD AMUSEMENT LAGOONS shall not be required to be separated by a BARRIER.
  - (C)** Features and devices installed in a CHILD AMUSEMENT LAGOON shall be smooth, easily cleanable and of durable design intended for such use.
- 2-1008.2** Underwater lights shall not be installed in WADING POOLS or CHILD AMUSEMENT LAGOONS.

**2-1009 Artificial Swimming Lagoons**

- 2-1009.1** The DESIGN PROFESSIONAL shall consult with the HEALTH AUTHORITY before the preparation and submission of any engineering plans or specifications for an ARTIFICIAL SWIMMING LAGOON.
- 2-1009.2** An ARTIFICIAL SWIMMING LAGOON may deviate from other provisions of these Regulations through the submission of a WAIVER addressing all safety concerns generated by the deviation from regulatory requirements, if its design and construction are within the limits of sound engineering practice and present no health or safety hazards.

**2-10010 Surf Pools**

- 2-10010.1** A SURF POOL may deviate from other provisions of these Regulations through the submission of a WAIVER addressing all safety concerns generated by the deviation from regulatory requirements, if its design and construction are within the limits of sound engineering practice and present no health or safety hazards.

**2-10011 Isolation and Flotation Units**

- 2-10011.1** The unit must be designed or ventilated to prevent any hazardous concentration of gases or vapors from disinfectants under all circumstances of operation.
- 2-10011.2** Each unit must be located in a separate room equipped with an individual SHOWER.

## **2-10012 Natural Bathing Places**

**2-10012.1** A PERMIT to operate a NATURAL BATHING PLACE must be obtained from the HEALTH AUTHORITY.

- (A) Approval and operation of a NATURAL BATHING PLACE will be based upon the result of a sanitary survey of the site and the results of the weekly microbiological testing of the water of the bathing area in accordance with this Section.
- (B) The flow of water supplying a bathing beach or the volume of water in a body of water on which a beach is located must be sufficient to provide at least 500 gallons of water per BATHER when the greatest number of BATHERS are in the water.
- (C) Evidence of human-caused pollution, floating debris, sludge accumulation and similar gross pollutants will disqualify the site as an acceptable bathing area until such pollutants are completely and permanently eliminated.
- (D) Water samples shall be submitted to a state-licensed laboratory each week. Such samples must meet the following criteria: *E. coli* at a geometric of 126 CFU per 100 mL and an STV (single test value) of 410 CFU per 100 mL measured using EPA Method 1603, or any other equivalent method that measures *E. coli*.
- (E) There must be a minimum of 40 square feet of beach area per BATHER.
- (F) The slope of the bottom of the beach area must be gradual and be such as to not create a safety hazard to the PATRON of the beach. The area floor must be free of physical hazards and obstructions.
- (G) Failure to meet any of the criteria noted above (B)-(F) shall result in the immediate closure of the NATURAL BATHING PLACE.

**2-10012.2** A NATURAL BATHING PLACE may require a WAIVER to address unique safety concerns inherent to the NATURAL BATHING PLACE.

**2-10012.3** The perimeter of the designated swimming area must be marked with buoys in the water and signage at either end of the beach designating "No swimming beyond this point."

**2-10012.4** HYGIENE FACILITIES must be constructed in accordance with the provisions of Section 2-8.

**2-10012.5** There must be telephone connections and transportation facilities available for emergency use.

## **2-10013 Deluge Showers**

**2-10013.1** In addition to the general AQUATIC VENUE requirements stated in these Regulations, deluge showers shall comply with the additional provisions or reliefs of this section.

**2-10013.2** Shall be constructed to achieve a 30 minute maximum TURNOVER.

**2-10013.3** Signage must be posted in the immediate vicinity declaring that the SHOWER utilizes re-circulated water.

## **2-10014 Innovative Designs**

An AQUATIC VENUE utilizing an innovative design may be APPROVED by the HEALTH AUTHORITY if its design and construction present no health or SAFETY hazard to the public. Applications and supporting documentation must be stamped by an engineer or architect licensed in Nevada. The HEALTH AUTHORITY will require written WAIVER(S) prior to approval.

## SECTION 3 Facility Operation and Maintenance

### Parts

- 3-1 Operating Permits
- 3-2 Aquatic Facility Operation and Maintenance
- 3-3 Aquatic Venue Structure
- 3-4 Indoor/Outdoor Environment
- 3-5 Recirculation and Water Treatment
- 3-6 Decks and Equipment
- 3-7 Chemical Storage and Use
- 3-8 Hygiene Facilities
- 3-9 Special Use Aquatic Venues

### 3-1 Operating Permits

#### Subparts

- 3-101 Owner Responsibilities
- 3-102 Permits

The provisions of this Section apply to all AQUATIC FACILITIES covered by these Regulations regardless of when constructed, unless otherwise noted.

#### 3-101 Owner Responsibilities

- 3-101.1 Prior to opening for use, the AQUATIC FACILITY OWNER shall apply to the HEALTH AUTHORITY for a PERMIT to operate each AQUATIC VENUE.
- 3-101.2 A separate PERMIT is required for each newly constructed or SUBSTANTIALLY ALTERED AQUATIC VENUE at an existing AQUATIC FACILITY.
- 3-101.3 Before an initial PERMIT to operate is issued, the following procedures shall be completed:
  - (A) The AQUATIC FACILITY OWNER has demonstrated the AQUATIC FACILITY, including all newly constructed or SUBSTANTIALLY ALTERED AQUATIC VENUES, is in compliance with the requirements of these Regulations;
  - (B) An initial inspection has been conducted; and
  - (C) The HEALTH AUTHORITY has APPROVED the AQUATIC FACILITY to be open to the public.
- 3-101.4 The PERMIT to operate shall:
  - (A) Be issued in the name of the OWNER;
  - (B) Be specific to a single AQUATIC VENUE; and
  - (C) Specify the period of time APPROVED by the HEALTH AUTHORITY.
- 3-101.5 The AQUATIC FACILITY OWNER shall renew all PERMITS to operate annually according to the schedule established by the HEALTH AUTHORITY.
- 3-101.6 The PERMIT to operate may be withheld, revoked, or denied by the HEALTH AUTHORITY for noncompliance of the AQUATIC FACILITY with the requirements of these Regulations and failure to pay required fees associated with the PERMIT.
- 3-101.7 The OWNER of an AQUATIC FACILITY is responsible for the facility being operated, maintained, and managed in accordance with the requirements of these Regulations.

**3-102 Permits**

**3-102.1** The PERMIT to operate shall be posted at the AQUATIC FACILITY in a location conspicuous to the public or immediately available for review upon request.

**3-102.2** Operation of an AQUATIC FACILITY without a PERMIT shall be prohibited.

**3-102.3** The HEALTH AUTHORITY may order a newly constructed or SUBSTANTIALLY ALTERED AQUATIC VENUE without or outside of an APPROVED PERMIT to close until the AQUATIC FACILITY has obtained an APPROVED PERMIT.

<b>3-2 Aquatic Facility Operation and Maintenance</b>
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<b>Subparts</b>
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<b>3-201 Closure and Reopening</b>
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<b>3-202 Preventative Maintenance Plan</b>
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**3-201 Closure and Reopening**

**3-201.1** If an AQUATIC VENUE is not open for use the following conditions shall be met to protect health and safety:

**(A)** Where the AQUATIC VENUE has a separate ENCLOSURE per Section 2-604:

- (1)** The water shall be recirculated and treated to meet the criteria of these Regulations;
- (2)** The water shall be drained; or
- (3)** An APPROVED safety cover that is listed and labeled to ASTM F1346-91 by an ANSI-accredited certification organization shall be installed provided no public health nuisances are present.

**(B)** Where the AQUATIC VENUE does not have a separate ENCLOSURE per Section 2-604 and other parts of the AQUATIC FACILITY are open for use:

- (1)** The water shall be recirculated and treated to meet the criteria of these Regulations and the AQUATIC VENUE shall be staffed to keep BATHERS out; or
- (2)** An APPROVED safety cover that is listed and labeled to ASTM F1346-91 by an ANSI-accredited certification organization shall be installed provided no public health nuisances are present or created.

**(C)** Where the AQUATIC VENUE does not have a separate ENCLOSURE per Section 2-604, and the AQUATIC FACILITY is closed for use:

- (1)** The water shall be recirculated and treated to meet the criteria of these Regulations;
- (2)** The water shall be drained; or
- (3)** An APPROVED safety cover that is, listed and labeled to ASTM F1346-91 by an ANSI-accredited certification organization shall be installed provided no public health nuisances are present.

**3-201.2** An OWNER or operator of a closed AQUATIC VENUE shall verify that the AQUATIC VENUE meets all applicable criteria of these Regulations before reopening the AQUATIC VENUE.

**3-202 Preventive Maintenance Plan**

**3-202.1** Written Plan

**(A)** A written comprehensive preventive maintenance plan for each AQUATIC VENUE shall be available at the AQUATIC FACILITY.

- (B) The AQUATIC FACILITY preventive maintenance plan shall include details and frequency of the OWNER/operator’s planned routine facility inspection, maintenance, and replacement of recirculation and water treatment components.

**3-202.2 Facility Documentation**

- (A) A copy of the APPROVED plans and specifications for each AQUATIC VENUE constructed after the adoption of these Regulations shall be available at the AQUATIC FACILITY.
- (B) A comprehensive inventory of all mechanical equipment associated with each AQUATIC VENUE shall be available at the AQUATIC FACILITY.
- (C) This inventory shall include:
  - (1) Equipment name and model number,
  - (2) Manufacturer and contact information,
  - (3) Local vendor/supplier and technical representative, if applicable, and
  - (4) Replacement or service dates and details.
- (D) Operation manuals for all mechanical equipment associated with each AQUATIC VENUE shall be available at the AQUATIC FACILITY. If no manufacturer’s operation manual is available, then the AQUATIC FACILITY should create a written document that outlines standard operating procedures for maintaining and operating the piece of equipment.

<p><b>3-3 Aquatic Venue Structure</b></p> <p><b>Subparts</b></p> <p><b>3-301 Depth Markers</b></p> <p><b>3-302 Aquatic Venue Shell and Interior Surface Maintenance</b></p>
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**3-301 Depth Markers**

- 3-301.1** Depth markers shall be provided in locations in accordance with Section 2-3018 and maintained.
- 3-301.2** “No Diving” markers shall be provided in accordance with Section 2-3018 and maintained.

**3-302 Aquatic Venue Shell and Interior Surface Maintenance**

- 3-302.1** Cracks shall be repaired when they may increase the potential for:
  - (A) Leakage,
  - (B) Trips or falls,
  - (C) Lacerations, or
  - (D) Impact the ability to properly clean and maintain the AQUATIC VENUE area.
- 3-302.2** Surface cracks under 1/8 inch wide shall be documented and monitored for any movement or change including opening, closing, and/or lengthening.
- 3-302.3** Any sharp edges shall be removed.
- 3-302.4** When cracks or chips in the finish expose BATHERS to the AQUATIC VENUE shell, the AQUATIC VENUE must be repaired or resurfaced prior to reopening for use.

### **3-4 Indoor/Outdoor Environment**

#### **Subparts**

**3-401 Lighting**

**3-402 Indoor Aquatic Facility Ventilation**

**3-403 Electrical**

**3-404 Emergency Exit**

**3-405 Plumbing**

**3-406 Solid Waste**

**3-407 Decks**

**3-408 Aquatic Facility Maintenance**

#### **3-401 Lighting**

##### **3-401.1 Lighting Maintained**

- (A)** Lighting systems, including emergency lighting, shall be maintained in all PATRON and maintenance areas, to ensure the required lighting levels are met as specified in Section 2-401.
- (B)** The AQUATIC FACILITY shall not be open if light levels are such that the main drain is not visible as specified in Section 3-506.
- (C)** Underwater lights, where provided, shall be operational and maintained as designed. Branch circuits that supply underwater lights operating at more than the Low Voltage Contact Limit as defined in NEC 680.2 must be GFCI protected.
- (D)** Operation of an unprotected underwater light circuit shall be prohibited.
- (E)** Damage to underwater lighting of any kind shall result in the disabling of all applicable electrical connections utilizing a lock out tag out procedure or the ENCLOSURE shall be closed until repairs have been completed. If a significant portion of the AQUATIC FACILITY'S underwater lighting is affected, the AQUATIC FACILITY shall close to night swimming until all repairs have been completed.

##### **3-401.2 Glare**

- (A)** The AQUATIC FACILITY OWNER shall ensure that glare conditions are assessed to ensure that the AQUATIC VENUE bottom and objects in the AQUATIC VENUE are clearly visible throughout operating hours.
- (B)** If the AQUATIC VENUE requires LIFEGUARDS, the AQUATIC FACILITY OWNER shall ensure that glare conditions are assessed from each LIFEGUARD STATION to ensure that the AQUATIC VENUE bottom and objects in the AQUATIC VENUE are clearly visible throughout operating hours.
- (C)** Windows and lighting equipment shall be adjusted, if possible, to minimize glare and excessive reflection on the water surface.

**3-401.3** Night swimming shall be prohibited unless required light levels in accordance with Section 2-401 are provided. Night swimming shall be considered one half hour before sunset to one half hour after sunrise.

**3-401.4** Emergency lighting shall be tested and maintained according to manufacturer's recommendations.

#### **3-402 Indoor Aquatic Facility Ventilation**

**3-402.1** AIR HANDLING SYSTEMS shall be maintained and operated by the OWNER/operator to protect the health and safety of the AQUATIC FACILITY'S PATRONS.

**3-402.2** AIR HANDLING SYSTEMS shall be maintained and operated to comply with all requirements of the original system design, construction, and installation.

**3-402.3** Indoor Facility Areas

- (A) The AIR HANDLING SYSTEM operation and maintenance requirements shall apply to an INDOOR AQUATIC FACILITY including:
  - (1) The AQUATIC VENUES, and
  - (2) The surrounding BATHER and SPECTATOR/STADIUM SEATING area;
- (B) But does not include:
  - (1) Mechanical rooms,
  - (2) HYGIENE FACILITIES and locker rooms, and
  - (3) Any associated rooms which have a direct opening to the AQUATIC FACILITY.

**3-402.4** The ventilation system must be capable of preventing the accumulation of condensation, CHLORAMINES, and microbial growth.

**3-403 Electrical**

**3-403.1** Electrical Repairs

- (A) Repairs or alterations to electrical equipment and associated equipment shall be in accordance with applicable law.
- (B) All defects in the electrical system shall be immediately repaired by a qualified PERSON.
- (C) Electrical wiring, whether permanent or temporary, shall comply with applicable law.

