

**R392. Health and Human Services, Population Health, Environmental Health.**

**R392-302. Design, Construction and Operation of Public Pools.**

**R392-302-1. Authority and Purpose of Rule.**

- (1) This rule is authorized under Sections 26B-1-202, 26B-7-113 and 26B-7-402.
- (2) This rule establishes minimum standards for the sanitation, design, construction, operation, and maintenance of public pools and provides for the prevention and control of hazards associated with public pools that are likely to adversely affect public health and wellness including risk factors contributing to injury, sickness, death, disability, and the spread of disease.

**R392-302-2. Applicability.**

- (1) Unless exempted in Subsection R392-302-2(2), this rule applies to any person who owns or operates a facility or public pool.
- (2) This rule does not apply to:
  - (a) a float tank;
  - (b) a short-term public recreation activity involving a body of water that is temporary in nature;
  - (c) a private residential pool, including any that are:
    - (i) not operated or intended for public use;
    - (ii) used for swim instruction;
    - (iii) rented to guests for hourly or daily use; or
    - (iv) included as an amenity in a vacation rental;
  - (d) a body of water whose primary intent is already regulated by another rule promulgated under Title R392; or
  - (e) the following bodies of water:
    - (i) streams;
    - (ii) lakes;
    - (iii) ponds;
    - (iv) watercourses;
    - (v) waterways;
    - (vi) wells;
    - (vii) springs;
    - (viii) irrigations systems; or
    - (ix) drainage systems.

**R392-302-3. Definitions.**

As used in this rule:

- (1) "Backwash" means the process of cleaning a certain type of pool filter by reversing the flow of water through the filter.
- (2) "Bather" means a person at a pool who has contact with water either through spray or partial or total immersion. The term bather as defined also includes staff members and refers to those users who can be exposed to contaminated water as well as potentially contaminate the water.
- (3) "Bather load" means the number of persons using the pool water at any one time.
- (4) "Breakpoint chlorination" means the conversion of inorganic combined chlorine compounds to nitrogen gas by a reaction of the inorganic combined chlorine compound with the addition of a certain amount of free available chlorine.
- (5) "Building code" means Article 680 of the National Electric Code as incorporated and amended under Title 15a, State Construction and Fire Codes Act.
- (6) "Cleansing shower" means cleaning the entire body surface with soap and water.
- (7) "Circulation system" means the mechanical components that are part of a recirculation system on a pool. Circulation equipment may include a pump, filter, hair and lint strainer, a valve, a gauge, a meter, a heater, a skimmer, a drain, an outlet fitting, or a chemical feeding device that facilitates water movement through connected piping to promote water flow and maintain pool water in a clean and sanitary condition.
- (8) "Collection tank" see "Surge system"
- (9) "Collection zone" means the area of an interactive water feature where water from the feature is collected for treatment.
- (10) "Combined chlorine" means the portion of the total chlorine that is combined with other molecules such as ammonia, urine, sweat, or other environmental contaminants, as calculated by determining the difference between the total available chlorine residual and the free available chlorine residual. Combined chlorine, commonly known as "chloramines," is responsible for the chlorine odor often associated with indoor pools.
- (11) "CPR" means Cardiopulmonary Resuscitation.
- (12) "Cryptosporidium outbreak warning" means the department has received reports of cryptosporidiosis above the typical number of background cases of the disease, which may trigger cryptosporidium disease prevention countermeasures as described Section R392-302-35.
- (13) "Department" means the Utah Department of Health and Human Services.
- (14) "Diving area" means the area of a pool that is designed for diving.

- (15) "Facility" means the premises, building, equipment, and accessory objects related to the operation of a public pool.
- (16) "Float tank" means a tub or tank containing a saturated solution of salt having:
- (a) a specific gravity high enough to allow the user to float on the surface;
  - (b) a temperature typically maintained between 92 to 96 degrees Fahrenheit; and
  - (c) a design intended for:
    - (i) solitary use; and
    - (ii) light and sound sensory deprivation of the user.
- (17) "Flume" means the riding channel of a waterslide that directs the path of travel and rate of descent of the bather.
- (18) "Free available chlorine" or "free chlorine residual" means the portion of the total available chlorine that is not combined with other molecules and is present as hypochlorous acid (HOCl) and hypochlorite ion (OCl).
- (19) "Gravity drain system" means a pool drain system wherein the drains are connected to a surge system or collection tank rather than drawing directly from the drain, and the surface of the water contained in the tank is maintained at atmospheric pressure.
- (20) "Hyperchlorination" means the intentional and specific raising of chlorine levels for a prolonged period to inactivate pathogens following a fecal or vomit release in a pool, or in response to a cryptosporidium outbreak warning.
- (21) "Instructional pool" means a pool used solely for providing water safety and survival instruction taught by a certified instructor. Instructional pools do not include private residential pools.
- (22) "Imminent health hazard" means a significant threat or danger to health that is considered to exist when there is evidence sufficient to show that a product, practice, circumstance, or event creates a situation that can cause infection, disease transmission, pest infestation, or hazardous condition that requires immediate correction or cessation of operation to prevent injury, illness, or death.
- (23) "Infinity edge" means a pool wall structure and adjacent pool deck that is designed in such a way that the top of the pool wall and adjacent deck are not visible from certain vantage points in the pool and that water from the pool flows over the edge and is captured and treated for reuse through the pool filtration system. They are often referred to as "vanishing edge," "negative edge," or "zero edge" pools.
- (24) "Interactive water feature" means a public-use indoor or outdoor installation such as a splash pad, spray pad, wet deck, or other water feature that includes:
- (a) sprayed, jetted, or other water sources contacting bathers;
  - (b) recirculating water;
  - (c) a drainage system that prevents ponding or captured water in the bather activity area; and
  - (d) a collection reservoir that the water from the interactive water feature completely drains to when the feature pump turns off.
- (25) "Lazy river" means a channeled flow of water where the water is moved by pumps or other means to provide a flow to transport bathers over a defined path and are generally consistent in depth throughout the channel of water.
- (26) "Lifeguard" means an attendant who actively supervises the safety of bathers and is certified according to the requirements of Subsection R392-302-29(6).
- (27) "Living unit" means a room or space that is temporarily or permanently occupied by an individual, group of individuals, or a family, for residential or overnight lodging purposes. A living unit may include:
- (a) a room in a public lodging facility;
  - (b) a condominium unit;
  - (c) a recreational vehicle;
  - (d) a manufactured home;
  - (e) a single-family home;
  - (f) a campground site; or
  - (g) an individual unit in a multiple-unit housing complex.
- (28) "Local health officer" means the health officer of the local health department having jurisdiction, or a designated representative.
- (29) "Local health department" has the meaning defined in Subsection 26A-1-102(5).
- (30) "Manager" means a person who, owns, manages, or controls a public pool, or a designated representative.
- (31) "mg/L" means milligrams per liter and is an equivalent measure to parts per million (ppm).
- (32) "Onsite wastewater system" means an underground wastewater dispersal system that is designed, constructed, and operated in accordance with Rule R317-4, Onsite Wastewater Systems.
- (33) "Overflow gutter system" means a method to remove water from a pool surface to return the water to the circulation system for filtration using a level structure along the pool perimeter. Overflow gutter systems require the use of a surge system to facilitate a consistent water level in the pool to allow for the removal of surface water.
- (34) "Oxidation" means the process of changing the chemical structure of water contaminants that allows the contaminant to be more readily removed from the water or made more soluble in the water.
- (35) "Oxidation Reduction Potential" (ORP) means a measure of the tendency for a solution to either gain or lose electrons; higher, or more positive, oxidation reduction potential indicates more potential for oxidation. This technology is commonly used in automatic disinfectant feed controllers.

(36) "Parts Per Million (ppm)" means a measurement commonly used for chemical testing in pools and is an equivalent measure to mg/L.

(37) "Peak occupancy" means the anticipated maximum number of bathers in the pool water.

(38) "Plumbing code" means International Plumbing Code as incorporated and amended in Title 15A, State Construction and Fire Codes Act.

(39) "Plumbing fixture" means a receptacle or device that is connected to the water supply system of the premises, or discharges wastewater, liquid-borne waste materials, or sewage to the drainage system of the premises.

(40)(a) "Pool" means an artificially constructed structure or modified natural structure designed for total or partial bather immersion in, or contact with water, that is intended for recreational or therapeutic purposes.

(b) A pool may include a:

(i) swimming pool;

(ii) a special purpose pool; or

(iii) a structured body of water designated as a pool by a local health officer:

(41) "Pool operator" means an individual responsible for the day-to-day operation and maintenance of the water and air quality systems and the associated infrastructure of the pool and who is certified according to the requirements of Subsection R392-302-34(1).

(42) "Pool deck" means the horizontal surface area immediately adjacent to and extending from the pool edge a minimum distance as described in Section R392-302-15, and Subsection R392-302-37(2).

(43) "Pool shell" means the rigid encasing structure of a pool that confines the pool water.

(44) "Private residential pool" means a pool that:

(a) is not used by the general public;

(b) is not a public pool;

(c) is designated or intended for private residential use by an individual, family, or a living unit member or guest; and

(d) serves three or fewer associated living units.

(45)(a) "Public pool" means a pool used by the general public regardless of whether there is a charge or payment for facility use.

(b) A private residential pool is not a public pool.

(46) "Recessed steps" means a way of entry or exit for a pool similar to a ladder but the individual treads are recessed into the pool wall.

(47) "Runout" means a part of a waterslide consisting of a continuation of a waterslide flume surface where bathers are intended to decelerate, come to a stop, and exit the waterslide.

(48) "Saturation index" means a mathematical value for indicating the corrosive or scale forming nature of pool water as determined by application of the formula provided in Table 2, which is based on the interrelation of pH, total alkalinity, calcium hardness, temperature, and Total Dissolved Solids (TDS).

(49) "Skimmer" means a device installed in the pool wall to remove floating debris and surface water to return the water to the circulation system for filtration. A skimmer may be used as one device, or as a system of devices located periodically along the top of the pool wall.

(50) "Spa pool" means a hot or cold water pool designed for relaxation or recreational use where the user is usually sitting, reclining, or at rest, and may include jetted circulation, bubbles produced by air induction, or a mineral bath.

(51) "Splash pool" means the area of water located at the ending point of a waterslide or vehicle slide designed to receive a bather emerging from a flume to end the slide action and provide a means of exit to a deck or walkway area.