**3-404 Emergency Exit**

Emergency exit routes shall be established for both indoor and outdoor facilities and be maintained so that they are well lit, unobstructed, and accessible at all times.

**3-405 Plumbing**

**3-405.1** Water Supply

- (A) All plumbing shall be maintained in good repair with no leaks or discharge.
- (B) Potable water shall be available at all times to PATRONS.
- (C) Water introduced into the AQUATIC VENUE, either directly or to the RECIRCULATION SYSTEM, shall be supplied with appropriate BACKFLOW prevention.

**3-405.2** Drinking Fountains

- (A) Drinking fountains shall be maintained clean and in good repair.
- (B) Drinking fountains shall have sufficient water pressure to allow correct adjustment to accommodate water dispensing to prevent PATRON facial contact with common surfaces and prevent water from landing outside the catch basin.

**3-405.3** Waste Water

- (A) AQUATIC VENUE waste water, including backwash water and cartridge cleaning water, shall be disposed of in accordance with applicable law.
- (B) Waste water and backwash water shall not be returned to an AQUATIC VENUE or the AQUATIC FACILITY'S water treatment system.
- (C) Filter backwash lines, DECK drains, and other drain lines connected to the AQUATIC FACILITY or the AQUATIC FACILITY'S RECIRCULATION SYSTEM shall be discharged through an APPROVED air gap.
- (D) No standing water shall result from any discharge, nor shall it create a nuisance, offensive odors, stagnant wet areas, or an environment for the breeding of insects.

**3-405.4** Removal of water from the AQUATIC VENUE and replacement with make-up water shall be performed as needed to maintain water quality.

**3-406 Solid Waste**

**3-406.1** Outside trash, recycling receptacles and storage areas shall be maintained in good repair and clean condition.

**3-406.2** Solid waste and recycled materials shall be removed at a frequency to prevent the attraction of vermin or cause odors and be disposed of in compliance with applicable law.

**3-407 Decks**

**3-407.1** Food Preparation and Consumption

- (A) Food preparation and cooking shall only be allowed in designated areas as specified in these Regulations.
- (B) BATHERS shall not eat while at an AQUATIC VENUE except in designated areas located at least 4 feet from the water's edge. Beverages in a durable covered container may be consumed while in or partially in the AQUATIC VENUE.
- (C) Swim-up bars or gaming areas, when utilized, shall provide facilities for BATHERS to place food and drinks on a surface which can be SANITIZED and use spill resistant containers to prevent the introduction of food or drink into the AQUATIC VENUE water.

**3-407.2** Glass

- (A) Glass food and beverage containers shall be prohibited in PATRON areas of AQUATIC FACILITIES.
- (B) Glass furniture shall be prohibited in an AQUATIC FACILITY.

**3-407.3** DECK Maintenance

- (A) The PERIMETER DECK shall be maintained free from obstructions, including PATRON seating, to preserve space required for lifesaving and rescue.
- (B) Diaper changing shall be prohibited on the DECK.
- (C) DECK areas shall be cleaned daily and kept free of debris, vermin, and vermin harborage.
- (D) DECK surfaces shall be maintained to their original design slope and integrity.
- (E) Cracks shall be repaired when they increase the potential for:
  - (1) Trips or falls,
  - (2) Lacerations, and/or
  - (3) Impact the ability to properly clean and maintain the DECK area.
- (F) DECK areas shall be free from standing water.
- (G) DECK drains shall be cleaned and maintained to prevent blockage and the ponding of water.
- (H) Absorbent materials used in wet areas must be able to be removed for daily cleaning and DISINFECTION.
- (I) Fixed equipment, loose equipment, and DECK furniture shall not interfere with emergency exit procedures or intrude upon the AQUATIC VENUE DESIGNATED WALKWAY.

**3-408 Aquatic Facility Maintenance**

All appurtenances, features, signage, safety and other equipment, and systems required by these Regulations shall be provided and maintained.



- 3-408.1** Diving Boards and Platforms
  - (A) The finish and profile of surfaces of diving boards and platforms shall be maintained to prevent slips, trips, and falls.
  - (B) Diving boards shall be inspected daily for cracks and loose bolts with cracked boards removed and loose bolts tightened immediately.
- 3-408.2** Steps and Guardrails
  - (A) Steps and guardrails shall be secured so as not to move during use.
  - (B) The profile and surface of steps shall be maintained to prevent slips and falls.
- 3-408.3** The profile and surface of starting platform steps shall be in good repair to prevent slips, trips, falls, and pinch hazards.
- 3-408.4** WATERSLIDES
  - (A) WATERSLIDES shall be maintained and operated to the manufacturer's or designer's specifications.
  - (B) Slime and biofilm layers shall be removed on all accessible WATERSLIDE surfaces.
  - (C) WATERSLIDE water flow rates shall be checked to be within the designer's or manufacturer's specifications prior to opening to the public.
  - (D) Where WATERSLIDE plumbing lines are susceptible to holding stagnant water, WATERSLIDE pumps shall be started with sufficient time prior to opening to flush such plumbing lines with treated water.
  - (E) The water shall be tested to verify the disinfectant in the water is within the parameters specified in Section 3-503.1.
- 3-408.5** ENCLOSURES and BARRIERS
  - (A) Required ENCLOSURES to include fencing and gates shall be maintained at all times.
  - (B) Gates, locks, and associated alarms, if required, shall be tested daily prior to opening.
- 3-408.6** AQUATIC FACILITY Cleaning
  - (A) The AQUATIC VENUE shall be kept clean of debris, organic material, and slime/biofilm in accessible areas of the water and on surfaces.
  - (B) Vacuuming shall only be done when the AQUATIC VENUE is closed and port openings shall be covered with an APPROVED device cover when not in use.

<b>3-5</b>	<b>Recirculation and Water Treatment</b>	
	<b>Subparts</b>	
<b>3-501</b>	<b>Recirculation System and Equipment</b>	<b>3-505</b> <b>Water Quality Chemical Testing Frequency</b>
<b>3-502</b>	<b>Filtration</b>	<b>3-506</b> <b>Water Clarity</b>
<b>3-503</b>	<b>Disinfection and pH Control</b>	<b>3-507</b> <b>Water Supply and Disposal</b>
<b>3-504</b>	<b>Water Sample Collection and Testing</b>	

**3-501 Recirculation Systems and Equipment**

- 3-501.1** General
  - (A) All components of the filtration and RECIRCULATION SYSTEM shall be kept in continuous operation 24 hours per day.
    - (1) For AQUATIC FACILITIES that intend to reduce the recirculation flow rate below the minimum required design values when the AQUATIC VENUE is closed, the system shall be operated according to the provisions outlined in Section 2-502.9(H).

- (B) Flow through the various components of a RECIRCULATION SYSTEM shall be balanced to maximize the water clarity and safety of a AQUATIC VENUE.
  - (C) For PERIMETER GUTTER SYSTEM or SKIMMER AQUATIC VENUES with main drains, the recommended recirculation flow should be as follows during normal operation:
    - (1) At least 80 percent of the flow through the perimeter overflow system, and
    - (2) No greater than 20 percent through the main drain.
- 3-501.2** Each individual AQUATIC VENUE in a combined treatment system shall meet the required TURNOVER times specified in **Table 2-502.9** and achieve all water quality criteria.
- 3-501.3** INLETS shall be checked at least weekly for rate and direction of flow and adjusted as necessary to produce uniform circulation of water and to facilitate the maintenance of a uniform disinfectant residual throughout the AQUATIC VENUE.
- 3-501.4** Surface Skimming Devices
- (A) The PERIMETER GUTTER SYSTEM shall be kept clean and free of debris that may restrict flow. Removable grates must be in place during operation to prevent entrapment.
  - (B) The automatic fill system, when installed, shall maintain the water level at an elevation such that the gutters overflow continuously around the perimeter of the AQUATIC VENUE.
  - (C) The water levels shall be maintained near the middle of the SKIMMER openings.
  - (D) The flow through each SKIMMER shall be adjusted to maintain skimming action that will remove all floating matter from the surface of the water.
  - (E) The strainer baskets for SKIMMERS shall be maintained in good repair, not broken or missing and cleaned as necessary to maintain proper skimming. Damaged strainer baskets shall be replaced.
  - (F) Weirs must remain in place and in working condition at all times. Broken or missing SKIMMER weirs shall be replaced.
  - (G) A flotation test may be required by the HEALTH AUTHORITY to evaluate the effectiveness of surface skimming.
- 3-501.5** Submerged Drains/Suction Outlet Covers or Gratings
- (A) Loose, broken, or missing suction outlet covers and sumps shall be secured or replaced immediately and installed in accordance with the manufacturer's requirements.
    - (1) AQUATIC VENUES shall be closed until the required repairs can be completed.
    - (2) AQUATIC FACILITIES shall follow procedures for closing and re-opening as applicable in Section 3-201.
  - (B) The manufacturer's documentation on all outlet covers and sumps shall be made part of the permanent records of the AQUATIC FACILITY.
- 3-501.6** Strainers shall be in place and cleaned as required to maintain pump performance.
- 3-501.7** Flow meters in accordance with Section 2-502.8 shall be provided and maintained in proper working order.
- 3-501.8** Flow Rates / TURNOVER
- (A) AQUATIC VENUES constructed or SUBSTANTIALLY ALTERED after the adoption of these Regulations shall be operated at the designed flow

rate to provide the required TURNOVER 24-hours per day when open for use except as allowed in Section 2-502.9.

- (B) AQUATIC VENUE RECIRCULATION SYSTEMS constructed before the adoption of these Regulations shall be operated 24 hours a day in accordance with Section 3-501.1(A).

### **3-502 Filtration**

Filters and filter media shall be listed and labeled to NSF/ANSI 50 by an ANSI-accredited certification organization. Filters shall be operated, backwashed, cleaned and maintained according to the manufacturer's instructions.

### **3-503 Disinfection and pH Control**

#### **3-503.1 Primary Disinfectants**

Only the primary disinfectants outlined in this Section shall be acceptable for use in AQUATIC VENUES.

#### **(A) CHLORINE (Hypochlorites)**

- (1) Only CHLORINE products that are EPA-REGISTERED for use as sanitizers or disinfectants in AQUATIC VENUES or SPAS in the United States are permitted.
- (2) Minimum FAC concentrations shall be maintained at all times in all areas as follows:
  - (a) AQUATIC VENUES not using CYA shall maintain a minimum FAC concentration of 1.0 PPM.
  - (b) AQUATIC VENUES using CYA shall maintain a minimum FAC concentration of 2.0 PPM.
  - (c) SPAS shall maintain a minimum FAC concentration of 3.0 PPM.
- (3) Recirculated AQUATIC FEATURE water lines susceptible to holding stagnant water shall maintain disinfectant throughout the lines as per Section 3-503.1(A)-(B).
- (4) Maximum FAC concentrations shall not exceed 10.0 PPM at any time the AQUATIC VENUE is open to BATHERS.

#### **(B) Bromine**

- (1) Only bromine products that are EPA-REGISTERED for use as sanitizers or disinfectants in AQUATIC VENUES or SPAS in the United States shall be permitted.
- (2) Minimum bromine concentrations shall be maintained at all times in all areas as follows:
  - (a) All AQUATIC VENUES: 3.0 PPM, and
  - (b) SPAS: 3.0 PPM.
- (3) Maximum bromine concentrations shall not exceed 8.0 PPM at any time the AQUATIC VENUE is open to BATHERS.

#### **(C) Stabilizers**

- (1) The CYA level at all AQUATIC VENUES shall not exceed 100 PPM.

#### **(D) Compressed CHLORINE Gas**

As per Section 2-504.2(K), use of compressed CHLORINE gas shall be prohibited for new construction and after SUBSTANTIAL ALTERATION to existing AQUATIC FACILITIES.

- (1) Facilities using compressed CHLORINE gas shall provide safety precautions per the following Sub-Sections.
  - (a) The chlorinators and any cylinders containing CHLORINE gas used therewith shall be housed in an ENCLOSURE

separated from other EQUIPMENT ROOMS, including the AQUATIC VENUE, corridors, dressing rooms and other space with a door so installed as to prevent gas leakage and equipped with an inspection window.

- (b) The enclosure shall be equipped with an audible alarm and leakage detection kit.
  - (c) A gas mask designed for use in a CHLORINE atmosphere must be located outside of the ENCLOSURE in a closed, unlocked cabinet along with a record book for use and a replacement canister.
  - (d) CHLORINE cylinders shall be secured from falling.
  - (e) Cylinders in use shall be secured on a suitable platform scale and equipped with a wrench or valve handle that can be used to shut off the gas in the event of an emergency.
  - (f) A separate vent opening near the floor to the building exterior shall be provided.
  - (g) An electric motor-driven fan capable of two air changes per hour, shall take suction from near the floor level of the ENCLOSURE and discharge at a suitable point to the exterior above the ground level.
  - (h) The fan switch shall be able to be operated from outside of the ENCLOSURE.
  - (i) Any person who operates such chlorinating equipment shall be trained in its use.
  - (j) AQUATIC FACILITIES shall stop the use of CHLORINE gas if specific safety equipment and training requirements, along with local code considerations, cannot be met.
- (E) Salt Electrolytic CHLORINE Generators, Brine Electrolytic CHLORINE or Bromine Generators
- (1) Only POOL grade salt shall be used.
  - (2) The salt generation generator must maintain CHLORINE and bromine levels within required concentrations as specified in Section 3-503.1(A). The saline content of the AQUATIC VENUE water shall be maintained in the required range specified by the manufacturer.
  - (3) Cleaning of electrolytic plates shall be performed as recommended by the manufacturer.
  - (4) Corrosion protection systems shall be maintained in the AQUATIC VENUE basin.
- (F) A facility unable to maintain water with the required disinfectant residual will be required to install equipment for the automated feeding of chemicals.

### 3-503.2 Secondary Disinfection Systems

- (A) UV Light
- (1) UV systems shall only operate while the RECIRCULATION SYSTEM is operating.
  - (2) 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 inactivation.
  - (3) UV sensors shall be calibrated at a frequency in accordance with the manufacturer's recommendations.

- (4) Records of calibration shall be maintained by the AQUATIC FACILITY.
- (B) Ozone
  - (1) Ozone systems shall be operated and maintained according to the manufacturer's instructions to maintain the required design performance.
  - (2) Residual ozone concentration in the AQUATIC VENUE water shall remain below 0.1 PPM.
  - (3) A printed standard operating manual shall be provided containing information on the operation and maintenance of the ozone generating equipment, including the responsibilities of workers in an emergency.
  - (4) All employees shall be properly trained in the operation and maintenance of the equipment.
- (C) Copper and Silver Ions
  - (1) Only those systems that are EPA-REGISTERED for use as sanitizers or disinfectants in AQUATIC VENUES or SPAS in the United States are permitted.
  - (2) Copper and silver concentrations shall not exceed 1.3 PPM for copper and 0.10 PPM for silver for use as disinfectants in AQUATIC VENUES in the United States.
  - (3) FAC or bromine levels shall be maintained in accordance with Section 3-503.1.
- 3-503.3** Other Sanitizers, Disinfectants, or Chemicals
  - (A) Other sanitizers, disinfectants, or chemicals used must:
    - (1) Be U.S. EPA-REGISTERED under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA),
    - (2) Not create a hazardous condition or compromise disinfectant efficacy when used with required bromine or CHLORINE concentrations, and
    - (3) Not interfere with water quality measures meeting all criteria set forth in these Regulations.
  - (B) CHLORINE Dioxide
    - (1) CHLORINE dioxide added through the recirculation system shall only be used for remediation for water quality issues when the AQUATIC VENUE is closed and BATHERS are not present.
    - (2) Safety training and safety precautions related to the use of CHLORINE dioxide shall be in place.
  - (C) Clarifiers, flocculants, and defoamers shall be used per the manufacturer's instructions.
- 3-503.4** PH
  - (A) The PH of the water shall be maintained between 7.2 and 7.8.
  - (B) APPROVED substances for PH adjustment shall include but not be limited to muriatic (hydrochloric) acid, sodium bisulfate, carbon dioxide, sulfuric acid, sodium bicarbonate, and soda ash.
  - (C) A facility unable to maintain water at the required pH, will be required to install equipment for the automated feeding of chemicals.
- 3-503.5** Feed Equipment
  - (A) Any disinfectant and PH control chemicals delivered through an automatic chemical feed system shall meet the following requirements:

- (1) All chemical feed system components must be dedicated to a single chemical and clearly labeled to prevent the introduction of incompatible chemicals.
- (2) Chemical feed system components shall be installed and interlocked so it cannot operate when the RECIRCULATION SYSTEM is in low or no flow circumstances as per Section 2-504.2(B).
- (3) Chemical feed system components shall incorporate failure-proof features so the chemicals cannot feed directly into the AQUATIC VENUE, the venue piping system not associated with the RECIRCULATION SYSTEM, source water supply system, or the area within proximity of the AQUATIC VENUE DECK under any type of failure, low flow, or interruption of operation of the equipment to prevent BATHER exposure to high concentrations of AQUATIC VENUE treatment chemicals.
- (4) All chemical feed equipment shall be maintained in good working condition.
- (B) Chemical feeders shall be installed such that they are not over a different chemical, stored chemicals, other feeders, or electrical equipment.
- (C) Chemicals shall be kept dry to avoid clumping and potential feeder plugging for mechanical gate or rotating screw feeders. The feeder mechanism shall be cleaned and lubricated to maintain a reliable feed system.
- (D) Adequate pressure shall be maintained at the venturi INLET to create the vacuum needed to draw the chemical into the RECIRCULATION SYSTEM.
- (E) Erosion feeders shall only have chemicals added that are APPROVED by the manufacturer.
  - (1) A feeder shall only be opened after the internal pressure is relieved by a bleed valve.
  - (2) Erosion feeders shall be maintained according to the manufacturer's instructions.
- (F) Tubing and connections shall be checked on a daily basis for leaks.
  - (1) All chemical tubing that runs across walkways in non-PATRON areas shall be routed in PVC piping to support the tubing and to prevent leaks.
  - (2) The double containment PVC pipe shall be of sufficient size to allow for easy replacement of tubing.
  - (3) Any necessary turns in the piping shall be designed so as to prevent kinking of the tubing.
- (G) The Chlorine Institute requirements for safe storage and use of CHLORINE gas shall be followed.
- (H) Carbon dioxide feed shall be permitted to reduce PH and control total alkalinity.
  - (1) Carbon dioxide feed shall be controlled using a gas regulator.
  - (2) CO<sub>2</sub>/O<sub>2</sub> monitor and alarm shall be maintained in working condition.
  - (3) Carbon dioxide is heavier than air, so forced ventilation shall be maintained in the storage room.

**3-503.6** Testing for Water Circulation and Quality

- (A) WATER QUALITY TESTING DEVICES (WQTDs) for the measurement of disinfectant residual, PH, alkalinity, CYA (if used), and temperature, at a minimum, shall be available on site.
  - (B) WQTDs utilizing reagents shall be checked for expiration at every use and the date recorded.
  - (C) WQTDs shall be stored in accordance with the manufacturer's instructions.
  - (D) Chemical testing reagents shall be maintained at proper manufacturer specified temperatures.
  - (E) WQTDs that require calibration shall be calibrated in accordance with the manufacturer's instructions and the date of calibration recorded.
  - (F) WQTDs unable to measure FAC are prohibited.
- 3-503.7** Automated Controllers and Equipment Monitoring
- (A) AQUATIC VENUES with AUTOMATED CONTROLLERS as outlined in Section 2-504.2(V) shall be capable of measuring the disinfectant residual of FAC, bromine or the system ORP to maintain the disinfectant residual.
  - (B) Automated controllers shall be interlocked per Section 2-504.2(B).
  - (C) The sample line for all probes shall be upstream from all primary, SECONDARY, AND SUPPLEMENTAL DISINFECTION injection ports or devices.
  - (D) AUTOMATED CONTROLLERS shall be monitored at the start of the operating day to ensure proper functioning.
  - (E) MONITORING shall include activities recommended by manufacturer, including but not limited to alerts and leaks.
  - (F) AUTOMATED CONTROLLERS shall be calibrated per the manufacturer's directions.
  - (G) When an ozone system is utilized as a SECONDARY DISINFECTION SYSTEM, the system shall be MONITORED continuously for the following: ORP, the control system indicating O<sub>3</sub> being created, and operational indicators indicating the system is in range. The MONITORING data must be recorded every four (4) hours.
    - (1) At the time the ozone generating equipment is installed, again after 24 hours of operation, and annually thereafter, the air space within six (6) inches of the AQUATIC VENUE water shall be tested to determine compliance of less than 0.1 PPM gaseous ozone.
    - (2) Results of the test shall be maintained on site for review by the HEALTH AUTHORITY.
  - (H) When a UV system is utilized for SECONDARY DISINFECTION, the system shall be monitored continuously for the following and the data recorded as indicated: flow rate every four (4) hours, intensity every four (4) hours, water temperature daily, set point for intensity daily, and UV lamp on/off cycles recorded weekly with the total cycles/week. In addition the following must be MONITORED and recorded as indicated: iron, calcium hardness – weekly, UVT analyzer calibration – weekly, calibration intensity MONITORED annually and recorded at the time of calibration, and the calibration of the flow meter per the manufacturer's requirements and recorded the time of calibration.
  - (I) The automated UV shut-down alarm required in Section 2-504.3(D)(7) shall be tested weekly and maintained as needed.

### **3-504 Water Sample Collection and Testing**

#### **3-504.1 Routine Sample Collection**

When routine samples are collected from in-line sample ports, the QUALIFIED OPERATOR shall also ensure water samples are acquired from the bulk water of the AQUATIC VENUE at least once per day

(A) Water quality data from these AQUATIC VENUE samples shall be compared to data obtained from in-line port samples to assess potential water quality variability in the AQUATIC VENUE.

#### **3-504.2 AQUATIC VENUE Water Chemical Balance**

(A) Total alkalinity shall be maintained in the range of 60 to 180 PPM.

(B) The OWNER shall ensure the AQUATIC FACILITY takes action to reduce the level of CHLORAMINES in the water when levels exceed 1.0 PPM. Such actions may include but are not limited to:

(1) SUPERCHLORINATION;

(2) BREAKPOINT CHLORINATION;

(3) Water exchange; or

(4) PATRON adherence to appropriate BATHER hygiene practices.

(C) Calcium hardness should not exceed 1000 PPM.

(D) Algaecides may be used in an AQUATIC VENUE provided:

(1) The product is labeled as an algaecide for AQUATIC VENUE or SPA use;

(2) The product is used in strict compliance with label instructions; and,

(3) The product is registered with the US EPA and applicable state agency.

**3-504.3** Source water shall be maintained as outlined in Section 2-901.

**3-504.4** AQUATIC VENUE water shall be chemically balanced.

#### **3-504.5 Water Temperature**

(A) Water temperatures shall be considered and planned for based on risk, safety, priority facility usage, and age of participants, while managing water quality concerns.

(B) The maximum temperature for any AQUATIC VENUE is 104°F.

**3-504.6** Facilities not having dependable DISINFECTION and filtration systems or failing to maintain such systems in accordance with these Regulations shall provide weekly bacteriological testing results from a State certified laboratory of water samples taken from each AQUATIC VENUE. Not more than 15 percent of the samples for any AQUATIC VENUE must either:

(A) Contain more than 200 bacteria per milliliter, as determined by the standard (35°C) agar plate count; or

(B) Show a positive test (confirmed test) for total coliform organisms in any of the five 10 milliliter portions of a sample or more than 1.0 coliform organisms per 50 milliliters if the membrane filter test is used.

### **3-505 Water Quality Chemical Testing Frequency**

**3-505.1** FAC or bromine, and PH shall be tested at all AQUATIC VENUES prior to opening each day or at least once every 24 hours at evenly spaced intervals when the AQUATIC VENUE remains open 24 hours a day.

**3-505.2** For all AQUATIC VENUES not associated with residential living units, the FAC (or bromine) and PH shall be tested prior to opening and every four (4) hours while accessible to BATHERS.

**3-505.3** In-line ORP readings, if such systems are installed, shall be recorded at the same time the FAC (or bromine) and PH tests are performed.



- 3-505.4** Total Alkalinity (TA) and combined AVAILABLE CHLORINE shall be tested weekly at all AQUATIC VENUES.
- 3-505.5** CYA shall be tested monthly at all AQUATIC VENUES utilizing CYA.
  - (A)** CYA shall be tested 24 hours after the addition of CYA to the AQUATIC VENUE.
  - (B)** If AQUATIC VENUES utilize stabilized CHLORINE as its primary disinfectant, the operator shall test CYA every week.
- 3-505.6** For heated AQUATIC VENUES, water temperature shall be recorded at the same time the FAC (or bromine) and PH tests are performed.
- 3-505.7** If in-line electrolytic chlorinators are used, salt levels shall be tested at least weekly or per manufacturer's instructions.
- 3-505.8** Copper and silver shall be tested daily at all AQUATIC VENUES utilizing copper/silver systems as a SUPPLEMENTAL DISINFECTION SYSTEM.

**3-506 Water Clarity**

- 3-506.1** The water in an AQUATIC VENUE shall be sufficiently clear such that the main suction outlet pattern is visible while the water is static at all times the AQUATIC VENUE is open or available for use.
- 3-506.2** This reference point shall be visible at all times at any point on the DECK up to 30 feet away in a direct line of sight from the main drain. For SPAS, this test shall be performed when the water is in a non-turbulent state and bubbles have been allowed to dissipate.

**3-507 Water Supply and Disposal**

All provisions for water supply, fill spout, cross-connection control, sanitary waste and AQUATIC VENUE waste water must meet all criteria outlined in Section 2-9 with the exception of Section 2-905.3 and providing a sump pit for AQUATIC VENUE waste water on AQUATIC FACILITIES constructed prior to the adoption of these Regulations..

- 3-507.1** BACKFLOW prevention devices shall be in good working order and shall be tested as required by the HEALTH AUTHORITY.

**3-6 Decks and Equipment**

**Subparts**

- 3-601 Spectator Areas**
- 3-602 Starting Blocks**
- 3-603 Lifeguard and Safety Related Equipment**
- 3-604 Enclosures**

**3-601 Spectator Areas**

- 3-601.1** Materials and Slip Resistance
  - (A)** Surfaces shall be clean and in good repair.
  - (B)** The finish and profile of DECK surfaces shall be maintained to prevent slips and falls.
  - (C)** Tripping hazards shall be avoided. If tripping hazards are present, they shall be repaired or promptly barricaded to protect PATRONS and employees.
- 3-601.2** The PERIMETER DECK shall be maintained clear of obstructions for at least a four (4) foot width around the entire AQUATIC VENUE unless otherwise allowed by these Regulations.

### **3-602 Starting Blocks**

- 3-602.1** Starting platforms shall only be used for competitive swimming and training.
- 3-602.2** Starting platforms shall only be used under the direct supervision of a coach or instructor.
- 3-602.3** Starting platforms shall be removed, if possible, or prohibited from use during all recreational or non-competitive swimming activity by covering platforms with a manufacturer-supplied platform cover or with another means or device that is readily visible and clearly prohibits use.

### **3-603 Lifeguard and Safety Related Equipment**

- 3-603.1** AQUATIC FACILITIES shall not be open to PATRONS unless the equipment listed under this Section is present and in a safe and working condition.
- 3-603.2** Safety Equipment Required at All AQUATIC FACILITIES
  - (A)** The AQUATIC FACILITY shall have equipment for staff to communicate in case of emergency.
    - (1)** The AQUATIC FACILITY or each AQUATIC VENUE, as necessary, shall have a functional telephone or other communication system or device that is hard wired and capable of directly dialing 911 or function as the emergency notification system.
    - (2)** The telephone or communication system or device shall be conspicuously provided and accessible to AQUATIC VENUE PATRONS such that it can be reached immediately.
    - (3)** Alternate functional systems, devices, or communication processes are allowed with HEALTH AUTHORITY approval in situations when a hardwired telephone is not logistically sound, and an alternate means of communication is available.
- 3-603.3** LIFEGUARD STATIONS shall have an unobstructed view of the entire bottom of the AQUATIC VENUE.
- 3-603.4** LIFEGUARD stands shall provide enough height to elevate the LIFEGUARD to an eye level above the heads of the BATHERS; and provide safe access and egress for the LIFEGUARD.
- 3-603.5** LIFEGUARD Chair and Stand Design
  - (A)** The chairs/stands must be designed:
    - (1)** With no sharp edges or protrusions; and
    - (2)** With sturdy, durable, and UV resistant material.
  - (B)** When a chair or stand is provided, it shall be equipped with overhead protection from or in a location without direct sun exposure or glare to allow for optimal BATHER surveillance.
- 3-603.6** First Aid Supplies
  - (A)** The AQUATIC FACILITY with onsite staff shall have designated locations for emergency and first aid equipment. An adequate supply of first aid supplies shall be continuously stocked.
  - (B)** Signage shall be provided at the AQUATIC FACILITY or each AQUATIC VENUE, as necessary, which clearly identifies the following:
    - (1)** First aid location(s);
    - (2)** Emergency telephone(s) or APPROVED communication system or device;
    - (3)** A permanent sign providing emergency dialing directions and the AQUATIC FACILITY address shall be posted and maintained at the emergency telephone, system or device;

- (4) A permanent sign shall be conspicuously posted and maintained displaying contact information for emergency personnel and AQUATIC FACILITY management; and
- (5) A sign shall be posted stating the following:
  - (a) The operating hours of the AQUATIC FACILITY, and
  - (b) Unauthorized use of the AQUATIC FACILITY outside of these hours is prohibited.