(52) "Special purpose pool" means a pool that is regulated with certain exemptions or additional requirements described under sections within this rule that are designated in the section title as a "special purpose pool".:

(53) "Surf pool" means a pool designed to generate waves dedicated to the activity of surfing on a surfing device such as a surfboard or boogie board, commonly used in the ocean and intended for sport as opposed to general play intent for a wave pool.

(54) "Surge system" means a tank, gutter, or other technology designed to handle bather water displacement and surge and to promote continuous skimming in any surge condition. A surge system receives the gravity flow of water from an overflow gutter system and water from the suction outlet system, or main drain or drains. A circulation system pump receives water from the surge system for treatment and filtration.

(55) "Swimming pool" means a pool used primarily for recreational, sporting, or instructional purposes in bathing, swimming, or diving activities.

(56) "Temporary pool" means a body of water that operates as a pool for a period of no more than 14 consecutive days in conjunction with a single event or celebration.

(57) "Therapy pool" means a pool primarily used for supervised treatment.

(58) "Turnover" means the circulation of a quantity of water equal to the pool volume through the circulation system.

(59) "Unblockable drain" means a drain with a suction outlet fitting assembly that, when installed according to the manufacturer's instructions, cannot be shadowed by an 18 inch by 23 inch body blocking element, and has a rated flow through the remaining open area beyond the shadowed portion to prevent a body suction entrapment hazard.

(60) "Vacation rental" means a furnished living unit that is rented out on a temporary basis as an alternative to a public lodging facility as defined in Rule R392-502.

(61) "Vehicle slide" means a pool where bathers ride a vehicle such as a toboggan, a sled, or tube, on a slide into a splash pool.

(62) "Wading area" means any area within a pool used for wading or water play activities where the water depth is two feet or less.

(63) "Wading pool" means a pool that is a maximum of two feet deep at the deepest point, physically separated from other pools, has an independent circulation system, and is primarily used for wading or water play activities.

(64) "Wastewater", as defined in this rule, means the discharge of pool water or backwash.

(65) "Water slide" means a recreational pool consisting of a flume lubricated by water flow upon which a bather slides into a splash pool or runoff.

(66)(a) "Wave pool" means a pool designed to simulate breaking or cyclic waves for general play.

(b) A surf pool is not a wave pool, which generates waves dedicated to the activity of surfing on a surfing device such as a surfboard or boogie board.

#### **R392-302-4. General Requirements.**

(1) Any public pool regulated under Section R392-302-2 shall meet the requirements of this rule.

(2) This rule does not require a construction or operational change in any portion of a public pool facility if the facility was installed in compliance with the law in effect when the facility was installed, except as specifically provided otherwise in this rule.

(3) Notwithstanding Subsection (2), if the local health officer determines that any facility is dangerous, unsafe, unsanitary, a nuisance, or menace to life, health, or property, the local health officer may order construction changes consistent with the requirements of this rule to existing facilities.

(4) Requirements of this rule supersede the requirements of building code pertaining to standards for specialized buildings as described in Section 15A-1-208.

#### **R392-302-5. Design Requirements and Plan Approval.**

(1) The manager shall submit plans to the local health department for:

(a) a new pool;

(b) a modification project of an existing pool; or

(c) replacement of equipment that is different from that originally approved by the local health officer.

(2) The manager shall ensure that:

(a) new pool construction or a modification project of an existing pool does not begin until the requirements of Subsection (4) have been met;

(b) plans submitted, as required in Subsection (1) are certified and stamped by a designing engineer or architect who is licensed by the Utah Division of Professional Licensing (DOPL) and contain the following verifications:

(i) the structure is stable;

(ii) the shape of a pool and location of appurtenances are designed such that the following are not impaired:

(A) pool water circulation;

(B) pool water quality; and

(C) bather safety;

(iii) a pool is designed with a circulation system, meeting the requirements of Section R392-302-19, that incorporates treatment and filtration equipment, as required in Sections R392-302-23 and R392-302-24;

(iv) in climates where a facility is subject to freezing temperatures, parts of the facility subject to freezing damage is designed to provide protection from damage due to freezing; and

(v) the facility has adequate fencing and barriers, showers, hand sinks, toilets, and dressing areas; and

(c) the pool is constructed to meet the requirements of Subsection (2)(b) and is constructed in accordance with approved plans.

(3) If any substantive changes are made to the originally approved design plans, the manager shall submit the amended design plan drawings, stamped and signed by the designing engineer or architect to the local health department for approval.

(4) The local health officer shall:

(a) conduct a review of the plans described in Subsection (1) within 30 days of submittal; and

(b) send to the manager a letter of review with plan review findings.

(5) The local health officer may exempt the manager from Subsection (1) for a modification project of an existing pool when the manager can satisfactorily demonstrate to the local health officer that the modification will not adversely affect facility operations, public health, or wellness.

#### **R392-302-6. Water Supply.**

(1) The manager shall ensure that:

(a) the water supply serving a public pool and any plumbing fixtures, including drinking fountains, hand washing sinks, and showers, is designed, installed, and operated according to the requirements set forth by:

(i) Plumbing Code;

(ii) the Utah Department of Environmental Quality, Division of Drinking Water under Title R309; and

(iii) local health department regulations;

- (b) any portion of water supply, recirculation, and distribution system serving the facility is protected against backflow; and
- (c) water introduced into the pool, either directly or through the circulation system, is supplied through a backflow preventer that:
  - (i) protects against contamination from back-siphonage or backpressure in accordance with the Plumbing Code, such as an air gap or backflow prevention assembly; and
  - (ii) is not connected to the pool recirculation system on the discharge side of the pool recirculation pump.

**R392-302-7. Wastewater.**

- (1) The manager shall ensure that:
  - (a) the public sanitary sewer system or onsite wastewater system serving a public pool facility is designed, installed, and operated according to the requirements set forth by:
    - (i) Plumbing Code;
    - (ii) the Utah Department of Environmental Quality, Division of Water Quality under Title R317; and
    - (iii) local health department regulations;
  - (b) except as specified in Subsections (1)(c) and (1)(d), wastewater is discharged to:
    - (i) a public sanitary sewer system when practicable;
    - (ii) an onsite wastewater system when a public sanitary sewer system is not practicable;
    - (iii) an area where the wastewater will not flow into a storm drain or surface water only when the disinfectant level is reduced to less than one milligram per liter before discharge; or
    - (iv) the facility's property if it does not flow off the property;
  - (c) salt-laden wastewater is only discharged to a public sanitary sewer system, or an onsite wastewater system designed to receive salt-laden wastewater;
  - (d) filter backwash water is only discharged to a sanitary sewer system or an onsite wastewater system;
  - (e) wastewater is not directly discharged to storm sewers or surface waters; and
  - (f) wastewater is discharged in a manner that will not create an imminent health hazard.

**R392-302-8. Solid Waste.**

- (1) The manager shall ensure that solid waste generated at a pool is:
  - (a) stored in a leak-proof, non-absorbent container; and
  - (b) disposed of with sufficient frequency and in such a manner to prevent a health hazard.

**R392-302-9. Construction Materials.**

- (1) The manager shall ensure that:
  - (a) a public pool and the appurtenances necessary for its proper function and operation are constructed of materials that are:
    - (i) inert;
    - (ii) non-toxic to humans;
    - (iii) impervious;
    - (iv) durable; and
    - (v) resistant to the effects of wear and deterioration from chemical, physical, radiological, and mechanical actions;
  - (b) a pool shell:
    - (i) withstands the stresses associated with normal use and regular maintenance including completely emptying the pool without shoring or additional support;
    - (ii) with a vinyl liner meets the following requirements:
      - (A) is bonded to the pool form; and
      - (B) is a minimum of 60 mil thickness;
    - (iii) has an interior surface designed and constructed in a manner that provides a smooth, easily cleanable, non-abrasive, and slip-resistant surface; and
    - (iv) surface is free of cracks or open joints except for structural expansion joints;
  - (c) the floor and wall of a pool below the waterline is white or light color such that from the pool deck a bather is visible on the pool floor and the following items can be identified:
    - (i) algae growth, debris, or dirt within the pool;
    - (ii) cracks in the surface finish of the pool; and
    - (iii) markings as required in Section R392-302-14; and
    - (d) the floor or wall of a pool is not constructed of wood, sand, clay, or earth.
  - (2) A local health officer may make exemptions to the color requirements of Subsection (1)(c) for:
    - (a) competitive lane markings;
    - (b) dedicated competitive diving well floors;
    - (c) step or bench edge markings;
    - (d) a pool less than 24 inches deep;
    - (e) waterline tiles or equivalent scum line protection material;

- (f) floor slope change indicator tiles; or
  - (g) other designs where it can be demonstrated that the requirements of Subsection (1)(c) are met.
- (3) The manager shall ensure that a non-cementitious pool is made of surface material that has been tested and passed by an American National Standards Institute (ANSI) accredited testing facility using one of the following standards that are appropriate to the material used:
- (a) for a fiberglass reinforced plastic spa pool, the International Association of Plumbing and Mechanical Officials (IAPMO) standard IAPMO/ANSI Z 124.7-2013, which is incorporated by reference;
  - (b) for a fiberglass reinforced plastic swimming pool, the IAPMO IGC 158-2000 standard, which is incorporated by reference;
  - (c) for pools built with prefabricated pool sections, International Organization for Standardization (ISO) standard ISO 19712-1:2008 - Plastics -- Decorative solid surfacing materials -- Part 1: Classification and specifications, which is incorporated by reference; or
  - (d) a standard that has been approved by the local health officer based on whether the standard applies to the surface and whether it determines compliance with the requirements of this rule.
- (4) The manager of a non-cementitious pool shall submit to the local health department documentation that the surface material has been tested and passed according to the requirement set forth in Subsection (3).

**R392-302-10. Floor Slopes.**

The manager shall ensure that:

- (1) except for a pool used exclusively for scuba diving training, the floor slope of any portion of a pool having a water depth of five feet or less may not exceed a ratio of one foot vertical change to ten foot horizontal change;
- (2) except for a pool used exclusively for scuba diving training, the floor slope of any portion of a pool having a water depth greater than five feet may not exceed a ratio of one foot vertical change to three foot horizontal change;
- (3) the floor slope of the pool in a diving area is consistent with the requirements for minimum water depths as specified in Section R392-302-12 for diving areas; and
- (4) the floor slope:
  - (a) is designed to drain without leaving puddles or trapped standing water; and
  - (b) is uniform.

**R392-302-11. Walls.**

- (1) The manager shall ensure that each pool wall is vertical or within plus three degrees of vertical to a depth of at least two feet and nine inches.
- (2) If a pool wall transitions from wall to the floor using a radius, the manager shall ensure that the wall transition radius meets the following requirements:
  - (a) at water depths of three feet or less, a transitional radius from wall to floor:
    - (i) does not exceed six inches;
    - (ii) is tangent to the wall; and
    - (iii) is tangent to or intersects the floor;
  - (b) at a water depth between three feet to five feet, the maximum transitional radius from wall to the floor is determined by calculating the radius as it varies progressively from a maximum six-inch radius at a three foot depth to a maximum of two feet radius at five feet of depth; and
  - (c) at a water depth greater than five feet the maximum transitional radius from wall to the floor is equivalent to the water depth of the pool less three feet.
- (3) If a pool wall transitions from wall to the floor using an angle, the manager shall ensure that the transitional angle meets the following requirements:
  - (a) at water depths of three feet or less, a transitional angle from wall to floor starts no more than three inches above the floor and intersects the floor at an angle equal to or steeper than 45 degrees from horizontal;
  - (b) at a water depth between three feet to five feet the transitional angle from wall to floor varies progressively starting no more than three inches above the floor at a three foot depth to no more than 18 inches above the floor at the five foot depth and intersects the floor at an angle equal to or steeper than 45 degrees from horizontal; and
  - (c) at water depths greater than five feet the transitional angle from the wall to the floor is equivalent to the water depth of the pool less three feet six inches and intersects the floor at an angle:
    - (i) equal to or steeper than 45 degrees from horizontal; or
    - (ii) equal to or a shallower angle than the one to three floor slope ratio required in Subsection R392-302-10(2).
- (4) The manager shall ensure that any outside corner created by adjoining walls or floor are rounded or chamfered.
- (5) The manager shall ensure that:
  - (a) a pool contains no underwater ledges except when approved by the local health officer for a special purpose pool;
  - (b) a pool contains no underwater ledges in areas of a pool designed for diving; and
  - (c) if underwater ledges are allowed by the local health officer a line marks the extent of the ledge within two inches of its leading edge and is at least two inches in width and in a contrasting dark color for maximum visual distinction.
- (6) The manager shall ensure that an underwater seat or bench:

- (a) if not located on a perimeter wall of the pool, the back of the seat or bench extends above the operating level of the pool and is clearly visible to users and meets the requirements Subsections (2), (3) and (4); and
  - (b) has a maximum water depth to the horizontal surface of 20 inches below the waterline;
  - (c) has an unobstructed surface that is a minimum of ten inches, and a maximum of 20 inches from front to back, and a minimum of 24 inches wide;
  - (d) does not transverse a pool depth change of more than 24 inches;
  - (e) has a minimum horizontal separation between sections of seats and benches of five feet;
  - (f) has a leading edge, or vertical face, that is flush with the pool wall under the seat or bench and meets the requirements of Subsection (1);
  - (g) does not replace the stairs or ladders required in Section R392-302-13, but is allowed in conjunction with pool stairs;
  - (h) is located outside of the minimum water envelope for diving equipment if a seat or bench is located in the deep area of the pool where diving equipment is installed; and
    - (i) is marked with a line that:
      - (i) is at least two inches in width;
      - (ii) is a contrasting color for maximum visual distinction; and
      - (iii) marks the extent of the seat or bench within two inches of its leading edge.
- (7) The manager shall ensure that recessed steps in a pool wall are at least four feet under water and meet the requirements of Subsection R392-302-13(4).

**R392-302-12. Diving Areas.**

- (1) The manager shall ensure that:
  - (a) where diving is permitted and at least one diving board or platform is over 3.28 feet, 1 meter, from the normal water level, the diving area design, equipment placement, and clearances meet the minimum standards of:
    - (i) The 2015-2017 USA Diving Official Technical Rules, Appendix B -- FINA Dimensions for Diving Facilities, which are incorporated by reference;
    - (ii) Rule 1, Section 1, Article 4 and Rule 1, Section 2, Article 4 of the NCAA Men's and Women's Swimming and Diving 2014-2015 Rules and Interpretations, which is incorporated by reference; or
    - (iii) Table 4.8.2.2 and Figure 4.8.2.2.1 and Figure 4.8.2.2.2 of the 2018 Model Aquatic Health Code, which are incorporated by reference;
  - (b) where diving is permitted from a height of less than or equal to 3.28 feet, 1 meter, from normal water level the diving area design, equipment placement, and clearances meet the minimum standards of Section 402.12, Table 402.12, and Figure 402.12 of the 2018 International Swimming Pool and Spa Code, which is incorporated by reference, for type VI, VII and VIII pools such that:
    - (i) type VI is a maximum of 26 inches, 2/3 meter, above the normal water level;
    - (ii) type VII is a maximum of 30 inches, 3/4 meter, above the normal water level; or
    - (iii) type VIII is a maximum of 3.28 feet, 1 meter, above the normal water level;
  - (c) the use of a starting platform is restricted to competitive swimming events or supervised training for competitive swimming events;
    - (i) if starting platforms are used for competitive swimming or training, the water depth is at least four feet; or
    - (ii) when starting platforms are not in competitive use they are removed, or secured with a starting platform safety cover;
  - (d) each diving board, platform, and appurtenance related to a diving area is maintained in a good condition; and
  - (e) areas of a pool where diving is not permitted have a "no diving" warning with a contrasting color located on the horizontal surface of the deck or coping as close to the water's edge as practical and spacing between each warning no greater than 25 feet.
- (2) The manager may use any of the following options to meet the "no diving" warning requirement specified in Subsection (1)(e):
  - (a) a "no diving" sign in block letters at least four inches in height as required in Section R392-302-32;
  - (b) the international no diving icon, that must include at least one "no diving" sign posted vertically in plain view within the pool enclosure with lettering at least four inches in height and a stroke width of at least one-half inch; or
  - (c) both a sign and an icon.

**R392-302-13. Pool Entry and Exits.**

- (1) The manager shall ensure that:
  - (a) each pool is equipped with a minimum of two points of entry or exit meeting the requirements of this section including:
    - (i) at least one point located within ten feet of the shallowest area of the pool; and
    - (ii) at least one point located within 15 feet of the deepest area of the pool, if applicable;
  - (b) an acceptable means of pool entry and exit as described in Subsection (1)(a) includes:
    - (i) a set of stairs with a handrail;
    - (ii) recessed steps with grab rails;

- (iii) a ladder; or
- (iv) a sloped entry; and
- (c) for a pool wider than 30 feet an acceptable means of entry and exit as described in Subsection (1)(b) is:
  - (i) provided on opposite sides of the pool; and
  - (ii) not more than 75 feet apart.
- (2) If stairs with handrails are used for pool entry and exit, the manager shall ensure that stairs, that consist of one or more stair risers:
  - (a) have at least one handrail as described in Subsection (3);
  - (b) are constructed of slip-resistant material that is easily cleanable and of a safe design;
  - (c) have a minimum run of ten inches;
  - (d) have a maximum rise of 12 inches;
  - (e) have a minimum width of 18 inches as measured at the leading edge of the step; and
  - (f) have a line at least one inch in width of a contrasting dark color within two inches of the leading edge of each step.
- (3) If stairs with handrails are used for pool entry and exit, the manager shall ensure that handrails:
  - (a) are rigidly installed and constructed in such a way that they can only be removed with tools;
  - (b) are constructed of corrosion-resistant materials;
  - (c) do not have an outside diameter exceeding two inches;
  - (d) have a uniform profile;
  - (e) are free of sharp edges;
  - (f) are mounted:
    - (i) on the deck; or
    - (ii) if stairs transition water depths within a pool, handrails may be mounted on the shallowest walking surface at the top of the stairs; and
  - (g) extend to the bottom step of the stairs or to the pool floor by either an attachment at or a cantilever to the bottom step of the stairs or pool floor.
- (4) If recessed steps and grab rails are used for pool entry and exit, the manager shall ensure that recessed steps:
  - (a) have a set of grab rails provided at the top of both sides of the recessed steps;
  - (b) are easily cleanable and provide drainage into the pool;
  - (c) have a minimum run of five inches;
  - (d) have a maximum rise of 12 inches; and
  - (e) have a minimum width of 14 inches.
- (5) If recessed steps and grab rails are used for pool entry and exit, the manager shall ensure that grab rails:
  - (a) are mounted to the pool deck, coping, or gutter walking surface;
  - (b) extend to, or beyond the edge of the pool above the water;
  - (c) are attached equidistant from the centerline of the recessed steps on both sides of the recessed steps as required in Subsection (4)(a);
  - (d) have a horizontal space between grab rails that is:
    - (i) not less than 18 inches; or
    - (ii) greater than 24 inches;
  - (e) are rigidly installed and constructed in such a way that they can only be removed with tools;
  - (f) are constructed of corrosion-resistant materials;
  - (g) do not have an outside diameter exceeding two inches;
  - (h) have a uniform profile; and
  - (i) are free of sharp edges.
- (6) If a ladder is used for pool entry and exit, the manager shall ensure that each ladder is:
  - (a) constructed of corrosion-resistant material that is easily cleanable;
  - (b) designed to provide a handhold;
  - (c) rigidly installed;
  - (d) maintained in a safe working condition; and
  - (e) equipped with slip-resistant rungs that:
    - (i) maintain a horizontal clear space between the ladder rung and the pool wall not less than three inches and not more than five inches;
    - (ii) have a maximum rise of 12 inches;
    - (iii) have a minimum width of 14 inches; and
    - (iv) have a minimum horizontal ladder tread depth of 1.5 inches.
- (7) If a sloped entry is used for pool entry and exit, the manager shall ensure that a sloped entry:
  - (a) is constructed of slip-resistant materials; and
  - (b) has a floor slope that meets the requirements described in Subsections R392-302-10(1) and R392-302-10(4).