**3-603.7** Safety Equipment Required at Facilities with Lifeguards

- (A) At least one spinal injury board constructed of material easily SANITIZED or disinfected shall be provided. The board shall be equipped with a head immobilizer and sufficient straps to immobilize a person to the spinal injury board.
- (B) Each LIFEGUARD conducting BATHER surveillance with the responsibility of in-water rescue in less than three (3) feet of water shall have a rescue tube immediately available for use.
- (C) Each LIFEGUARD conducting BATHER surveillance in a water depth of three (3) feet or greater shall have a rescue tube on his/her person in a rescue ready position.
- (D) LIFEGUARDS shall wear attire that readily identifies them as members of the AQUATIC FACILITY'S LIFEGUARD staff.
- (E) A whistle or other signaling device shall be worn by each LIFEGUARD conducting BATHER surveillance for communicating to PATRONS and/or staff.
- (F) Personal protective devices including a resuscitation mask with a one-way valve and non-latex one-use disposable gloves shall be immediately available to all LIFEGUARDS.
- (G) AQUATIC FACILITIES with one LIFEGUARD shall provide and maintain a U.S. Coast Guard-approved aquatic rescue throwing device.
- (H) AQUATIC FACILITIES with one LIFEGUARD shall provide and maintain a 12 foot to 16 foot reaching pole.

**3-603.8** Safety Equipment and Signage Required at Facilities without Lifeguards

- (A) AQUATIC VENUES whose depth exceeds 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 whose length is 50 feet or 1.5 times the width of the AQUATIC VENUE, whichever is less. The rescue throwing device shall be located in the immediate vicinity to the AQUATIC VENUE and be visible and accessible to BATHERS.
- (B) AQUATIC VENUES whose depth exceeds two (2) feet of standing water shall provide and maintain a reaching pole of 12 feet to 16 feet in length, non-telescopic, light in weight, and with a securely attached Shepherd's Crook with an aperture of at least 18 inches. The reaching pole shall be located in the immediate vicinity to the AQUATIC VENUE and be visible and accessible to BATHERS and PATRONS.
- (C) Cardiopulmonary Resuscitation (CPR) posters that are up to date with the latest CPR programs and protocols shall be posted conspicuously at all times.
- (D) A sign shall be posted outlining the IMMINENT HEALTH HAZARDS, which require an AQUATIC VENUE or AQUATIC FACILITY closure as defined in these Regulations and a telephone number to report problems to the OWNER/operator.

(E) For any AQUATIC VENUE with standing water, a sign shall be posted signifying a LIFEGUARD is not on duty in four (4) inch lettering and that the following rules apply:

- (1) Persons under the age of 14 cannot be in the AQUATIC VENUE without direct adult supervision meaning children shall be in adult view at all times, and
- (2) Youth and childcare groups, training activities, lifeguard courses, and swim lessons are not allowed without a LIFEGUARD providing BATHER surveillance.

**3-603.9** Spa Specific Signage - the following signs must be posted at all SPAS:

- (A) Extended exposure to HOT WATER or vapors may be detrimental to the health of elderly persons and persons with heart conditions, diabetes, or high or low blood pressure.
- (B) Children 12 years or younger must be supervised by an adult, the maximum recommended exposure time for such children to use the spa is 10 minutes. Posted in four (4) inch letters.

**3-604 Enclosures**

- 3-604.1** All required ENCLOSURES shall be maintained to prevent unauthorized entry to the protected space.
- 3-604.2** All primary public access gates or doors serving as part of an ENCLOSURE shall have functional self-closing and self-latching closures.
- 3-604.3** Gates or doors used solely for after-hours maintenance shall remain locked at all times when not in use by authorized staff.

**3-7 Chemical Storage and Use**

**Subparts**

- 3-701 Chemical Storage**
- 3-702 Chemical Handling**

**3-701 Chemical Storage**

- 3-701.1** Chemical storage and handling shall be in compliance with applicable law.
- 3-701.2** Storage, handling and use of each chemical shall be in compliance with the manufacturer's SDS and labels.
- 3-701.3** AQUATIC VENUE chemicals shall be stored to prevent access by unauthorized individuals.

**3-702 Chemical Handling**

- 3-702.1** 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 according to OSHA and/or EPA materials labeling requirements.
- 3-702.2** Chemicals shall be measured using a dedicated measuring device where applicable. These measuring devices shall be clean, dry, and constructed of material compatible with the chemical to be measured to prevent the introduction of incompatible chemicals.
- 3-702.3** Chemical Addition Methods
  - (A) DISINFECTION and PH control chemicals shall be automatically introduced through the RECIRCULATION SYSTEM.
    - (1) Superchlorination or shock chemicals and other chemicals other than DISINFECTION and PH control may be added manually to the AQUATIC VENUE.

- (2) Chemicals added manually directly into the AQUATIC VENUE shall only be introduced in the absence of BATHERS.
- (B) Chemicals shall be diluted (or mixed with water) prior to application and as per the manufacturer's directions.
  - (1) Chemicals shall be added to water when diluting as opposed to adding water to a concentrated chemical.
  - (2) Each chemical shall be mixed in a separate, labeled container.
  - (3) Two or more chemicals shall never be mixed in the same dilution water.

<b>3-8</b>	<b>Hygiene Facilities</b>
<b>Subparts</b>	
<b>3-801</b>	<b>Plumbing Fixture Requirements</b>
<b>3-802</b>	<b>Provisions of Suits, Towels, and Shared Equipment</b>

**3-801 Plumbing Fixture Requirements**

- 3-801.1** HYGIENE FACILITY fixtures, dressing area fixtures, and furniture shall be cleaned and SANITIZED as often as necessary with an EPA-REGISTERED product to provide a clean and sanitary environment.
- 3-801.2** HYGIENE FACILITY floors, walls, and ceilings shall be kept clean and free of visible mold and mildew.
- 3-801.3** HAND WASH STATIONS shall include the following items:
  - (A) Hand wash sink,
  - (B) Adjacent soap dispenser,
  - (C) Hand drying device or paper towels and dispenser, and
  - (D) Trash receptacle.
- 3-801.4** CLEANSING SHOWERS  
CLEANSING SHOWERS shall be cleaned and SANITIZED as often as necessary with an EPA-REGISTERED product to provide a clean and sanitary environment.
- 3-801.5** RINSE SHOWERS
  - (A) RINSE SHOWERS shall be cleaned as necessary with an EPA-REGISTERED product to provide a clean and sanitary environment.
  - (B) RINSE SHOWERS shall be easily accessible.
  - (C) Equipment and furniture on the DECK shall not block access to RINSE SHOWERS.
  - (D) Soap dispensers and soap shall be prohibited at RINSE SHOWERS.
  - (E) RINSE SHOWER drains shall discharge to the sanitary sewer according to applicable law.
- 3-801.6** Non-Plumbing Fixture Requirements
  - (A) If paper towels are used for hand drying, a dispenser and paper towels shall be provided for use at HAND WASH STATIONS.
  - (B) Soap dispensers shall be provided at HAND WASH STATIONS and CLEANSING SHOWERS and shall be kept full of liquid or granular soap. Bar soap shall be prohibited.
  - (C) A minimum of one (1) hands-free trash receptacle shall be provided in areas adjacent to hand washing sinks. Trash receptacles shall be emptied daily and more often if necessary to provide a clean and sanitary environment
  - (D) Non-permanent floor coverings shall be removable and maintained in accordance with Section 3-801.1. Wooden racks, duckboards, and

wooden mats shall be prohibited on HYGIENE FACILITY and dressing area flooring.

**3-801.7 Sharps**

**(A)** A Biohazard Action Plan shall also be on file as required by local, state or federal regulations and included as part of the AQUATIC FACILITY SAFETY PLAN.

**(B)** Sharps within APPROVED containers shall be disposed of as needed by the AQUATIC FACILITY in accordance with applicable law.

**3-802 Provisions of Suits, Towels, and Shared Equipment**

**3-802.1** All towels provided by the AQUATIC FACILITY shall be washed with detergent and bleach in warm water, rinsed, and thoroughly dried at the warmest temperature listed on the fabric label after each use. Non-absorbent, easily cleanable receptacles shall be provided for the collection of used suits and towels.

**3-802.2** Equipment provided by the AQUATIC FACILITY that comes into contact with BATHER'S eyes, nose, ears, and mouth (including but not limited to snorkels, nose clips, and goggles) shall be cleaned, SANITIZED between uses, and stored in a manner to prevent biological growth.

**3-802.3** Other shared equipment provided by the AQUATIC FACILITY, including but not limited to fins, kickboards, tubes, lifejackets, and noodles, shall be kept clean and stored in a manner to prevent mold and other biological growth.

**3-802.4** Shared equipment shall be maintained in good repair.

**3-802.5** Used and un-SANITIZED shared equipment shall be kept separate from cleaned and SANITIZED shared equipment.

**3-802.6** Non-absorbent, easily cleanable receptacles shall be provided for the collection of used shared equipment.

**3-9 Special Use Aquatic Venues and Features**

**Subparts**

**3-901 Waterslides**

**3-902 Wave Pools**

**3-903 Moveable Floors**

**3-904 Bulkheads**

**3-905 Interactive Water Play Venues**

**3-906 Spas**

**3-907 Natural Bathing Places**

**3-908 Isolation and Flotation Units**

**3-901 Waterslides**

**3-901.1 Signage**

Warning signs shall be posted in accordance with the manufacturer's recommendations.

**3-902 Wave Pools**

**3-902.1 Life Jackets**

U.S. Coast Guard-approved life jackets that are properly sized and fitted shall be provided free for use by BATHERS who request them.

**3-903 Moveable Floors**

**3-903.1 Starting Platforms**

The use of starting platforms in the area of a MOVEABLE FLOOR shall be prohibited when the water depth is shallower than the minimum required water depth of four (4) feet.

- 3-903.2 Diving Boards**  
When a MOVEABLE FLOOR is installed into a DIVING POOL, diving shall be prohibited unless the DIVING POOL depth meets criteria set in Section 2-602.1.
- 3-904 Bulkheads**
- 3-904.1** If a BULKHEAD is operated with an open area underneath, no one shall be allowed to swim beneath the BULKHEAD.
- 3-904.2** The BULKHEAD position shall be maintained such that it cannot encroach on any required clearances of other features such as diving boards.
- 3-905 Interactive Water Play Aquatic Venues**
- 3-905.1** Cracks in the INTERACTIVE WATER PLAY AQUATIC VENUE shall be repaired when they may be a potential for leakage, present a tripping hazard, present a potential cause of lacerations, or impact the ability to properly clean and maintain the INTERACTIVE WATER PLAY AQUATIC VENUE area.
- 3-905.2** When cleaning the INTERACTIVE WATER PLAY AQUATIC VENUE, contaminants shall be removed or washed to the sanitary sewer. If no sanitary sewer drain is available, then debris shall be directed to the nearest DECK drain or removed in a manner that prevents contaminants from reentering the INTERACTIVE WATER PLAY AQUATIC VENUE.
- 3-906 Spas**
- 3-906.1** SPA filtration systems shall be operated 24 hours per day except for periods of draining, filling, and maintenance.
- 3-906.2** SPAS shall be drained, cleaned, scrubbed, and have the water replaced as needed to maintain water quality and water clarity requirements.
- 3-906.3** SPA surfaces, including the interior of SKIMMERS, shall be scrubbed or wiped down, and have all water drained prior to refilling the SPA.
- 3-907 Natural Bathing Places**
- 3-907.1** Warning signs must be posted at each end of the designated bathing area, "No Lifeguard Service Beyond This Point."
- 3-907.2** Conveniently located trash receptacles must be provided. These receptacles must be emptied as needed and maintained in a sanitary condition.
- 3-907.3** At least one LIFEGUARD and elevated chair shall be provided for every 400 feet of beach.
- 3-907.4** Water samples shall be submitted to a state-licensed laboratory each week. Such samples must meet the following criteria: *E. coli* at a geometric of 126 CFU per 100 mL and an STV (single test value) of 410 CFU per 100 mL measured using EPA Method 1603, or any other equivalent method that measures *E. coli*.
- 3-907.5** Failure to meet any of the criteria noted in Section 2-10012.1(B)-(F) shall result in the immediate closure of the NATURAL BATHING PLACE.
- 3-908 Isolation and Floatation Units**
- 3-908.1** The maximum bathing load in a tank is one person.
- 3-908.2** The solution in the tank must be disinfected by normal chlorination or bromination at 3.0 to 5.0 PPM.
- 3-908.3** The maximum temperature of the solution in the tank must not exceed 97°F.
- 3-908.4** Each room must have the following signs provided:

- (A) Maximum water depth.
- (B) BATHER behavior.
- (C) Location of the emergency phone and emergency telephone number(s).
- (D) Diagrammatic CPR instructions.

**3-908.5** The QUALIFIED OPERATOR information must be posted in a conspicuous location within the AQUATIC FACILITY.



## SECTION 4 Policies and Management

### Parts

- 4-1 Qualified Operator Requirement
- 4-2 Lifeguard Training
- 4-3 Facility Staffing
- 4-4 Facility Management
- 4-5 Fecal/Vomit/Blood Contamination Response
- 4-6 Additional Requirements for Special Use Aquatic Venues

4-1 Qualified Operator Requirement
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Subpart
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4-101 Qualified Operator Qualifications, Certification, and Registration
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The provisions of this Section shall apply to all AQUATIC FACILITIES covered by these Regulations regardless of when constructed, unless otherwise noted.

Employees assigned to roles which have the potential for an occupational exposure to bloodborne pathogens, pathogens that cause RWIs, or other pathogens shall be trained to recognize and respond to body fluid (blood, feces, and vomit) releases in and around the AQUATIC VENUE area.

### 4-101 Qualified Operator Qualifications, Certification, and Registration

#### 4-101.1 Operator Qualifications

- (A) A QUALIFIED OPERATOR of an AQUATIC FACILITY shall have completed a training course that is recognized by the HEALTH AUTHORITY and maintain a current certification as required by the HEALTH AUTHORITY.
- (B) A QUALIFIED OPERATOR shall have a current certificate or written documentation acceptable to the HEALTH AUTHORITY showing the completion of a training course.
  - (1) Originals or copies of such certificate or documentation shall be available on site for inspection by the HEALTH AUTHORITY for each QUALIFIED OPERATOR employed at or contracted by the site, as specified in these Regulations.
  - (2) Originals shall be made available upon request by the HEALTH AUTHORITY.

#### 4-101.2 Operator Registration

- (A) A QUALIFIED OPERATOR shall register with the HEALTH AUTHORITY once a certification is obtained and prior to beginning work at any AQUATIC FACILITY or with any POOL COMPANY.
- (B) All QUALIFIED OPERATORS currently registered with the HEALTH AUTHORITY shall obtain proof of national certification from a recognized testing entity at the time of their registration renewal within three years from the implementation of these Regulations. Registrations will expire in conjunction with the national certification date and must be renewed prior to expiration.
- (C) Individuals not properly certified or registered may not perform service at a permitted AQUATIC FACILITY. All services provided must be in accordance with these Regulations.
- (D) The QUALIFIED OPERATOR is responsible for maintaining the AQUATIC VENUE in accordance with these Regulations. If a defect or deficiency

is discovered at an AQUATIC VENUE that presents a risk to PATRONS, it is the QUALIFIED OPERATOR's responsibility to close the AQUATIC VENUE until the required repairs have been made.

**4-101.3** Registration of Pool Companies

- (A) All POOL COMPANIES who provide service to permitted AQUATIC VENUES must be registered with the HEALTH AUTHORITY and provide a current list of all registered persons in their employ within 30 days of any changes in personnel. Registrations will expire two years after the date of issuance and must be renewed prior to expiration.
- (B) The AQUATIC FACILITY shall promptly post in a conspicuous location within each ENCLOSURE at an AQUATIC FACILITY where services are provided by a POOL COMPANY, a legible sign which identifies the company name, phone number, and the company certificate number issued by the HEALTH AUTHORITY.
- (C) The AQUATIC FACILITY shall promptly remove the POOL COMPANY sign when the POOL COMPANY is no longer providing services.
- (D) The AQUATIC FACILITY shall ensure each POOL COMPANY has current proof of certification while providing POOL services. Proof of certification shall consist of an unaltered and unexpired photo identification card issued by the HEALTH AUTHORITY which has the:
  - (1) Person's name,
  - (2) Type of certification,
  - (3) Certificate number, and
  - (4) Expiration date.

**4-101.4** Required Servicing Equipment

The following list of equipment must be available for use by each QUALIFIED OPERATOR when providing service to a permitted AQUATIC VENUE:

- (A) Water Quality Testing Devices (WQTDs) which can reliably measure:
  - (1) Disinfectant residual,
  - (2) PH,
  - (3) Total alkalinity,
  - (4) Acid demand, and
  - (5) Cyanuric acid concentration;
- (B) A brush suitable for cleaning the bottom of the AQUATIC VENUE;
- (C) A thermometer;
- (D) A vacuum cleaner, complete with attachments;
- (E) A leaf SKIMMER;
- (F) Hand tools and lubricants necessary for servicing mechanical equipment incident to swimming POOLS and their appurtenances;
- (G) Materials and chemicals necessary for disinfecting AQUATIC VENUE water and adjusting total alkalinity and PH; and
- (H) Any other equipment deemed necessary by the HEALTH AUTHORITY.

**4-101.5** Contractors

A licensed contractor may perform work at an AQUATIC FACILITY within the scope of the licensed contractor's qualifications.

**4-101.6** Qualified Operator Training Courses must be in accordance with the criteria outlined in the most current MAHC published by the CDC.

## **4-2 Lifeguard Training**

### **Subparts**

#### **4-201 Lifeguard and Attendant Qualifications**

#### **4-202 Lifeguard Supervisor Training**

#### **4-201 Lifeguard and Attendant Qualifications**

##### **4-201.1** A LIFEGUARD shall:

- (A)** Have successfully completed a recognized LIFEGUARD training course offered by a recognized training agency;
- (B)** Possess a current certificate for such training;
- (C)** Have met all pre-service requirements; and
- (D)** Participate in continuing in-service training requirements of the AQUATIC FACILITY.

**4-201.2** Lifeguard Training Courses must be in accordance with the criteria outlined in the most current MAHC published by the CDC.

##### **4-201.3** An ATTENDANT shall:

- (A)** Possess a current certification for CPR and First Aid; and
- (B)** Be trained by the employer to identify and correct safety hazards specific to the assigned attraction.

#### **4-202 Lifeguard Supervisor Training**

##### **4-202.1** LIFEGUARD SUPERVISOR Candidate Prerequisites

LIFEGUARD SUPERVISOR candidate prerequisites shall include but not be limited to having:

- (A)** A current LIFEGUARD certification;
- (B)** A current LIFEGUARD SUPERVISOR Certification; and
- (C)** The ability to effectively communicate verbally in English.

## **4-3 Facility Staffing**

### **Subparts**

#### **4-301 Qualified Operator Requirements and Availability**

#### **4-302 Aquatic Facilities Requiring Lifeguards**

#### **4-303 Safety Plan**

#### **4-304 Staff Management**

#### **4-301 Qualified Operator Requirements and Availability**

**4-301.1** All AQUATIC VENUES must have a QUALIFIED OPERATOR contracted or employed to monitor and maintain the AQUATIC VENUE whenever the facility is operating.

**4-301.2** The AQUATIC FACILITY'S QUALIFIED OPERATOR must be available to respond to an emergency or IMMANENT HEALTH HAZARD within two hours.

**4-301.3** QUALIFIED OPERATORS shall monitor the AQUATIC VENUE weekly during the off season, a minimum of three (3) times per week during the peak season, or more often as necessary to maintain compliance with these Regulations.

**(A)** Weekly visits shall be documented and be available at the AQUATIC FACILITY for review by the HEALTH AUTHORITY.

**(B)** The written documentation shall indicate the checking, MONITORING, and testing required in these Regulations.

- (C) The written documentation shall indicate what corrective actions, if any, were taken by the contracted off-site QUALIFIED OPERATOR during the scheduled visits or assistance requests.
- (D) All AQUATIC FACILITIES with on-site staff lacking a full time on-site QUALIFIED OPERATOR shall have a designated on-site RESPONSIBLE PERSON.
- (E) The RESPONSIBLE PERSON shall:
  - (1) Determine when the AQUATIC FACILITY or individual AQUATIC VENUE should be closed, and quickly execute proper closing procedures;
  - (2) Not make adjustments or perform any maintenance at the AQUATIC VENUE; and
  - (3) Contact the contracted off-site QUALIFIED OPERATOR immediately following AQUATIC VENUE closure.

**4-302 Aquatic Facilities Requiring Lifeguards**

**4-302.1** All AQUATIC VENUES with standing water and any of the following conditions listed in this Section shall be required to have a LIFEGUARD(s) conducting BATHER surveillance at all times the AQUATIC VENUE is open.

- (A) A LIFEGUARD shall be required for any of the following conditions:
  - (1) Any POOL that allows unsupervised children under the age of 14 years;
  - (2) Any POOL while it is being used for the recreation of youth groups, including but not limited to, childcare usage or school groups;
  - (3) Any AQUATIC VENUE while it is being used for group training including but not limited to competitive swimming and/or sports, LIFEGUARD training, exercise programs, and swimming lessons;
  - (4) Any AQUATIC VENUE with a surface area of at least 2000 square feet,
    - (a) AQUATIC VENUES jointly owned by all residents in a development or a homeowners association do not require a LIFEGUARD(S), but must have a written procedure for supervision of BATHERS APPROVED by the HEALTH AUTHORITY prior to being issued a PERMIT to operate,
    - (b) A LIFEGUARD must be provided if the number of PATRONS exceeds 80 percent of the THEORETICAL PEAK OCCUPANCY;
  - (5) Any AQUATIC VENUE ENCLOSURE with a cumulative unsupervised POOL surface area of 4000 square feet or more;
  - (6) Any AQUATIC VENUE with an induced current or wave action including but not limited to WAVE POOLS and LAZY RIVERS;
  - (7) WATERSLIDE LANDING POOLS;
  - (8) Any AQUATIC VENUE in which BATHERS enter the water from any height above the DECK including but not limited to diving boards, DROP SLIDES, starting platforms, and/or climbing walls;
  - (9) Any POOL that charges an admission fee including a fee charged for the use of poolside amenities includes the use of the POOL; or
  - (10) Any POOL not associated with multiple living or lodging units.

## **4-303 Safety Plan**

- 4-303.1** All AQUATIC FACILITIES shall create and implement a SAFETY PLAN to include, but not be limited, to the following elements:
- (A)** Staffing Plan,
  - (B)** EMERGENCY ACTION PLAN (EAP),
  - (C)** Biohazard action plan,
  - (D)** Pre-Service Training Plan, and
  - (E)** In-service Training Plan.
- 4-303.2** When LIFEGUARDS are required, a Lifeguard Staffing Plan shall be submitted to the HEALTH AUTHORITY for approval prior to opening. The plan shall include diagrammed zones of BATHER surveillance for each AQUATIC VENUE that ensures the following:
- (A)** At least one LIFEGUARD shall be required for every 2000 square feet or major fraction thereof, unless an independent lifeguard auditing entity provides documentation validating that the proposed number of LIFEGUARDS will meet all of the requirements outlined in this section. A minimum of three (3) unannounced audits must be conducted by the auditing entity each season with copies provided to and available for review by the HEALTH AUTHORITY;
  - (B)** The LIFEGUARD is capable of viewing the entire area of the assigned zone of BATHER surveillance;
  - (C)** The LIFEGUARD is able to reach the furthest extent of the assigned zone of BATHER surveillance within 20 seconds;
  - (D)** Identify whether the LIFEGUARD is in an elevated stand, walking, in-water and/or other APPROVED position;
  - (E)** Additional responsibilities for each zone as identified; and
  - (F)** All areas of each AQUATIC VENUE are assigned a zone of BATHER surveillance.
  - (G)** Any modifications to the APPROVED LIFEGUARD plan must be submitted and APPROVED by the HEALTH AUTHORITY prior to implementation.
- 4-303.3** The Lifeguard Staffing Plan shall include the following:
- (A)** Identification of all zones of BATHER surveillance at the AQUATIC FACILITY;
  - (B)** Description of methods used for maintaining coverage of the zone of BATHER surveillance during LIFEGUARD rotation; and
  - (C)** Staffing rotation schedule which provides an alternation of tasks such that no LIFEGUARD conducts BATHER surveillance activities for more than 60 continuous minutes.
    - (1)** Alternation of tasks includes a change in the zone of surveillance that requires relocation of the LIFEGUARD or a period of 10 minutes of non-PATRON surveillance activity such as taking a break, conducting maintenance or conducting ride dispatch.
- 4-303.4** The Lifeguard Staffing Plan shall include LIFEGUARD supervision protocols to achieve the requirements of Section 4-304.3.
- 4-303.5** LIFEGUARDS shall be trained on and receive a copy of the EAP that is posted and always available at the AQUATIC FACILITY, as well as the following policies and procedures:
- (A)** Zone of BATHER Surveillance Plan,
  - (B)** Rotation Plan,
  - (C)** Minimum Staffing Plan, and
  - (D)** Rescue/First Aid Response plan.

- 4-303.6** The RESPONSIBLE PERSON(s) with CPR/AED and first aid training shall present unexpired certificate(s) maintained on site and available for review at the time of inspection.
- 4-303.7** Any modifications to the APPROVED Lifeguard Staffing Plan must be submitted and APPROVED by the HEALTH AUTHORITY prior to implementation.

**4-304 Staff Management**

- 4-304.1** Prior to use of any AQUATIC VENUE, the AQUATIC FACILITY shall provide staff required per the provisions of the SAFETY PLAN as stated in Section 4-303.1.
- 4-304.2** RESPONSIBLE PERSON duties shall include, but not be limited to:
  - (A)** Enforcing the AQUATIC FACILITY rules and regulations by interfacing with PATRONS;
  - (B)** Respond to reported emergencies;
  - (C)** Identify health and safety hazards and take action to mitigate or avoid the hazard;
  - (D)** Know where the PPE is located and use it when required; and
  - (E)** Interface with the HEALTH AUTHORITY related to the requirements of these Regulations.
- 4-304.3** Lifeguard Staff
  - (A)** Where LIFEGUARDS are used, the AQUATIC FACILITY shall provide, prior to opening the AQUATIC FACILITY to the public, the minimum number of LIFEGUARDS and staff required per the provisions of the SAFETY PLAN such that:
    - (1)** All zones of BATHER surveillance are staffed during operation;
    - (2)** Zones of BATHER surveillance for individual AQUATIC VENUES not open for use, must also be staffed unless an effective means is provided to restrict and monitor access to the AQUATIC VENUE;
    - (3)** Rotations can be conducted while all zones are staffed;
    - (4)** LIFEGUARD SUPERVISOR is present; and
    - (5)** Additional PERSON(s) to rapidly respond to an emergency to help the initial rescuer are present.
  - (B)** LIFEGUARD responsibilities shall include but not be limited to:
    - (1)** Monitor BATHERS within the zone of BATHER surveillance responsibility;
    - (2)** Enforce facility rules;
    - (3)** Respond to emergencies including water rescue, CPR, AED use, and first aid;
    - (4)** Identify health and safety hazards and take action to mitigate or avoid the hazard;
    - (5)** Maintain skills at a test-ready proficiency level;
    - (6)** Wear the identifying uniform;
    - (7)** If needed for effective BATHER surveillance, wear corrective eyewear and/or wear polarized sunglasses;
    - (8)** Know where PPE is located and use it when required.
  - (C)** LIFEGUARDS assigned responsibilities for BATHER surveillance shall not be assigned other tasks that intrude on BATHER surveillance.
  - (D)** While conducting BATHER surveillance, LIFEGUARDS shall not engage in social conversations or have on their person or LIFEGUARD STATION cellular telephones, texting devices, music players, or other similar non-emergency electronic devices.