**R392-302-14. Depth Markings, Safety Markings, and Safety Ropes.**

- (1) The manager shall ensure that:
  - (a) pool water depth is plainly marked at least at the point of:



- (i) minimum pool water depth;
- (ii) maximum pool water depth; and
- (iii) demarcation between the diving area and any other areas of the pool as described in Subsection (1)(c);
- (iv) at depths of five feet or less, pool water depths are marked at water depth increments not to exceed one foot;
- (v) at depths greater than five feet, pool water depths are marked at water depth increments not to exceed two feet;
- (b) depth markings:
  - (i) are spaced no more than 25 feet from each other;
  - (ii) are located above the waterline or within two inches from the coping on the vertical wall of the pool;
  - (iii) are located on the horizontal surface of the deck or coping as close as practical to the pool water's edge; and
  - (iv) have numerals meeting the requirements of a four-inch safety sign as described in Subsection R392-302-32(1);
- (c) a pool constructed with a change in the slope of the pool floor from a shallower area to a deeper area has:
  - (i) a line of demarcation on the pool floor that is marked with a contrasting dark color that is:
    - (A) at least two inches in width; and
    - (B) located 12 inches toward the shallow end from the point of change in slope; and
  - (ii) a floating safety rope designating a change in slope of the pool floor that meets the requirements of Subsection(1)(d) and is placed directly above and parallel to the line of demarcation on the pool floor;
- (d) except for special activities including swimming contests or training exercises where the full unobstructed length of a pool is used, a pool with a diving area has a floating safety rope that is:
  - (i) securely fastened to wall anchors that are:
    - (A) made of corrosion-resistant materials; and
    - (B) recessed with no projections that could be a safety hazard if the floating safety rope is removed;
  - (ii) marked with visible floats spaced at intervals of seven feet or less;
  - (iii) at least 1/2 inch in diameter, and of sufficient strength to support the loads imposed on it during normal bathing activities; and
  - (iv) separates the diving area from any other area of the pool; and
- (e) a pool used exclusively for diving is exempt from the requirements of a safety rope as described in Subsection (1)(d).

**R392-302-15. Decks and Walkways.**

- (1) Except as described in Subsections (5) and (6), the manager shall ensure that a continuous, unobstructed pool deck extends at least five feet around the entire pool as measured from:
  - (a) the poolside edge of the coping if the coping is flush with the pool deck; or
  - (b) the deck-side edge of the pool coping if the coping is elevated from the pool deck.
- (2) If the coping is elevated from the pool deck, the manager shall ensure that the elevation difference between the top of the coping surface and the surrounding deck is:
  - (a) no less than four inches; and
  - (b) no more than 19 inches.
- (3) The manager shall ensure that:
  - (a) each pool has coping that is a minimum of 12 inches wide;
  - (b) the deck area is maintained clear of obstructions for at least a four-foot width around the entire pool unless otherwise allowed by this rule;
  - (c) except as specified in Subsection (4), the pool deck slopes away from the pool to a deck drain at a grade of 1/4 inch to 3/8 inch per linear foot;
  - (d) each deck and walkway:
    - (i) is constructed to drain standing water in a way that prevents it from returning to the pool or circulation system;
    - (ii) has non-slip surfaces;
    - (iii) is not constructed of wood; and
    - (iv) is maintained in a sanitary condition free from litter; and
  - (e)(i) carpeting is not installed within five feet of the water side edge of the coping; and
  - (ii) carpet is wet vacuumed as often as necessary to keep it clean and free of accumulated water or debris.
- (4) The local health officer may exempt a pool from Subsection (3)(c) and may allow the pool deck to slope toward the pool if:
  - (a) the manager can demonstrate to the local health officer that water draining toward the pool will not adversely affect pool water quality;
  - (b) the pool deck slopes toward the pool for a maximum distance of five feet from the water's edge;
  - (c) the portion of the pool deck that slopes toward the pool does so at a grade of 1/4 inch to 3/8 inch per linear foot;
- and
  - (d) a minimum of three feet of additional deck that meets the requirements of Subsection (3) is provided beyond the high point of the slope.
- (5) The local health officer may allow a deck to be obstructed by a diving board, a platform, a slide, stairs, or a ladder if there is at least five feet of deck area provided around the deck side of the obstruction;
- (6) The local health officer may allow other types of deck obstructions, if the obstructions meet the following criteria:

- (a) no more than 15 linear feet of pool perimeter is obstructed in any one location;
- (b) the combined total length of the deck obstructions may not exceed 10% of the total linear pool perimeter;
- (c) multiple obstructions are separated by at least five feet;
- (d) the design of the obstruction does not endanger the health or safety of bathers; and
- (e) a spa and pool that share a common wall that meets the requirements of Subsection R392-302-37(2)(f) is not considered a deck obstruction.

(7) The manager shall ensure that stairs serving decks have uniform stair risers that meet the following requirements:

- (a) a minimum rise of four inches;
- (b) a maximum rise of seven inches;
- (c) a minimum run of ten inches; and
- (d) a minimum width of 18 inches.

#### **R392-302-16. Handholds.**

(1) Except in areas of a pool that are zero-depth or where water depth does not exceed 24 inches, the manager shall ensure that there is a continuous handhold around the entire perimeter of the pool that;

- (a) is installed not more than nine inches above the normal operating water level of the pool;
- (b) has rounded edges; and
- (c) is slip-resistant.

(2) If an overflow gutter is provided, the manager shall ensure that the construction of the overflow gutter allows for use of the overflow gutter as a continuous handhold as described in Subsection (1).

(3) Where an overflow system is not provided, a pool coping, decking, or other material used on a skimmer type pool may be used as the continuous handhold. The manager shall ensure that the overhang of the coping decking, or other material used as a continuous handhold is:

- (a) a maximum thickness of four inches.
- (b) a minimum of one inch beyond the vertical pool wall;
- (c) a maximum of two inches beyond the vertical pool wall, unless accommodating an automatic pool cover track system; and

(d) if an overhang of the pool coping, decking, or other material used as a continuous handhold is accommodating an automatic pool cover, the local health officer may allow the pool coping, decking, or other material to be three inches beyond the vertical pool wall.

#### **R392-302-17. Fencing and Barriers.**

(1) The manager shall ensure that the complete perimeter of the pool, pool deck, and additional decking area, if provided, is enclosed with a fence or other barrier to prevent unauthorized entry that:

- (a) is at least six feet in height measured from the exterior side of the barrier;
- (b) does not allow passage of a four-inch diameter sphere through any fence or barrier opening including below the barrier;

(c) the vertical clearance between a surface below the barrier is constructed of a solid surface such as concrete, paving stones, or other solid surface material approved by the local health officer;

(d) if the fence or barrier has horizontal members, the horizontal members are at least 45 inches apart from each other;

(e) if the fence or barrier includes a gate or door to access the pool enclosure, the gate or door is self-closing and:

(i) has a self-latching mechanism that includes a self-locking mechanism installed between 34 inches and 48 inches above the ground; or

(ii) has a self-latching mechanism that does not include a self-locking mechanism installed 54 inches above the ground, and a lock such as a keyhole, electronic sensor, or combination dial installed between 34 inches and 48 inches above the ground;

(iii) has no opening greater than 1/2 inch within 18 inches of the self-latching mechanism;

(iv) is designed in such a way that it does not prevent egress in the event of an emergency;

(v) is constructed to prevent unauthorized entry from the perimeter of the facility; and

(vi) at least one exit gate is required for each pool enclosure that opens outward from the pool area.

(2)(a) The manager shall ensure that any pool enclosure accessible to the public when one or more of the pools are closed and not being maintained for use has a sign that meets the requirements of a four-inch safety sign as described in Subsection R392-302-32(1) identifying each closed pool; and

(b) access to each closed pool is prevented by one of the following:

(i) a safety cover that restricts bather access and meets ASTM standard F1346-91 that is incorporated by reference;

(ii) a secondary barrier that is approved by the local health officer; or

(iii) another bather restriction method approved by the local health officer.

(3)(a) The local health officer may exempt indoor pools from any portion of Subsection (1) if it is determined that bather safety is not compromised.

(b) The local health officer may exempt pools designed for hotels motels and apartment complexes from the height requirements described in Subsection (1) in consideration of architectural and landscaping features.

(c) A local health officer may exempt an entrance to the pool enclosure from Subsection (1) if:

- (i) the gate or door to a facility or pool area is staffed and controlled, and is locked when the facility or pool area is not open to the public; or
- (ii) the pool or facility has certified lifeguards conducting bather surveillance when the pool area or facility is open, and the gate or door is locked when the facility or pool area is not open to the public.

**R392-302-18. Lighting, Ventilation, and Electrical Requirements.**

- (1) The manager shall ensure that a pool constructed after September 16, 1996, is not used for night swimming in the absence of underwater lighting.
- (2) The local health officer may grant an exemption to the lighting requirement described in Subsection (1) if:
  - (a) the manager demonstrates that a six-inch diameter black disk on a white background placed in the deepest part of the pool can be clearly observed from the pool deck during nighttime hours, which are 30 minutes before sunset to 30 minutes after sunrise; and
  - (b) a written record of this exemption is kept by:
    - (i) the local health department; and
    - (ii) the manager, at the pool facility.
  - (3) Where night swimming is permitted and underwater lighting is used, the manager shall ensure that:
    - (a) artificial lighting is provided so that each area of the pool, including the deepest portion, is visible from the edge of the pool deck;
    - (b) area lighting is provided for the pool deck at not less than ten horizontal foot-candles, ten lumens per square foot, or 108 lux that is directed away from the pool surface as practical to reduce glare;
    - (c) for outdoor pools any combination of overhead and underwater lighting provides maintained illumination not less than ten horizontal foot-candles, ten lumens per square foot, or 108 lux at the pool water surface; and
    - (d) for indoor pools, any combination of overhead and underwater lighting provides maintained illumination not less than 30 horizontal foot-candles, 30 lumens per square foot, or 323 lux at the pool water surface.
  - (4) The manager shall ensure that electrical wiring conforms building code.
  - (5) The manager shall ensure that facilities with indoor pools, pool equipment rooms, access spaces, dressing rooms, shower rooms, and toilet spaces are ventilated in accordance with American Society of Heating, Refrigerating and Air-Conditioning Engineers Standard 62.1-2016, which is incorporated by reference.