- 4-304.4 ATTENDANT Staff**
- (A)** ATTENDANTS are required at each entry and exit point of WATERSLIDES or DROP SLIDES in sufficient numbers to ensure proper dispatching and surveillance of riders.
  - (B)** Attendants must have a method of communication between the entry attendant and the runout attendant.
- 4-304.5 LIFEGUARD SUPERVISOR Staff**
- (A)** AQUATIC FACILITIES that are required to have two (2) or more LIFEGUARDS per the Lifeguard Staffing Plan's zone of BATHER surveillance responsibility in Section 4-303.2 shall have at least one person located at the AQUATIC FACILITY during operation designated as the LIFEGUARD SUPERVISOR who meets the requirement of Section 4-202.
    - (1)** One of the LIFEGUARDS may be designated as the LIFEGUARD SUPERVISOR in addition to fulfilling the duties of LIFEGUARD.
  - (B)** LIFEGUARD SUPERVISOR duties shall not interfere with the primary duty of BATHER surveillance.
  - (C)** LIFEGUARD SUPERVISOR responsibilities shall include but not be limited to:
    - (1)** Monitor performance of LIFEGUARDS in their zone of BATHER surveillance responsibility;
    - (2)** Ensure the rotation is conducted in accordance with the Lifeguard Staffing Plan;
    - (3)** Coordinate staff response and BATHER care during an emergency;
    - (4)** Identify health and safety hazards and communicate to staff and management to mitigate or avoid the hazard; and
    - (5)** Ensure the required equipment per Section 3-603.2 is in place and in good condition.
- 4-304.6 Emergency Action and Communications Plans**
- (A)** AQUATIC FACILITIES with required LIFEGUARD staff shall create and maintain an operating procedures manual containing information on the emergency response and communications plan including an EAP, Facility Evacuation Plan, and Inclement Weather Plan.
  - (B)** A written EAP shall be developed, maintained, and updated as necessary for the AQUATIC FACILITY.
  - (C)** The written EAP shall be kept at the AQUATIC FACILITY and available for emergency personnel and/or the HEALTH AUTHORITY upon request.
  - (D)** The EAP shall include at a minimum:
    - (1)** A diagram of the AQUATIC FACILITY;
    - (2)** A list of emergency telephone numbers;
    - (3)** The location of first aid kit and other rescue equipment (bag valve mask, AED, if provided, backboard, etc.);
    - (4)** An emergency response plan for accidental chemical release; and
    - (5)** A fecal/vomit/blood CONTAMINATION RESPONSE PLAN as outlined in Section 4-501.
  - (E)** A written Facility Evacuation Plan shall be developed and maintained for the AQUATIC FACILITY. This plan shall include, at a minimum:
    - (1)** Actions to be taken in cases of drowning, serious illness or injury, chemical handling accidents, weather emergencies, and other serious incidents; and

- (2) Defined roles and responsibilities for all staff.
  - (F) A communication plan shall exist to facilitate activation of internal emergency response centers and/or community 911/EMS as necessary.
  - (G) The AQUATIC FACILITY shall have a contingency/response plan for localized weather events that may affect its operation (i.e., lightning, high winds, etc.).
- 4-304.7 Remote MONITORING Systems**
- (A) Lifeguard-based remote safety MONITORING systems shall not replace the need for LIFEGUARDS. Remote safety MONITORING systems may be used to aid the operation, but not as a substitute for LIFEGUARDS or ATTENDANTS when critical areas such as blind spots in an AQUATIC VENUE or area of a SLIDE are visually obstructed or otherwise cannot be viewed by a LIFEGUARD or ATTENDANT.
  - (B) QUALIFIED OPERATOR-based remote water quality MONITORING systems shall not be a substitute for manual water quality testing of the AQUATIC VENUE.
  - (C) When LIFEGUARD or QUALIFIED OPERATOR-based remote MONITORING systems are used, AQUATIC FACILITY staff shall be trained on their use, limitations, and communication and response protocols for communications with the MONITORING group.
- 4-304.8 Employee Illness and Injury Policy**
- (A) LIFEGUARD SUPERVISORS shall not permit employees who are ill with diarrhea to enter the water or perform in a LIFEGUARD role.
  - (B) LIFEGUARD SUPERVISORS shall not permit employees with open wounds in the water or in a LIFEGUARD role unless they have healthcare provider approval or wear a waterproof, occlusive bandage to cover the wound.

<b>4-4</b>	<b>Facility Management</b>
<b>Subparts</b>	
<b>4-401</b>	<b>Operations</b>
<b>4-402</b>	<b>Patron-Related Management Aspects</b>

**4-401 Operations**

**4-401.1 Operations Manual**

- (A) Each AQUATIC FACILITY shall develop an operations manual to keep at the AQUATIC FACILITY in either a printed or electronic format that is readily available for review during inspection.
- (B) The manual shall at minimum include, but not be limited to, the following items:
  - (1) AQUATIC VENUE and AQUATIC FEATURE description(s) and locations;
  - (2) Facility communication;
  - (3) List of chemicals and system information;
  - (4) Fecal/vomit and body fluid contamination response protocols;
  - (5) Preventive maintenance plan; and
  - (6) Any other standard operation and maintenance policies and instructions or applicable information for each AQUATIC VENUE and AQUATIC FEATURE at the facility.



**4-401.2** Operation Records

**(A)** AQUATIC FACILITIES shall keep records pertaining to the operation, maintenance, and management of the AQUATIC FACILITY. AQUATIC FACILITY records shall be:

- (1)** Kept for a minimum of three years, and
- (2)** Available upon request by the HEALTH AUTHORITY.

**4-401.3** Safety and Maintenance Inspection and Recordkeeping

**(A)** The QUALIFIED OPERATOR or RESPONSIBLE PERSON shall ensure a daily AQUATIC FACILITY preventive maintenance inspection is done before opening which includes:

- (1)** Walkways, DECKS and exits are clear, clean and free of debris;
- (2)** Drain covers, vacuum fitting covers, SKIMMER equalizer covers, and any other suction outlet covers are in place, secure, and unbroken;
- (3)** SKIMMER baskets, weirs, lids, flow adjusters, and suction outlets are free of any blockage;
- (4)** INLET and return covers and any other fittings are in place, secure, and unbroken;
- (5)** Safety warning signs and other signage are in place and in good repair;
- (6)** Safety equipment required by these Regulations is in place and in good repair, including emergency instructions and phone numbers;
- (7)** Entrapment prevention systems are operational;
- (8)** Recirculation, DISINFECTION systems, controller(s), and probes are operating as required;
- (9)** SECONDARY and/or SUPPLEMENTAL DISINFECTION SYSTEMS are operating as required;
- (10)** Underwater lights and other lighting are intact with no exposed wires or water in lights;
- (11)** Slime and biofilm has been removed from accessible surfaces of AQUATIC VENUES, SLIDES, and other AQUATIC FEATURES;
- (12)** Doors to nonpublic areas (CHEMICAL STORAGE SPACES, offices, etc.) are locked;
- (13)** First aid supplies are stocked;
- (14)** Emergency communication equipment and systems are operational;
- (15)** Fecal/vomit/blood incident contamination response protocols, materials, and equipment are available;
- (16)** Water features and amenities are functioning in accordance with the manufacturer's recommendations;
- (17)** ENCLOSURES, gates, and self-latching or other locks are tested, intact, and functioning properly, and ENCLOSURES do not have nearby furniture to encourage climbing;
- (18)** Drinking fountains are clean and in functional condition;
- (19)** Electrical devices are in good working condition and meet NEC requirements;
- (20)** Alarms, if required, are tested and functioning properly;
- (21)** Assessing water clarity such that the bottom and objects in the AQUATIC VENUE are clearly visible;
- (22)** Monthly tests of GFCI devices and emergency phone; and

(23) Inspections every six months of bonding conductors, where accessible.

**4-401.4** Water MONITORING and Testing Records

MONITORING and testing records shall include the following:

- (A) PH level;
- (B) Disinfectant residuals;
- (C) Operating pressures of water recirculation pumps and filters or the corresponding flow rate from flow meter readings;
- (D) Cyanuric acid levels, if used;
- (E) Maintenance and malfunctioning of equipment, including dates and time of all equipment calibration including WQTDS;
- (F) If heated, AQUATIC VENUE water temperature;
- (G) The time of filter backwash or cleaning;
- (H) Total alkalinity;
- (I) Microbiological testing, if applicable, dates/times samples were taken and results,
- (J) Any equipment failure, power outage, or error resulting in the interruption of the circulation, filtration, or DISINFECTION systems for more than one hour;
- (K) The daily attendance at the AQUATIC FACILITY; and
- (L) SECONDARY DISINFECTION SYSTEMS when required.

**4-401.5** Staff Certifications on File

Copies of all required LIFEGUARD, LIFEGUARD SUPERVISOR, or QUALIFIED OPERATOR certificates shall be maintained at the AQUATIC FACILITY and made available to the HEALTH AUTHORITY upon request.

**4-401.6** Bodily Fluids Remediation Log

- (A) A Body Fluid Contamination Response Log shall be maintained to document each occurrence of contamination of the water or its immediately adjacent areas by formed or diarrheal fecal material, stomach discharge of vomit, and blood.
- (B) The AQUATIC FACILITY's standard operating procedures for responding to these contamination incidents shall be readily available for review by the HEALTH AUTHORITY.
- (C) The log shall include the following information recorded at the time of the incident:
  - (1) Person conducting response;
  - (2) QUALIFIED OPERATOR or on-site RESPONSIBLE PERSON on duty;
  - (3) Date and time of incident response;
  - (4) Specific area, if not in the water, contaminated by incident;
  - (5) BATHER COUNT in the AQUATIC VENUE at the time of incident;
  - (6) Type and form of body fluid observed e.g., diarrheal or formed stool, vomitus, or blood;
  - (7) Date and time the area was closed;
  - (8) Whether the AQUATIC VENUE used CHLORINE stabilizer and its concentration at time of incident;
  - (9) Free residual disinfectant and PH levels at the time of incident;
  - (10) Remediation procedures used after the incident including the disinfectant contact time, if applicable;
  - (11) Free residual disinfectant and PH level at the time of reopening the AQUATIC VENUE to the public;
  - (12) Stabilizer concentration, if used, at the time of reopening; and
  - (13) Date and time of reopening.

## 4-402 Patron-Related Management Aspects

### 4-402.1 BATHER COUNT-Maximum Occupancy

- (A) AQUATIC VENUES shall not exceed the maximum designed THEORETICAL PEAK OCCUPANCY for the individual AQUATIC VENUES as provided in section 2-102.3(E), unless operating under a WAIVER APPROVED in accordance with Section 5-3.
- (B) AQUATIC FACILITIES that typically operate with low BATHER OCCUPANCY shall have a plan in place to adjust for potential higher BATHER use. Such plans shall not exceed the maximum designed THEORETICAL PEAK OCCUPANCY for the individual AQUATIC VENUES or the AQUATIC FACILITY.

### 4-402.2 Signage

- (A) The QUALIFIED OPERATOR shall post and enforce the AQUATIC FACILITY rules governing health, safety, and sanitation.
- (B) The lettering shall be legible and at least one (1) inch (36 point type) high, with a contrasting background, unless otherwise specified.
- (C) Signage shall be conspicuously placed at each entrance to the AQUATIC FACILITY communicating expected and prohibited behaviors and other information using text that complies with the intent of the following information:
  - (1) In case of an emergency, dial 911 or other emergency instructions;
  - (2) Hours of operation;
  - (3) THEORETICAL PEAK OCCUPANCY;
  - (4) No smoking in the AQUATIC VENUE or on the DECK;
  - (5) Do not swim if you have open wounds;
  - (6) Do not swim if you are ill with diarrhea or have had diarrhea within the past two weeks;
  - (7) Shower before entering the water;
  - (8) No glass items in the AQUATIC VENUE or on the DECK;
  - (9) Diaper changing on the DECK is prohibited;
  - (10) No animals in the AQUATIC VENUE and no animals on the DECK, except service animals; and
  - (11) QUALIFIED OPERATOR information to include name, registration number, and contact information.
- (D) In addition to signage listed in Section (C), unstaffed AQUATIC FACILITIES shall also include signage messages covering:
  - (1) No Lifeguard on Duty, in letters at least four (4) inches high;
  - (2) Children under 14 years of age must have adult supervision;
  - (3) No Solo Bathing; and
  - (4) Hours of operation; AQUATIC FACILITY use prohibited at any other time
    - (a) AQUATIC FACILITIES without compliant lighting must limit hours of operation from dawn to dusk.
- (E) In AQUATIC FACILITIES not requiring LIFEGUARDS, CPR posters reflecting the latest standards shall be posted conspicuously at all times.
- (F) Signage shall be conspicuously placed within 30 feet of each entrance to each AQUATIC VENUE communicating expected and prohibited behaviors and other information using text that complies with the intent of the following information:

- (1) No Diving, in letters at least four (4) inches high, as applicable per Section 2-3018.10;
  - (2) Location of the nearest emergency phone;
  - (3) Maximum BATHER OCCUPANCY;
  - (4) Pollution of AQUATIC VENUE prohibited;
  - (5) Do not swallow or spit water;
  - (6) Intentional hyperventilation or extended breath holding activities are dangerous and prohibited.
- (G) In addition to Section (C) requirements, AQUATIC VENUES with moveable bottom floors shall also have the following information or text complying with the intent of the following information:
- (1) A sign for AQUATIC VENUE water depth in use shall be provided and clearly visible;
  - (2) A "No Diving" sign shall be provided; and
  - (3) The floor is movable and AQUATIC VENUE depth varies.
- (H) In addition to Section (C) requirements, SPAS shall also have the following information or text complying with the intent of the following information:
- (1) Maximum water temperature is 104°F;
  - (2) Pregnant women and people with heart disease, high blood pressure or other health problems should not use SPAS without prior consultation with a healthcare provider;
  - (3) Children under 12 years of age must be accompanied by an adult, the maximum recommended exposure time for such children is 10 minutes, posted in four (4) inch lettering; and
  - (4) Use of the SPA when alone is prohibited (if no LIFEGUARDS on site).
- (I) Signage shall be posted at the HYGIENE FACILITY exit used to access AQUATIC VENUES stating or containing information, or text complying with the intent of the following information:
- (1) Do not swim when ill with diarrhea;
  - (2) Do not swim with open wounds and sores;
  - (3) Shower before entering the water;
  - (4) Check your child's swim diapers/rubber pants regularly;
  - (5) Diaper changing on the DECK is prohibited;
  - (6) Do not poop or pee in the water;
  - (7) Do not swallow or spit water; and
  - (8) Wash hands before returning to the AQUATIC VENUE.

**4-402.3** BATHERS must wear appropriate attire that is designed and intended for use as swimwear where swimwear is required. Street clothing may not be worn while bathing.

<b>4-5</b>	<b>Fecal/Vomit/Blood Contamination Response</b>
<b>Subparts</b>	
<b>4-501</b>	<b>Contamination Response Plan</b>
<b>4-502</b>	<b>Aquatic Venue Water Contamination Response</b>
<b>4-503</b>	<b>Aquatic Venue Water Contamination Treatment and Disinfection</b>
<b>4-504</b>	<b>Surface Contamination Cleaning and Disinfection</b>

#### **4-501 Contamination Response Plan**

- 4-501.1** All AQUATIC FACILITIES shall have a CONTAMINATION RESPONSE PLAN within the EAP for responding to formed-stool contamination, diarrheal-stool contamination, vomit contamination, and contamination involving blood.
- 4-501.2** The Response Plan shall be reviewed at least annually and updated as necessary.
- 4-501.3** The Response Plan shall be kept on site and available for viewing by the HEALTH AUTHORITY.

#### **4-502 Aquatic Venue Water Contamination Response**

- 4-502.1** Closure  
In the event of a fecal or vomit contamination in an AQUATIC VENUE, the QUALIFIED OPERATOR shall immediately close the AQUATIC VENUE to BATHERS until remediation procedures are complete. This closure shall include the affected AQUATIC VENUE and other AQUATIC VENUES that share the same RECIRCULATION SYSTEM.
- 4-502.2** Physical Removal  
Contaminating material shall be removed and disposed of in a sanitary manner.
- (A)** The item used to remove fecal or vomit contamination shall undergo thorough cleaning followed by DISINFECTION.
- (B)** Aquatic vacuum cleaners shall not be used for removal of contamination from the water or adjacent surfaces unless vacuum waste is discharged to a sanitary sewer and the vacuum equipment can be adequately disinfected.

#### **4-503 Aquatic Venue Water Contamination Treatment and Disinfection**

- 4-503.1** In the event of a fecal, vomit, or blood contamination incident, the AQUATIC FACILITY shall follow the most recent response guidelines from the CDC Healthy Swimming Fecal Incident Response Recommendations for Aquatic Staff.
- Note:** The use of stabilized CHLORINE or CYA inhibits the effectiveness of the disinfecting agent and may require the draining of an AQUATIC VENUE if the concentration cannot be lowered to 15 PPM prior to treatment per guidelines above.

#### **4-504 Surface Contamination Cleaning and Disinfection**

- 4-504.1** If a bodily fluid, such as feces, vomit, or blood, has contaminated a surface in an AQUATIC FACILITY, facility staff shall limit access to the affected area until remediation procedures have been completed.
- 4-504.2** Before DISINFECTION, all visible contaminant shall be cleaned and removed with disposable cleaning products effective with regard to the type of contaminant present, type of surface to be cleaned, and the location within the facility.
- 4-504.3** Contaminant removed by cleaning shall be disposed of in a sanitary manner or as required by law.
- 4-504.4** Contaminated surfaces shall be disinfected with one of the following DISINFECTION solutions:
- (A)** A 1:10 dilution of fresh household bleach with water; or
- (B)** An equivalent EPA REGISTERED disinfectant that has been APPROVED for body fluids DISINFECTION.

- 4-504.5** The disinfectant shall be left to soak on the affected area for a minimum of 20 minutes or as otherwise indicated on the disinfectant label directions.
- 4-504.6** Disinfectant shall be removed by cleaning and shall be disposed of in a sanitary manner or as required by the HEALTH AUTHORITY.

## SECTION 5 Compliance and Enforcement

### Parts

- 5-1 Provision for Conditions Not Addressed in these Regulations
- 5-2 Prerequisites for Operation
- 5-3 Waivers
- 5-4 Responsibilities
- 5-5 Enforcement and Inspections
- 5-6 Imminent Health Hazards
- 5-7 Issuing Report and Obtaining Acknowledgment of Receipt
- 5-8 Summary Suspension, Reinstatement, and Revocation
- 5-9 Suspension or Revocation of Qualified Operator or Pool Company Registration
- 5-10 Notice and Service of Notice
- 5-11 Abandonment Process
- 5-12 Public Information
- 5-13 Severability Clause

<b>5-1 Provision for Conditions Not Addressed in these Regulations</b>
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- 5-101 The HEALTH AUTHORITY shall address conditions when necessary to protect public health and may impose temporary, specific requirements in addition to the requirements specified in these Regulations.
- 5-102 The HEALTH AUTHORITY shall document the conditions that necessitate the imposition of additional requirements and the underlying public health rationale. The documentation shall be provided to the PERMIT applicant or PERMIT HOLDER, and a copy shall be maintained in the HEALTH AUTHORITY's file for the AQUATIC FACILITY.

<b>5-2 Prerequisites for Operation</b>
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### Subparts

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| 5-201 Permit Requirements  |
| 5-202 Permit Application, Renewals, Transfers, Submission, Conditions, and Content |

#### 5-201 Permit Requirements

A person shall not operate an AQUATIC FACILITY without a valid PERMIT issued by the HEALTH AUTHORITY.

#### 5-202 Permit Application, Renewals, Transfers, Submission, Conditions, and Content

##### 5-202.1 Application and Submission

- (A) For new construction and SUBSTANTIAL ALTERATION submittals, documents will be reviewed and a written response outlining any additional information or corrections needed for the plan approval will be provided within 30 business days from the most recent date of submission.
- (B) If from the date of plan approval, construction has not been initiated within one (1) calendar year, or construction halts for one (1) calendar year, the HEALTH AUTHORITY may, in its sole discretion, delete the PERMIT and require the resubmission of plans and a PERMIT application with associated fees prior to resuming construction.
- (C) WAIVER applications will be reviewed and a written response, outlining any additional information or corrections needed, will be provided

within three (3) business days from the most recent date of submission.

- (1) The applicant must provide all requested information within two (2) business days;
- (2) A final determination will be provided within a total of 10 business days.

**5-202.2** Conditions

To qualify for a PERMIT, an applicant shall:

- (A) Be an OWNER, prospective OWNER, or person legally in charge OWNER designee, or an officer of the legal ownership of the AQUATIC FACILITY;
- (B) Pay the applicable PERMIT fees at the time the application is submitted; and
- (C) Comply with the requirements of these Regulations.

**5-202.3** Application, Renewal, and Submission

- (A) Applications for an initial, new, or renewal PERMIT must be made on an application form furnished by the HEALTH AUTHORITY.
- (B) All applications must be submitted at least 30 days before:
  - (1) The opening date of any AQUATIC VENUE or AQUATIC FACILITY;
  - (2) The expiration of any PERMIT; and/or
  - (3) The effective date of a change of ownership.

**5-202.4** Contents of the Application

The application must include:

- (A) The name, mailing address, telephone number, and signature of the person applying for the PERMIT.
- (B) The name, mailing address, and physical location of the AQUATIC FACILITY.
- (C) If an application is made by a corporation, an LLC, association or partnership, the names of the members or officers and signature of at least one managing member or officer, a contact telephone number, and address shall be provided.
- (D) Information specifying whether an association, corporation, individual, partnership, or other legal entity owns the AQUATIC FACILITY.
- (E) The name, title, address, and telephone number of the RESPONSIBLE PERSON for the AQUATIC FACILITY.
- (F) The name, title, address, and telephone number of the person who functions as the immediate supervisor of the RESPONSIBLE PERSON including, but not limited to the zone, district, or regional supervisor.
- (G) Proof of ownership, lease agreement, or other legal document that establishes the standing of the applicant's authority to use the land for the PERMIT purpose.
- (H) The names, titles, and business addresses of:
  - (1) The legal owners of the physical location of the AQUATIC FACILITY.
  - (2) The local authorized applicant, if one is required, based on the type of legal ownership. Authorization shall be in writing and shall be signed by the OWNER or corporate officer, managing member, or other authorized person.
- (I) A statement signed by the applicant that:
  - (1) Attests to the accuracy of the information provided in the application; and
  - (2) Affirms that the applicant will:



- (a) Comply with these Regulations and
- (b) Allow the HEALTH AUTHORITY access to the establishment and to any records needed to establish compliance with these Regulations.

(J) Other information as required by the HEALTH AUTHORITY.

**5-202.5 Denial of Application for PERMIT, Notice**

If an application for a PERMIT to operate is denied, the HEALTH AUTHORITY shall provide the applicant with a notice which includes the:

- (A) Specific reasons and regulatory citations for denial of the PERMIT;
- (B) Actions the applicant must take to qualify for a PERMIT; and
- (C) Applicant's right of appeal and the appeal process.

<p><b>5-3 Waivers</b></p> <p><b>Subparts</b></p> <p><b>5-301 Conditions of Waiver</b></p> <p><b>5-302 Documentation of Proposed Waiver and Justification</b></p> <p><b>5-303 Change of Ownership of an Existing Aquatic Facility</b></p>
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**5-301 Conditions of Waiver**

The HEALTH AUTHORITY may grant a WAIVER by modifying or waiving the requirements of these Regulations if, in the opinion of the HEALTH AUTHORITY, public health and safety will not be impacted as a result of an APPROVED WAIVER.

- 5-301.1** The HEALTH AUTHORITY may impose conditions relating to the prevention of IMMINENT HEALTH HAZARDS, as referenced in Section 5-6, upon the WAIVER.
- 5-301.2** If the WAIVER is granted, the PERMIT HOLDER shall comply with all operational plans, procedures, and conditions stipulated in the WAIVER.
- 5-301.3** If a WAIVER is granted, the HEALTH AUTHORITY shall retain the information.
- 5-301.4** Presence of any IMMINENT HEALTH HAZARD may result in an immediate closure.
- 5-301.5** Failure to meet any WAIVER condition may result in immediate closure pending revocation of the WAIVER.

**5-302 Documentation of Proposed Waiver and Justification**

An AQUATIC FACILITY seeking a WAIVER shall apply in writing with the appropriate forms to the HEALTH AUTHORITY. The application shall include, but not be limited to:

- 5-302.1** A statement of the proposed WAIVER of the regulatory requirement citing relevant Regulation section numbers.
- 5-302.2** A statement of how the intent of the Regulations will be met and the reasons why public health and safety would not be jeopardized if the waiver was granted.
- 5-302.3** An operational plan, if required, that includes information relevant to the WAIVER requested.
- 5-302.4** Any requested records or documentation required as part of the WAIVER approval.

**5-303 Change of Ownership of an Existing Aquatic Facility**

- 5-303.1** An existing AQUATIC FACILITY, at the time of change of ownership, shall meet the requirements of this Section prior to issuance of a PERMIT.
- 5-303.2** The HEALTH AUTHORITY may issue a PERMIT to a new OWNER of an existing AQUATIC FACILITY after a properly completed application is submitted, reviewed, and APPROVED, fees are paid, and an inspection is passed.

- 5-303.3** A facility may be required to bring any aspect of the AQUATIC VENUE or AQUATIC FACILITY into compliance with the current Regulations when ownership changes.

**5-4 Responsibilities**

**Subparts**

- 5-401 Responsibilities of the Health Authority**
- 5-402 Responsibilities of the Permit Holder**
- 5-403 Permit Modifications**
- 5-404 Permit Transfer Prohibited**

**5-401 Responsibilities of the Health Authority**

The responsibilities of the HEALTH AUTHORITY include:

- 5-401.1** At the time a PERMIT is first issued, the HEALTH AUTHORITY shall inform the PERMIT HOLDER where a copy of these Regulations may be obtained, and that the PERMIT HOLDER is responsible for compliance with these Regulations.
- 5-401.2** Failure to provide the above information does not prevent the HEALTH AUTHORITY from taking authorized action, or seeking remedies, if the PERMIT HOLDER fails to comply with these Regulations or an order, warning, or directive of the HEALTH AUTHORITY.

**5-402 Responsibilities of the Permit Holder**

To retain the PERMIT, the PERMIT HOLDER shall:

- 5-402.1** Post the PERMIT in a location in the AQUATIC FACILITY that is clearly conspicuous to the PATRON upon entering the AQUATIC FACILITY or immediately available upon request.
- 5-402.2** Comply with the provisions of these Regulations including the conditions of a granted VARIANCE, APPROVED WAIVER, and APPROVED plans.
- 5-402.3** Immediately discontinue operations and notify the HEALTH AUTHORITY if an IMMINENT HEALTH HAZARD exists.
- 5-402.4** Immediately notify the HEALTH AUTHORITY if a drowning, near drowning, or water rescue event occurs.
- 5-402.5** Allow representatives of the HEALTH AUTHORITY access to the AQUATIC VENUE or AQUATIC FACILITY upon request.
- 5-402.6** Comply with directives of the HEALTH AUTHORITY, including, but not limited to, time frames for corrective actions specified in inspection reports, supervisory conferences, compliance schedules, notices, orders, warnings, and other directives issued by the HEALTH AUTHORITY concerning the PERMIT HOLDER'S AQUATIC FACILITY or in response to community emergencies.
- 5-402.7** Comply with all applicable federal, state and local governmental requirements as related to the operation of an AQUATIC VENUE or AQUATIC FACILITY. The responsibility of upholding these requirements falls solely on the PERMIT HOLDER, and failure to do so may result in PERMIT suspension or revocation.
- 5-402.8** Accept notices issued and served by the HEALTH AUTHORITY.
- 5-402.9** Be subject to the administrative, civil, injunctive, and criminal remedies as specified in NRS Chapter 444, for failure to comply with these Regulations or with a directive of the HEALTH AUTHORITY, including but not limited to time frames for corrective actions specified in inspection reports, supervisory

conferences, compliance schedules, notices, orders, warnings, and other directives.

**5-403 Permit Modifications**

Proposed modifications in the type of operations to be conducted by an AQUATIC FACILITY must not be allowed unless APPROVED by the HEALTH AUTHORITY. The modification process may include, but not be limited to, submission of a construction application, complete with plans and information describing the proposed modifications in design, equipment, and operations.

**5-404 Permit Transfer Prohibited**

A PERMIT may not be transferred from one OWNER to another, from one AQUATIC VENUE or AQUATIC FACILITY to another.