**R392-302-19. Circulation Systems.**

- (1) The manager shall ensure that:
  - (a) a circulation system is provided and in continuous operation;
  - (b) when the pool is open for bathing, the normal waterline of the pool is maintained to promote continuous skimming for any surge condition;
  - (c) when an overflow gutter system is used the water is maintained at the overflow rim of the gutter;
  - (d) when a skimmer is used the water is maintained at the midpoint of the skimmer opening;
  - (e) the circulation system meets the minimum turnover time listed in Table 1;
  - (f) if a single pool circulation system incorporates more than one of the pool types listed in Table 1:
  - (i) the entire pool circulation system is designed with the shortest turnover rate required in Table 1 for the incorporated pool types; or
  - (ii) the pool circulation system is designed with multiple circulation zones that each meet the recirculation flow rate required in Table 1;
  - (g) the circulation equipment is operated continuously except for periods of maintenance;
  - (h) a rate-of-flow indicator, reading in gallons per minute, is:
    - (i) functioning; and
    - (ii) properly installed:
      - (A) according to manufacturer recommendations; and
      - (B) in a place and position where it can be easily read by authorized personnel;
    - (i) the area housing the circulation equipment, the pump room, is designed and maintained:
      - (i) according to manufacturer recommendations;
      - (ii) with adequate working space for equipment maintenance including disassembly removal, and replacement;
      - (iii) protected from environmental conditions including UV radiation; and
      - (iv) secured from unauthorized personnel;
    - (j) each circulation pipe is regulated to control the circulation system flow with one or more valves that are located to be easily accessible for maintenance or replacement;
    - (k) written operational instructions for circulation equipment are available to the local health officer upon request;
    - (l) circulation equipment including multiport valves, if used, comply with NSF/ANSI 50-2015, which is incorporated by reference; and
    - (m) each pump or series of pumps used for pool water circulation under normal operating conditions:
      - (i) have adequate capacity to provide the minimum turnover rate specified in Table 1;
      - (ii) are capable of providing flow adequate for the backwashing of filters; and

(iii) are capable of maintaining the required minimum circulation flow rate at a dynamic head that includes, in addition to fitting and friction losses:

- (A) except as described in Subsection R392-302-20(4)(b), an additional of 15 feet of head for pool inlet orifices; and
- (B) an additional 15 feet of head for rapid sand filters, vacuum precoat media filters or vacuum cartridge filters; or
- (C) an additional 40 feet of head for pressure precoat media filters, high-rate sand filters, or cartridge filters.

(2) A variable speed pump is permitted for pool water circulation if the manager ensures that the minimum circulation flow rate in the approved design and the minimum turnover rate required in Table 1 is maintained, and the requirements of Section R392-302-25 are met.

(3) The manager shall ensure that:

(a) piping is:

- (i) made of non-toxic material;
- (ii) resistant to corrosion;
- (iii) able to withstand normal operating pressures;
- (iv) identified by a color code or label; and
- (v) maintained in good condition; and

(b) the maximum water velocity in:

(i) discharge piping is ten feet per second, except for copper pipe where the maximum velocity for discharge piping is eight feet per second; and

(ii) suction piping is six feet per second.

(4) The manager shall ensure that the circulation system includes a pump strainer that:

- (a) prevents hair, lint, and other debris from reaching the pump;
- (b) is corrosion-resistant;
- (c) has openings not more than 1/8 inch in size;
- (d) provides a free flow capacity of at least four times the area of the pump suction line;
- (e) is easily accessible for frequent cleaning;
- (f) is maintained in a clean and sanitary condition; and
- (g) is provided with necessary valves to facilitate cleaning of the system without excessive flooding.

(5) The manager shall ensure that a pool facility has a vacuum-cleaning system that:

(a) facilitates access to any area of the pool through hoses less than 50 feet in length;

(b) except for a vacuum system operated from a skimmer, includes one or more vacuum connections located in the pool wall, at least eight inches below the water line for any vacuum system that is an integral part of the circulation system; and

(c) each dedicated vacuum connection located in a pool wall, as described in Subsection (5)(b), has a finish fitting that is installed such that tools are necessary to open and close the fitting.

(6) The manager shall ensure that pool water boilers and pressure vessels:

- (a) meet the requirements of Rule R616-2;
- (b) have a fixed thermometer mounted in the pool circulation line downstream from the heater outlet; and
- (c) are provided with a heatsink as required by the manufacturer's instructions.

(7) The manager shall ensure that pool water heat exchangers:

- (a) have a fixed thermometer mounted in the pool circulation line downstream from the heater outlet; and
- (b) are provided with a heatsink as required by manufacturer's instructions.

(8) The manager shall ensure that each air induction system is designed and maintained to prevent:

(a) any possibility of water backup that could cause electrical shock hazards;

(b) an air intake from introducing contaminants such as noxious chemicals, fumes, deck water, dirt, or other debris into the pool; and

(c) the circulation line of a jet system or other form of water agitation from connecting to the pool water circulation, filtration, or heating system.

(9) Notwithstanding Subsection R392-302-4(1), the manager shall ensure that by January 31, 2023 each chemical feed system includes two layers of interlocking protection for a low or no flow condition so that the operation of any chemical feeder is dependent upon the operational flow of the main circulation system and:

(a) the functionality of the interlocking mechanism is verified and documented to the local health department; and

(b) the interlocking mechanism is accomplished through an electrical interlock consisting of:

(i) a flow meter or flow switch at the chemical controller if a controller is being used; and

(ii) each chemical feeder is wired electrically to the circulation system by use of a differential pressure switch, a pump power monitor, or other suitable means.

(10) The local health officer may require the manager to demonstrate that the circulation system is performing in accordance with the approved design.

(11) The local health officer may reduce the head loss requirement for pool inlet orifices as described in Subsection (1)(I)(iii) if the manager can demonstrate that at least a six to one pressure ratio from the pool inlet orifice to the return loop is maintained.

TABLE 1 Circulation
------------------------

Pool Type	Minimum Number of Wall Inlets	Minimum Number of Skimmers per 3,500 square feet of surface area or less	Minimum Turnover Rate
1. Swimming pool	One per ten linear feet of perimeter or fraction thereof	One per 500 square feet of surface area	Six hours
3. Wading pool	One per 20 linear feet of perimeter, or fraction thereof, with a minimum of two equally spaced	One per 500 square feet of surface area	One hour
4. Spa pool	One per 20 linear feet or fraction thereof	One per 100 square feet of surface area	1/2 hour
5. Wave pool	One per ten linear feet or fraction thereof	One per 500 square feet of surface area	Six hours
6. Splash pool	One per ten linear feet or fraction thereof	One per 500 square feet of surface area	One hour
7. Vehicle slide	One per ten linear feet or fraction thereof	One per 500 square feet of surface area	One hour
8. Special purpose pool	One per ten linear feet or fraction thereof	One per 500 square feet of surface area	One hour

**R392-302-20. Return Inlets.**

- (1) The manager shall ensure that:
  - (a) return inlets for potable or treated water are:
    - (i) located to facilitate:
      - (A) uniform circulation of water; and
      - (B) a uniform disinfectant residual throughout the entire pool; and
    - (ii) hydraulically sized to provide the designed flow rate for each zone of multi-zoned pools based on the designed turnover rate for each zone;
      - (b) if wall inlets from the circulation system are used, each wall inlet is:
        - (i) flush with the pool wall, and located:
          - (A) at least five feet below the normal water level; or
          - (B) at the bottom of the vertical wall surface tangent to the arc forming the transition between the vertical wall and the floor of the pool;
            - (ii) except as provided in Subsection R392-302-37(4) and Subsection R392-302-38(1)(g), spaced no greater than every ten feet around the pool perimeter; and
            - (iii) designed as a directionally adjustable and lockable orifice with sufficient head loss to ensure balancing of flow through each wall inlet as related to the other wall inlets such that:
              - (A) the return loop piping is sized to provide less than 2-1/2 feet of head loss to the most distant orifice to ensure equal flow through all orifices; and
              - (B) wall inlets are locked in place once adjusted for uniform circulation.
    - (2) If floor inlets are installed in addition to wall inlets, the manager shall ensure there is a minimum of one row of floor inlets centered in the pool width with piping installed in accordance with Subsection R392-302-19(3) such that:
      - (a) individual floor inlets and rows of floor inlets are spaced a maximum of 15 feet from each other; and
      - (b) floor inlets are at least 15 feet from a pool wall with wall inlets.
    - (3) If floor inlets from the circulation system are used, the manager shall ensure each floor inlet is:
      - (a) flush with the floor;
      - (b) placed at no more than 15 foot intervals from other floor inlets;
      - (c) spaced no more than 7-1/2 feet from the pool wall if there are no wall inlets on that wall;
      - (d) designed such that the flow can be adjusted to provide sufficient head loss to ensure balancing of flow through all floor inlets; and
      - (e) designed such that the flow cannot be adjusted without the use of a tool such that:

- (i) the return supply piping is sized to provide less than 2-1/2 feet of head loss to the most distant floor inlet to ensure equal flow through all floor inlets; and
- (ii) floor inlets are locked in place once adjusted for uniform circulation.
- (4) The local health officer may:
  - (a) exempt the inlet placement requirements for inlet designs that can be demonstrated to produce uniform mixing of pool water through a dye test;
  - (b) reduce the head loss requirement if the manager can demonstrate that at least a 6:1 pressure ratio from orifice to the return loop is maintained; and
  - (c) require floor inlets to be installed in addition to wall inlets if a pool has a width greater than 50 feet.