**5-5 Enforcement Inspections**

**Subparts**

- 5-501 Inspection Authority**
- 5-502 Inspection Frequency**
- 5-503 Posting Aquatic Venue Closures**
- 5-504 Follow-up Inspection**
- 5-505 Appeal Process**

**5-501 Inspection Authority**

- 5-501.1** Upon presenting proper identification, the HEALTH AUTHORITY shall have the right of access, entrance, inspection, and investigation of any AQUATIC FACILITY permitted by these Regulations.
- 5-501.2** Unless a QUALIFIED OPERATOR is available onsite all day, keys must be provided to allow access to the AQUATIC VENUE, pump room, HYGIENE FACILITY, and any other related areas.
- 5-501.3** The right of access pursuant to this Section, includes, but, is not limited to access for the purpose of:
  - (A)** Routine inspection;
  - (B)** Inspect or investigate to determine if there has been a violation of NRS Chapter 444 or these Regulations;
  - (C)** Verify compliance with previously written violation orders;
  - (D)** Collect samples or specimens;
  - (E)** Examine, review, and copy relevant documents and records;
  - (F)** Obtain photographic or other evidence needed to enforce these Regulations; and
  - (G)** Question any person.
- 5-501.4** If the HEALTH AUTHORITY is refused access, the HEALTH AUTHORITY shall provide details of the denial of access on an inspection report form and the AQUATIC FACILITY will be posted as closed.

**5-502 Inspection Frequency**

- 5-502.1** An AQUATIC FACILITY'S inspection frequency may be amended based on the risk of recreational water injury and illness.

**5-503 Posting Aquatic Venue Closures**

- 5-503.1** Where an IMMINENT HEALTH HAZARD is found, the AQUATIC VENUE may be posted closed.

**5-503.2** Closure signs shall be conspicuously posted at each entrance leading to the AQUATIC VENUE.

**5-503.3** Concealment, mutilation, alteration, or removal of Closure signs by any person without permission from the HEALTH AUTHORITY shall constitute a violation of these Regulations.

**5-504 Follow-up Inspection**

The HEALTH AUTHORITY shall inspect the premises upon notification that the hazard has been eliminated and remove the closure signs after verifying correction. The HEALTH AUTHORITY, in its sole discretion, may accept other evidence of correction of the hazard in lieu of inspecting the premises.

**5-505 Appeal Process**

**5-505.1** A person aggrieved by an action taken by the HEALTH AUTHORITY may request a meeting with the employee responsible for the action and the program supervisor within 10 business days.

**5-505.2** If the meeting does not resolve the issue, the aggrieved person may submit a written request for a meeting with the division director or section manager within 10 business days.

**5-6 Imminent Health Hazards**

**Subpart**

**5-601 Violations Requiring Immediate Correction or Closure**

**5-601 Violations Requiring Immediate Correction or Closure**

Any of the following violations are IMMEDIATE HEALTH HAZARDS that require immediate correction or closure of the AQUATIC VENUE until the condition is corrected:

**5-601.1** Failure to provide adequate supervision of children and required staffing such as: LIFEGUARDS, ATTENDANTS, and a QUALIFIED OPERATOR for the AQUATIC FACILITY as prescribed in these Regulations;

**5-601.2** Failure to provide disinfectant residual levels within the minimum and maximum limits designated in these Regulations;

**5-601.3** Failure to treat and achieve proper disinfection following a body fluid contamination event;

**5-601.4** PH level below 6.5;

**5-601.5** PH level above 8.0;

**5-601.6** Failure to continuously operate the AQUATIC VENUE filtration and DISINFECTION equipment;

**5-601.7** Failure to maintain CYA levels below 100 PPM;

**5-601.8** Use of an unapproved or contaminated water supply source for potable water;

**5-601.9** Non-GFCI protected electrical receptacles within 20 feet of the inside wall of the AQUATIC VENUE;

**5-601.10** Failure to maintain GFCI protection for underwater lighting as required;

**5-601.11** Absence of all required lifesaving equipment on DECK;

**5-601.12** AQUATIC VENUE bottom not clearly visible;

**5-601.13** Total absence of or improper depth markings at an AQUATIC VENUE;

**5-601.14** Plumbing CROSS-CONNECTIONS between the drinking water supply and AQUATIC VENUE water or between the sewage system and the AQUATIC VENUE including filter backwash facilities;

- 5-601.15** Failure to provide and maintain an ENCLOSURE or BARRIER to inhibit unauthorized access to the AQUATIC FACILITY or AQUATIC VENUE as required;
- 5-601.16** Use of unapproved chemicals or the application of chemicals by unapproved methods to the AQUATIC VENUE water;
- 5-601.17** Broken, unsecured, or missing submerged suction outlet covers in the AQUATIC VENUE;
- 5-601.18** Gates that are not self-closing and self-latching and/or ENCLOSURE breaches or gaps;
- 5-601.19** Broken glass or sharp objects in the AQUATIC VENUE or on the DECK area; or
- 5-601.20** Any other item determined to be an IMMINENT HEALTH HAZARD by the HEALTH AUTHORITY.

<b>5-7 Issuing Report and Obtaining Acknowledgment of Receipt</b>
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<b>Subparts</b>
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| <b>5-701 Inspection Conclusion</b> |
| <b>5-702 Resuming Operations</b>   |

**5-701 Inspection Conclusion**

- 5-701.1** At the conclusion of the inspection, the HEALTH AUTHORITY shall:
  - (A)** Review a copy of the completed inspection report, and any corresponding notice to correct violations with the PERMIT HOLDER or the facility representative; and
  - (B)** Obtain a signed acknowledgement of receipt on the report. If an electronic report, the acknowledgement may be by other means.
- 5-701.2** Refusal to Sign Acknowledgement
  - (A)** Should the PERMIT HOLDER or facility representative refuse to sign the acknowledgment, the HEALTH AUTHORITY shall inform the refusing party that:
    - (1)** Refusal to sign an acknowledgment does not nullify the inspection report or the PERMIT HOLDER'S obligation to correct the violations noted in the inspection report within the time frames specified, and
    - (2)** An acknowledgment of receipt does not constitute an agreement with findings.
  - (B)** The refusal will be documented on the report and placed in the AQUATIC VENUE'S file.
  - (C)** Provide a copy of the inspection report to the PERMIT HOLDER or facility representative.

**5-702 Resuming Operations**

- 5-702.1** If operations are discontinued pursuant to Section 5 herein, as the PERMIT HOLDER shall obtain approval from the HEALTH AUTHORITY before resuming operations.
- 5-702.2** Prior to opening for use, the QUALIFIED OPERATOR shall demonstrate to the HEALTH AUTHORITY any IMMINENT HEALTH HAZARDS have been corrected.
- 5-702.3** Facilities documented by the HEALTH AUTHORITY to be operating under conditions of an IMMINENT HEALTH HAZARD and issued an immediate closure, shall pay applicable fees and pass a reopening inspection with no additional closure violations remaining.

## **5-8 Summary Suspension, Reinstatement and Revocation**

### **Subparts**

#### **5-801 Summary Suspension, Reinstatement of Suspended Permit**

#### **5-802 Suspension and Revocation**

### **5-801 Summary Suspension Reinstatement of Suspended Permit**

- 5-801.1** The HEALTH AUTHORITY may suspend PERMITS for failure of the PERMIT HOLDER to comply with the requirements of these Regulations.
- 5-801.2** If conditions exist at an AQUATIC VENUE which presents an IMMINENT HEALTH HAZARD, the HEALTH AUTHORITY may, upon written notice, immediately suspend the operating PERMIT and order the immediate closure of the AQUATIC VENUE.
- 5-801.3** The suspension shall be effective upon receipt of the written notice by the RESPONSIBLE PERSON, QUALIFIED OPERATOR, or other person in charge. The order of suspension statement on the inspection report constitutes written notice.
- 5-801.4** The order of suspension must include the following statements:
- (A)** The PERMIT is immediately suspended and all operations shall be immediately discontinued;
  - (B)** The reasons for summary suspension with specific reference to NRS Chapter 444 and these Regulations;
  - (C)** The type of imminent threat to public health that caused the violation;
  - (D)** The person to whom a request for re-inspection may be made;
  - (E)** The PERMIT holder may request a hearing within five (5) business days of the summary suspension.
- 5-801.5** THE HEALTH AUTHORITY shall conduct a re-inspection of the AQUATIC FACILITY OR AQUATIC VENUE for which the permit was summarily suspended within two (2) business day after receiving notice from the PERMIT holder stating that the conditions cited in the summary suspension order no longer exist.

### **5-802 Suspension and Revocation**

- 5-802.1** The PERMIT HOLDER may request a hearing within five (5) business days of the summary suspension.
- 5-802.2** The HEALTH AUTHORITY shall hold a hearing, if requested, within ten (10) business days of receipt of the request for hearing.
- 5-802.3** The HEALTH AUTHORITY will permanently revoke a PERMIT, unless a request for a hearing is filed with the HEALTH AUTHORITY by PERMIT HOLDER within five (5) business days.
- 5-802.4** The HEALTH AUTHORITY may, after a hearing, suspend or revoke an AQUATIC FACILITY OR AQUATIC VENUE PERMIT for violation of NRS Chapter 444, these Regulations, or an order issued by the HEALTH AUTHORITY.
- 5-802.5** Unless a hearing is requested as required herein, the suspension or revocation order shall take effect 15 calendar days after the date of issuance of the notice of suspension or revocation.
- 5-802.6** A notice of suspension or revocation must include the following:
- (A)** The reasons for the suspension or revocation with reference to the specific provisions of NRS Chapter 444, and these Regulations.
  - (B)** The AQUATIC FACILITY has a right to request a hearing within 15 calendar days after issuance of the notice;

- (C) The PERMIT shall be suspended or revoked fifteen (15) calendar days after receipt of the suspension or revocation notice and all operations shall cease at that time unless a hearing is requested.

## **5-9 Suspension or Revocation of Qualified Operator or Pool Company Registration**

- 5-901** The HEALTH AUTHORITY may suspend or revoke the registration of a POOL COMPANY or QUALIFIED OPERATOR if work of the company or QUALIFIED OPERATOR is performed in such a manner as to create on-going or egregious unsanitary, unsafe, or unhealthful conditions.
- 5-902** A POOL COMPANY or QUALIFIED OPERATOR may request a hearing within five (5) business days of the summary suspension.
- 5-903** The HEALTH AUTHORITY shall hold a hearing, if requested, within ten (10) business days of the receipt of the request for hearing.
- 5-904** The HEALTH AUTHORITY will permanently revoke a POOL COMPANY or QUALIFIED OPERATOR registration, unless a request for a hearing is filled with the HEALTH AUTHORITY by the POOL COMPANY or QUALIFIED OPERATOR within five (5) business days.
- 5-905** The HEALTH AUTHORITY may, after a hearing, suspend or revoke a POOL COMPANY or QUALIFIED OPERATOR for violation of NRS Chapter 444, these Regulations, or an order issued by the HEALTH AUTHORITY.
- 5-906** Unless a hearing is requested as required herein, the suspension or revocation order shall take effect 15 calendar days after the date of issuance of the notice of suspension or revocation.
- 5-907** A notice of suspension or revocation must include the following:
- 5-907.1** The reasons for the suspension or revocation with reference to the specific provisions of NRS Chapter 444 and these Regulations;
  - 5-907.2** The POOL COMPANY or QUALIFIED OPERATOR has a right to request a hearing within 15 calendar days after issuance of the notice;
  - 5-907.3** The registration shall be suspended or revoked fifteen (15) calendar days after receipt of the suspension or revocation notice and all operations shall cease at that time unless a hearing is requested.

## **5-10 Notice and Service of Notice**

- 5-1001** A notice issued in accordance with these Regulations is considered properly served if it is served by one of the following methods:
- 5-1001.1** The notice is personally served by the HEALTH AUTHORITY to the QUALIFIED OPERATOR or RESPONSIBLE PERSON or the person in charge; and/or
  - 5-1001.2** Sending the notice by registered or certified mail, return receipt requested, to the last known address of the AQUATIC FACILITY OWNER.
  - 5-1001.3** The HEALTH AUTHORITY shall file a copy of the notice in the PERMIT holder's file.

## **5-1002 Reinstatement**

**5-1002.1** When a PERMIT has been suspended or revoked, an application may be made for reinstatement. Such application must include a verified statement declaring that the reason for the suspension or revocation of the PERMIT has been eliminated.

**5-1002.2** If upon investigation by the HEALTH AUTHORITY, it is determined that all reasons for suspension or revocation have been eliminated and all provisions of these Regulations have been complied with, the HEALTH AUTHORITY shall reinstate said PERMIT.

## **5-1003 Post Revocation Action**

Once the PERMIT has been suspended or revoked, as specified in Section 5-8 of these Regulations, the PERMIT holder shall discontinue all activity associated with the AQUATIC VENUE(s) in question. Failure to do so may result in the HEALTH AUTHORITY requesting an injunction from the District Court of Jurisdiction against continued operation by the PERMIT HOLDER.

## **5-1004 Hearings and Appeals**

**5-1004.1** All hearings provided for in these Regulations shall be conducted in accordance with the Nevada Administrative Practice Act, NRS Chapter 233B and Health Authority Hearing Officer Regulations.

**5-1004.2** Nothing herein contained shall be construed as denying the rights of appeal to the courts after administrative remedies as herein above have been exhausted.

## **5-11 Abandonment Process**

**5-1101** To remove an AQUATIC VENUE from regulatory oversight and have the associated HEALTH PERMIT deleted, all equipment associated with the circulation system must be removed and piping appropriately capped in addition to one of the following:

**5-1101.1** The AQUATIC VENUE shell may be left in place provided it has been punctured to prevent the accumulation of water, an adequate BARRIER is in place and locked, and must be maintained clean, drained, and free of nuisance conditions;

**5-1101.2** The AQUATIC VENUE is filled with gravel or other fill, the shell perforated to prevent water saturation and subsequent nuisance issues allowing for the BARRIER to be removed; or

**5-1101.3** The AQUATIC VENUE shell is demolished and removed allowing for the BARRIER to then be removed.

## **5-12 Public Information**

The HEALTH AUTHORITY shall treat the inspection report as a public document and shall make it available for disclosure pursuant to NRS Chapter 239.

## **5-13 Severability Clause**

Should any section, paragraph, sentence, clause, or phrase of these Regulations be declared unconstitutional or invalid for any reason the remainder of these Regulations shall not be affected thereby.