**R392-302-21. Suction Outlets.**

- (1) The manager shall ensure that each interactive water feature and pool circulation system pump is connected to at least two suction outlets unless the pump is connected to:
  - (a) a gravity drain system; or
  - (b) an unblockable drain.
- (2) The manager shall ensure that:
  - (a) each grate or cover of a submerged suction outlet conforms to the standards of ANSI/APSP-16 2011, as incorporated in 16 CFR 1450.3 (July 5, 2011);
  - (b) each suction outlet is constructed so that if one of the outlets is completely obstructed, the remaining outlets and related piping are capable of handling 100% of the maximum design circulation flow;
  - (c) each suction outlet connected to a pump through a single common suction line is connected to the common suction line:
    - (i) through pipes of equal diameter;
    - (ii) with a fitting that is located about midway between the suction outlets; and
    - (iii) without an isolation valve or other means to cut any individual suction outlet out of the system;
    - (d) at least one of the suction outlets is located at the deepest point of the pool; and
    - (e) when the pool has multiple main drain suction outlets, the center of each suction outlet cover or grate is spaced:
      - (i) no more than 30 feet apart; and
      - (ii) no less than three feet apart;
  - (3) The local health officer may allow multiple pumps to connect to the same suction outlets only if:
    - (a) the outlets are sized to accommodate 100% of the total design flow from all pumps combined; and
    - (b) the flow characteristics of the system meet the requirements of Subsections (4), (5) and (6);
  - (4) The manager shall ensure that:
    - (a) there is one main drain suction outlet for each 30 feet of pool width;
    - (b) the center of the outlet cover or grate of any outermost main drain suction outlet is located within 15 feet of a side wall;
    - (c) any device or method used for draining a pool does not overcharge the sanitary sewer; and
    - (d) the pool is not open to any bathers if a suction outlet grate or cover is broken, damaged, missing, or not securely fastened.
  - (5) The manager shall ensure that
    - (a) a pool drain, drain cover, or drain grate is installed according to the manufacturer's instructions; and
    - (b) a pool is not operated with a drain, drain cover, or drain grate that is positioned or applied in a manner that conflicts with any mandatory markings on the drain, drain cover, or drain grate under the standard required in Subsection (2)(a) that includes:
      - (i) whether the drain is for single or multiple drain use;
      - (ii) the maximum flow through the drain cover; and
      - (iii) whether the drain may be installed on a wall or a floor.
  - (6) The manager shall ensure that each drain cover or drain grate is installed on a sump:
    - (a) recommended by the manufacturer;
    - (b) specifically designed for that drain by a Registered Design Professional as defined in ANSI/APSP-16 2011, as incorporated in 16 CFR 1450.3 (July 5, 2011); or
    - (c) that meets the ANSI/APSP-16 2011 standard, as incorporated in 16 CFR 1450.3 (July 5, 2011).
  - (7) When installed, the manager shall ensure that any entrapment release system, such as a safety vacuum release system:
    - (a) is inspected and tested as specified by the manufacturer at least once a week but no less often than established by the manufacturer;
    - (b) includes a notification system that:
      - (i) alerts bathers and the pool operator when the safety vacuum release system has inactivated the circulation system; and
      - (ii) activates a continuous clearly audible alarm that can be heard in each area of the pool or a continuous visible alarm that can be seen in each area of the pool;
    - (c) has a sign that:

- (i) states, "Do not use the pool if this alarm is activated";
  - (ii) meets the requirements of a two-inch safety sign as described in Subsection R392-302-32(1), including a heading containing a safety signal such as warning, caution, or attention;
  - (iii) is posted next to the audible or visible alarm source; and
  - (iv) provides the phone number of the pool operator.
- (8) The manager shall close to bathers any pool that has a single main drain with a malfunctioning safety vacuum release system.

**R392-302-22. Overflow Gutter System and Skimming Devices.**

- (1) The manager shall ensure that:
  - (a) a pool having a surface area greater than 3,500 square feet has an overflow gutter system; and
  - (b) a pool having a surface area equal to or less than 3,500 square feet has either an overflow gutter system or a skimmer.
- (2) The local health officer may allow an exemption to the size requirement for overflow gutter systems and allow a skimmer system in a pool that has a surface area greater than 3,500 square feet if sufficient skimming is provided through the skimmer system.
- (3) If the pool has an overflow gutter system, the manager shall ensure that the overflow gutter system:
  - (a) extends completely around the pool, except at stairs, sloped entries, recessed steps, ladders, or other areas approved by the local health officer;
  - (b) is capable of continuously removing pool water at 100% of the maximum flow rate;
  - (c) is connected to the circulation system by a surge system that:
    - (i) has a surge capacity of not less than one gallon for each square foot of surface area;
    - (ii) has water level sensors and controls built in to maintain the pool water level; and
    - (iii) promotes continuous skimming in each surge condition; and
  - (d) is designed and constructed:
    - (i) to prevent entrapment of any part of a bather's body;
    - (ii) with the opening into the gutter system beneath the coping or grating that:
      - (A) is at least three inches in height; and
      - (B) has a depth of at least three inches;
    - (iii) with a handhold as described in Subsection R392-302-16(2);
    - (iv) with suction outlet pipes that are at least two inches in diameter; and
    - (v) with the total combined area of all unobstructed openings in the outlet grates being equal to or greater than a minimum of 1-1/2 times the total cross sectional area of all connected suction outlet pipes.
  - (4) If the pool has a skimmer, the manager shall ensure that each skimmer:
    - (a) complies with NSF/ANSI 50-2015 standards, which is incorporated by reference;
    - (b) is installed on any pool with a surface area equal to or less than 3,500 square feet;
    - (c) has at least one skimming device provided for each 500 square feet of water surface area or fraction thereof;
    - (d) is spaced to provide an effective skimming action over the entire surface of the pool if two or more skimmers are required;
    - (e) is installed with the normal operating level of the pool water at the midpoint of the skimmer opening or in accordance with the manufacturer's instructions;
    - (f) is built into the pool wall;
    - (g) has piping and other components that are designed for a total capacity of at least 80% of the maximum flow rate of the circulation system;
    - (h) is designed with a minimum flow rate of 25 gallons per minute, and a maximum flow rate of 55 gallons per minute; and
    - (i) is equipped with a weir that:
      - (i) is maintained properly for continuous skimming of the surface water;
      - (ii) moves freely and automatically adjusts to variations in water level over a range of at least four inches; and
      - (iii) operates at any flow variation.
    - (j) is provided with one of the following systems to prevent air-lock:
      - (i) an equalizer pipe as described in Subsection (6);
      - (ii) a surge system; or
      - (iii) another system approved by the local health officer that will assure enough water for pump suction in the event the pool water drops below the weir level.
  - (5)(a) The local health officer may allow a higher maximum flow rate through a skimmer up to the skimmer's NSF rating if the piping system is designed to accommodate the higher flow rates; or
  - (b) The local health officer may allow may allow the manager to install a skimmer that is designed with a minimum of 3.125 gallons to a maximum of 6.875 gallons per linear inch of weir.
  - (6) The manager shall ensure that an easily removable and cleanable basket or screen through which any overflow water passes:
    - (a) is provided to trap large solids;

- (b) is maintained in good working condition; and
- (c) is emptied as often as necessary to prevent clogging and buildup of potentially infectious debris.
- (7) The manager shall ensure that if an equalizer pipe is used to prevent air-lock, the equalizer pipe is:
  - (a) sized to meet the capacity requirements for the filter and pump;
  - (b) not less than two inches in diameter;
  - (c) designed to control velocity through the pipe in accordance with Subsection R392-302-19(3)(b)(ii);
  - (d) located at least one foot below a valve or float assembly that prevents suction from the equalizer pipe under normal operating conditions;
  - (e) protected with a cover or grate that meets the requirements of ANSI/APSP-16 2011, as incorporated in 16 CFR 1450.3 dated July 5, 2011; and
  - (f) sized to accommodate the design flow requirements described in Subsection (3).
- (8) The manager shall maintain proper operation of each valve and float assembly.

**R392-302-23. Filtration.**

- (1) The manager shall ensure that a filter system:
  - (a) has a way to isolate each individual filter for backwashing or other service; and
  - (b) is designed to allow the pool operator to easily observe the discharged filter backwash water to determine if the filter system is clean.
- (2) The manager shall ensure that a pool uses one of the following filters:
  - (a) a rapid rate sand filter;
  - (b) a high-rate sand filter;
  - (c) a precoat filter;
  - (d) a cartridge filter; or
  - (e) another filter type deemed equivalent by the local health officer.
- (3) The manager shall ensure that each filter complies with the standard NSF/ANSI 50-2015, which is incorporated by reference.
  - (4) The manager shall ensure that a gravity and pressure rapid rate sand filter system is:
    - (a) designed for a filter media rate of three gallons, or less, per minute per square foot of bed area at time of maximum head loss;
    - (b) equipped with a filter bed surface area that is sufficient to meet the design rate of flow required by Section R392-302-19, Table 1, for required turnover;
    - (c) equipped with either an influent pressure gauge, vacuum gauge, or compound gauge, as determined by the filter type, to show the condition of each filter;
    - (d) equipped with an air-relief valve at or near the high point of the filter or piping system; and
    - (e) designed with necessary valves and piping to allow:
      - (i) filtering of pool water;
      - (ii) individual backwashing of each filter:
        - (A) to a system as required in Subsection R392-302-7(1)(d); and
        - (B) at a minimum flow rate of 15 gallons per minute per square foot of filter area;
      - (iii) isolation of each individual filter;
      - (iv) complete drainage of the filtration system; and
      - (v) convenient maintenance, operation, and inspection.
  - (5) The manager shall ensure that a pressure rapid rate sand filter system is provided with an access opening of at least a standard size 11 inch, by 15 inch manhole with a cover.
  - (6) The manager shall ensure that each high-rate sand filter system is:
    - (a) designed with:
      - (i) a minimum filter media rate of 13 gallons per minute per square foot of bed area; and
      - (ii) a maximum filter media rate of 18 gallons per minute per square foot of bed area;
    - (b) equipped with:
      - (i) a filter bed area sufficient to meet the design flow rate required by Section R392-302-19, Table 1, for required turnover;
      - (ii) an influent pressure gauge to show the condition of the filter; and
      - (iii) an air-relief valve at or near the high point of the filter; and
    - (c) installed in compliance with the manufacturer's recommendations for each system component.
  - (7) The local health officer may reduce the minimum filter media rate as required in Subsection (5)(a)(i) to a rate as low as ten gallons per minute per square foot of bed area where:
    - (a) more than one high-rate sand filter is installed and operating;
    - (b) the filter system includes a valve downstream of the filters that is designed to regulate the backwash flow rate; and
    - (c) adequate backwash flow is maintained through each filter according to the manufacturer's requirements.
  - (8) The manager shall ensure that each precoat filter system is:
    - (a) designed with:
      - (i) a filtering area that is compatible with the design pump capacity as required by Subsection R392-302-19(1)(m);



- (ii) a filter media rate that:
  - (A) is a maximum of two gallons per minute per square foot of effective filtering surface without continuous precoat media feed; or
  - (B) is a maximum of 2-1/2 gallons per minute per square foot with continuous precoat media feed;
- (b) equipped with a feeder device that feeds precoat media:
  - (i) accurate to within 10%;
  - (ii) continuously within a calibrated range that is adjustable from two to six milligrams per liter; and
  - (iii) at the design capacity of the circulation pump;
- (c) designed and constructed with materials that will withstand normal continuous use without significant deformation or deterioration that could adversely affect filter operations;
- (d) supplied with potable water delivered through an air gap as required in Section R392-302-6;
- (e) equipped with:
  - (i) an influent pressure gauge, vacuum gauge, or a compound gauge to show the condition of the filter; and
  - (ii) an air-relief valve at or near the high point of the filter or piping system; and
- (f) designed to facilitate:
  - (i) cleaning by one or more of the following methods:
    - (A) backwashing;
    - (B) air-bump-assist backwashing;
    - (C) automatic or manual water spray; or
    - (D) agitation; and
  - (ii) complete and rapid draining of the filter system.
- (9) If fabric is used, the manager shall ensure that filtration area is determined based on effective filtering surfaces.
- (10) The manager shall ensure that:
  - (a) diatomaceous earth filter backwash water is discharged as required in Subsection R392-302-7(1)(d) through a separation tank that has a sign that meets the requirements of a two-inch safety sign described in Subsection R392-302-32(1), warning the user not to start up the filter pump without first opening the air-relief valve; and
  - (b) personal protective equipment suitable for preventing inhalation of diatomaceous earth or other filter aid material is provided for pool operator use;
- (11) In vacuum filter system installations where the circulating pump is rated at two horsepower or higher, the manager shall ensure that an adjustable high vacuum automatic shut-off device is provided to prevent damage to the pump.
- (12) The local health officer may:
  - (a) exempt a pool from the requirement in Subsection (3) for precoat filters if the precoat filter elements are easily accessible for cleaning by hand hosing after each filter backwash cycle;
  - (b) approve site-built or custom-built vacuum precoat filters if the precoat filter elements are easily accessible for cleaning by hand hosing after each filter backwash cycle if it complies with the design requirements in Subsection (7); and
  - (c) approve any design that provides equivalent cleaning of precoat filter elements.
- (13) The manager shall ensure that each hose bib is equipped with a vacuum breaker listed by the International Association of Plumbing and Mechanical Officials, IAPMO, the American Society of Sanitary Engineering, A.S.S.E., or other nationally recognized standard.
- (14) The manager shall ensure that a cartridge filter system is:
  - (a) designed and constructed with:
    - (i) sufficient filter area to meet the design pump capacity as required by Section R392-302-19, Table 1;
    - (ii) a maximum filter media rate of 0.375 gallons per minute per square foot of effective filter area; and
    - (iii) materials that will withstand normal continuous use without significant deformation or deterioration that could adversely affect filter operations such as polyester fiber;
  - (b) equipped with
    - (i) an influent pressure gauge, vacuum gauge, or compound gauge to show the condition of the filter; and
    - (ii) an air-relief valve at or near the high point of the filter system; and
  - (c) cleaned in accordance with the manufacturer's recommendations.

**R392-302-24. Disinfectant and Chemical Feeders.**

- (1) The manager shall ensure that:
  - (a) a pool is equipped with disinfectant dosing or disinfectant generating equipment that:
    - (i) conforms to the NSF/ANSI 50-2015, which is incorporated by reference; or
    - (ii) is deemed equivalent by the local health officer;
  - (b) chlorine dosing or disinfectant generating equipment is designed with a capacity to provide the following chlorine amounts:
    - (i) outdoor pools require four pounds of free available chlorine per day per 10,000 gallons of pool water; or
    - (ii) indoor pools require 2-1/2 pounds of free available chlorine per day per 10,000 gallons of pool water.
- (2) Where ORP controllers are used, the manager shall ensure that:
  - (a) pool side water testing is performed at least weekly;

- (b) an ORP calibration check is completed as needed when pool side water testing results are inconsistent with the ORP controller results; and
- (c) inspection and cleaning of sensor probes and chemical injectors is performed in accordance with the manufacturer's recommendations and as needed to reconcile pool side water testing results with the ORP controller results.
- (3) The manager shall ensure that:
  - (a) compressed chlorine gas is not used as a pool water disinfectant unless approved by the local health officer;
  - (b) any bactericidal agent, other than chlorine and bromine, and their feeding apparatus is approved by the local health officer and each bactericidal agent is registered by the U.S. Environmental Protection Agency for use in swimming pools; and
  - (c) positive displacement equipment and piping used to apply a chemical to the water is:
    - (i) designed and constructed of materials that can be cleaned and maintained free from clogging; and
    - (ii) resistant to the damaging effects of the chemical in use.
- (4) The manager shall ensure that:
  - (a) each pool complies with Subsections (4)(b) and (4)(c) by January 31, 2023;
  - (b) each chemical feed system includes the following two layers of interlock protection for a low or no flow condition:
    - (i) a flow meter or flow switch at the chemical controller; and
    - (ii) each chemical feeder wired electrically to the circulation system that may include the use of a differential pressure switch, a pump power monitor, or other suitable means; and
  - (c) the functionality of the interlocking protection mechanism is verified, and documentation is prepared for the local health officer to review upon request.
- (5) The local health officer may exempt an erosion type chemical feeder from the requirements of Subsection (4)(b)(ii).

**R392-302-25. Disinfection and Quality of Water.**

- (1) The manager shall ensure that:
  - (a) each pool is continuously disinfected by a product that:
    - (i) is registered with the United States Environmental Protection Agency as a disinfecting process or disinfectant product for pool water;
    - (ii) imparts a disinfectant residual that may be easily and accurately measured by a field test procedure appropriate to the disinfectant in use;
    - (iii) is compatible for use with other chemicals normally used in pool water treatment;
    - (iv) does not create an imminent health hazard for bathers if applied according to manufacturer's specifications; and
    - (v) does not create an imminent health hazard if handled, stored, and used according to manufacturer's directions;
  - (b) the concentration of the active disinfectant within the pool water is consistent with:
    - (i) the manufacturer's directions for the disinfectant in use; and
    - (ii) the minimum concentration listed in Table 3;
  - (c) the concentration of free available chlorine is not above ten milligrams per liter while the facility is open to bathers;
  - (d) products used to treat or condition pool water are used according to the manufacturer's directions;
  - (e) expired test kit reagents are not used; and
  - (f) if cyanuric acid or stabilized chlorine is used to stabilize the free chlorine residual from the effects of UV light:
    - (i) a test kit for cyanuric acid accurate to within 10.0 milligrams per liter is provided; and
    - (ii) the concentration of cyanuric acid in the water is:
      - (A) at least ten milligrams per liter; and
      - (B) does not exceed 100 milligrams per liter;
  - (g) if the concentration of combined chlorine residual is greater than 0.5 milligrams per liter the combined chlorine level is reduced by:
    - (i) breakpoint chlorination, as described in Subsection (15); or
    - (ii) a full or partial exchange of the pool water with potable water; and
    - (h) the total alkalinity measurement is within the range of:
      - (i) 100 to 125 milligrams per liter for a pool lined with plaster;
      - (ii) 80 to 150 milligrams per liter for a spa pool lined with plaster; and
      - (iii) 125 to 150 milligrams per liter for a pool lined with other approved construction materials.
- (2) The manager shall provide an easy to operate, portable disinfectant test kit compatible with the disinfectant in use and accurate to within 0.5 milligrams per liter at each facility.
- (3) The manager shall calculate the saturation index in accordance with Table 2 and ensure that the saturation index value of the pool water is within the range of -0.3 and +0.3.
- (4) The manager shall ensure that:
  - (a) the pool water has sufficient clarity to easily see the drain grate or cover in the deepest part of the pool, or that a black disk six inches in diameter on a white field is easily visible if placed in the deepest part of the pool;
  - (b) the minimum water temperature for a pool is 78 degrees Fahrenheit; and
  - (c) the maximum water temperature for a pool is 104 degrees Fahrenheit.
- (5) The local health officer may grant an exemption to the pool water temperature requirements for a special purpose pool including a cold plunge pool but may not exempt the water temperature requirement listed in Subsection (4)(c).

- (6) The manager or a representative of the local health department, as determined by the local health officer, shall:
- (a) collect a pool water sample from each pool at least once per month or at a more frequent interval as determined by the local health officer;
  - (b) submit the collected pool water sample to a laboratory approved under Rule R444-14, Certification of Environmental Laboratories, to perform total coliform and heterotrophic plate count testing; and
  - (c) ensure that the collected sample is analyzed in a laboratory for total coliform and heterotrophic plate count using methods allowed under Section R444-14-4.
- (7) The individual who submits the collected sample to the analyzing laboratory shall ensure that the laboratory provides sample results within five working days to the local health department and the manager.
- (8) The local health officer and manager shall review the sample results to determine if the pool water has failed the bacteriological quality standard as determined by the following sample failure criteria:
- (a) the sample contains more than 200 colony forming units (CFUs) per milliliter, as determined by the heterotrophic plate count; or
  - (b) the sample indicates the presence of coliform bacteria or contains more than one CFU of coliform bacteria per 100 milliliters.
- (9) If the local health officer determines that the sample fails as described in Subsection (8), an additional sample shall be collected and submitted as described in Subsection (6) within one laboratory receiving day after the sample report was received.
- (10) A local health officer may exempt a pool from the requirement of monthly sampling if:
- (a) the pool is closed, whether permanently or seasonally; or
  - (b) the pool is temporarily closed for an interval exceeding half of a calendar month.
- (11) If the pool water samples required in Subsection (6) fail bacteriological quality standards as described in Subsection (8), the manager shall develop a corrective action plan and submit the plan to the local health department for approval.
- (12) If a more than one of five pool water samples required in Subsection (6) fail bacteriological quality standards as described in Subsection (8), the local health officer may require any of the following:
- (a) more frequent water bacteriological sample collection;
  - (b) a health inspection;
  - (c) additional training for the pool operator; or
  - (d) more frequent water quality monitoring including:
    - (i) disinfectant residuals, pH, and pool water temperature are checked and recorded four times a day; and
    - (ii) flow rate gauges and pool circulation rates are checked and recorded four times a day.
- (13) If ORP technology is used in accordance with Subsection R392-302-24(2), the local health officer may reduce the water quality monitoring frequency described in Subsection (12)(d)(i).
- (14) The local health officer may limit peak bather load as described in Section R392-302-26, to ensure proper pool water quality.
- (15) The manager shall calculate the dose of additional free available chlorine to add to the pool to achieve breakpoint chlorination as follows:
- (a) find the amount of combined chlorine in the pool by:
    - (i) testing the pool water for free available chlorine and total chlorine and subtracting the free available chlorine from the total chlorine; or
    - (ii) testing the pool water for combined chlorine;
  - (b) multiplying the combined chlorine level by ten to find the amount of free available chlorine to add to the water to achieve breakpoint chlorination.

TABLE 2 CHEMICAL VALUES AND FORMULA FOR CALCULATING SATURATION INDEX					
The formula for calculating the saturation index is:					
$SI = pH + TF + CF + AF - TDSF$					
SI means Saturation Index TF means temperature factor CF means calcium factor mg/l means milligrams per liter deg F means degrees Fahrenheit AF means alkalinity factor TDSF means total dissolved solids factor					
Temperature in deg F	TF	Calcium Hardness in mg/l	CF	Total Alkalinity in mg/l	AF

32	0.0	25	1.0	25	1.4
37	0.1	50	1.3	50	1.7
46	0.2	75	1.5	75	1.9
52	0.3	100	1.6	100	2.0
I	0.4	125	1.7	125	2.1
66	0.5	150	1.8	150	2.2
76	0.6	200	1.9	200	2.3
84	0.7	250	2.0	250	2.4
94	0.8	300	2.1	300	2.5
105	0.9	400	2.2	400	2.6
128	1.0	800	2.5	800	2.9
Total Dissolved Solids in mg/l			TDSF		
0 to 999			12.1		
1000 to 1999			12.2		
2000 to 2999			12.3		
3000 to 3999			12.4		
4000 to 4999			12.5		
5000 to 5999			12.55		
6000 to 6999			12.6		
7000 to 7999			12.65		
Each additional 1000			Add 0.05		
<p>If the SATURATION INDEX is 0, the water is chemically in balance.</p> <p>If the INDEX is a minus value, corrosive tendencies are indicated.</p> <p>If the INDEX is a positive value, scale forming tendencies are indicated.</p> <p>EXAMPLE: Assume the following factors:  pH 7.5; temperature 80 degrees F, 19 degrees C; calcium hardness 235; total alkalinity 100; and total dissolved solids 999.  pH = 7.5  TF = 0.7  CF = 1.9  AF = 2.0  TDSF = 12.1  TOTAL: <math>7.5 + 0.7 + 1.9 + 2.0 - 12.1 = 0.0</math>  This water is chemically balanced.</p>					

TABLE 3 DISINFECTANT LEVELS AND CHEMICAL PARAMETERS UNDER NORMAL OPERATING CONDITIONS			
Stabilized Chlorine measured in milligrams per liter see note 2	POOLS	SPA POOLS	SPECIAL PURPOSE POOLS
pH 7.2 to 7.6	2.0, see note 1	3.0, see note 1	2.0, see note 1
pH 7.7 to 8.0	3.0, see note 1	5.0, see note 1	3.0, see note 1
Non-Stabilized Chlorine measured in milligrams per liter see note 2			
pH 7.2 to 7.6	1.0, see note 1	2.0, see note 1	2.0, see note 1
pH 7.7 to 8.0	2.0, see note 1	3.0, see note 1	3.0, see note 1

Bromine measured in milligrams per liter	4.0, see note 1	4.0, see note 1	4.0, see note 1
Iodine measured in milligrams per liter	1.0, see note 1	1.0, see note 1	1.0, see note 1
pH	7.2 to 7.8	7.2 to 7.8	7.2 to 7.8
Cyanuric acid measured in milligrams per liter	10 to 100	10 to 100	10 to 100
Minimum water temperature measured in degrees Fahrenheit see Subsections R392-302-25(4)(b) and R392-302-25(5)	78	78	78
Maximum water temperature measured in degrees Fahrenheit see Subsections R392-302-25(4)(c) and R392-302-25(5)	104	104	104
Calcium Hardness measured in milligrams per liter as calcium carbonate	200, see note 1	200, see note 1	200, see note 1
Total Alkalinity Measured in milligrams per liter			
Plaster pools	100 to 125	80 to 150	100 to 125
Painted or Fiberglass pools	125 to 150	80 to 150	125 to 150
Saturation Index see Table 2	-0.3 to +0.3	-0.3 to +0.3	-0.3 to +0.3
Chloramines or combined chlorine residual measured in milligrams per liter	0.5, see note 3	0.5, see note 3	0.5, see note 3
Note 1: Minimum value			
Note 2: Maximum value of free chlorine is ten milligrams per liter as described in Subsection R392-302-25(1)(c)			
Note 3: Maximum value of chloramines or combined chlorine residual as described in Subsection R392-302-25(1)(g)			

**R392-302-26. Bather Load.**

- (1) The manager shall ensure that peak bather load, as described in Subsection (3), is not exceeded.
- (2) The manager shall ensure that a two-inch safety sign, as described in Subsection R392-302-32(1) with a heading containing a safety signal such as warning, caution, or attention is posted:
  - (a) indicating the allowed peak bather load for each pool; and
  - (b) within the pool enclosure.
- (3) The peak bather load shall be determined as follows:
  - (a) ten square feet of pool water surface area per bather is provided in a spa pool;

(b) 20 square feet of pool water surface area per bather is provided for each bather in:

- (i) a swimming pool;
  - (ii) a lazy river;
  - (iii) an instructional pool;
  - (iv) a therapy pool;
  - (v) a wading pool;
  - (vi) an interactive water feature collection zone; or
  - (vii) a wave pool;
- (c) 50 square feet of pool water surface area per bather is provided;
- (i) a splash pool; or
  - (ii) a slide runout; and
- (d) a manufacturer established capacity is followed in a surf pool.

(4) The local health officer may approve a different peak bather load during the pool plan approval process as described in Section R392-302-5.

**R392-302-27. Dressing Rooms.**

The manager shall ensure that:

- (1) each area and fixture within a dressing room is maintained in an operable, clean, and sanitary condition;
- (2) where dressing rooms are provided, the entrances and exits are designed to break the line of sight into the dressing areas from other locations;
- (3) each dressing room is constructed of materials that have smooth, non-slip surfaces, and are impervious to moisture;
- (4) dressing room floors slope to a drain and are constructed to prevent accumulation of water;
- (5) carpeting is not installed on dressing room floors;
- (6) each junction between walls and floors are coved;
- (7) the walls or partitions between dressing cubicles begin at a height not more than 12 inches from and extend not less than 60 inches above the finished floor surface or are placed on continuous raised masonry or concrete bases at least four inches high;
- (8) each locker is:
  - (a) set on:
    - (i) a solid masonry base no less than four inches high; or
    - (ii) legs elevating the bottom locker at least four inches above the floor; and
  - (b) equipped with louvers for ventilation; and
  - (c) at least one covered waste receptacle is provided in each dressing room.

**R392-302-28. Restroom and Shower Facilities.**

- (1) The manager shall ensure that:
  - (a) a bather has access to a restroom with a shower facility in accordance with Table 4 and Table 5, and the restroom and shower facility is:
    - (i) located with convenient access for bathers;
    - (ii) located no further than 150 feet from the pool deck; and
    - (iii) designed to break the line of sight into the restroom and shower facilities from other locations;
  - (b) the minimum number of toilets provided is based upon the designed peak bather load with a minimum of two unisex facilities, or one for each gender, except where the facility is used exclusively by one gender;
  - (c) the minimum number of toilet and shower fixtures are installed in accordance with Table 4 and Table 5, except as described in Subsection (2); and
  - (d) handwashing sinks are installed at the ratio of one handwashing sink for each toilet up to four toilets, then one handwashing sink for each two additional toilets.
- (2) By considering the number of available sanitary fixtures within 150 feet of the pool deck perimeter, the local health officer may reduce the minimum number of fixtures to no fewer than two toilets and one shower fixture for a unisex restroom, or one toilet and shower fixture for each gendered restroom, except where the peak bather load is 25 or fewer bathers, in which case the minimum number may be one toilet and one shower fixture for a unisex restroom.

Male	Female
1:1 to 25	1:1 to 25
2:26 to 75	2:26 to 75
3:76 to 125	3:76 to 125
4:126 to 200	4:126 to 200
5:201 to 300	5:201 to 300

6:301 to 400	6:301 to 400
Over 400, add one fixture for each additional 200 males or 150 females	
Where urinals are installed, the manager may reduce the number of toilets by one toilet for each installed urinal, except that the number of toilets may not be reduced to fewer than 1/2 of the minimum number of toilets required.	

TABLE 5 SANITARY FIXTURE MINIMUM REQUIREMENTS SHOWER FIXTURES	
Male	Female
1:4000 square feet of pool surface area or portion thereof	1:4000 square feet of pool surface area or portion thereof

- (3) The manager shall ensure that each restroom is supplied with:
- (a) soap and toilet tissue in suitable dispensers;
  - (b) individual disposable towels or other hand drying fixture approved by the local health officer, such as an air dryer;
- and
- (c) a solid, durable, covered, and easily cleanable waste receptacle.
- (4) The manager shall ensure that each shower fixture:
- (a) is enclosed for privacy;
  - (b) has a thermostatically controlled mixing valve capable of providing two gallons per minute of 90 degree Fahrenheit water to each shower fixture; and
  - (c) has a liquid soap in a suitable dispenser.
- (5) The manager shall ensure that each plumbing fixture is:
- (a) designed to be easily cleanable, and withstand frequent cleaning and disinfecting;
  - (b) maintained in an operable, clean, and sanitary condition; and
- (6) The manager shall ensure that:
- (a) each restroom is constructed of materials that have smooth, non-slip surfaces, and are impervious to moisture;
  - (b) the floor of a restroom and shower facility slopes to a drain and is constructed to prevent accumulation of water;
  - (c) carpeting is not installed on restroom or shower floors; and
  - (d) junctions between walls and floors are coved.

**R392-302-29. Supervision of Bathers and Lifeguard Requirements.**

- (1) The manager shall ensure that access to a pool is prohibited for bathers when the pool is not open.
- (2) The manager shall ensure that lifeguard service is provided at a pool if direct fees are charged, or public funds support the operation of the pool.
- (3) The manager shall ensure that lifeguard service is provided at a pool if direct fees are not charged or public funds do not support the operation of the pool, except when signs are clearly posted indicating that lifeguard service is not provided.
- (4) For a pool as described in Subsection (3), the manager shall ensure that lifeguard service is provided during the period of use that would require lifeguard as described in Subsection (2).
- (5) Each lifeguard training program provider shall:
- (a) before providing training or certification to a lifeguard, apply to the department for approval by submitting:
    - (i) a completed application;
    - (ii) a written summary describing how the training program meets each training objective listed in the application;
    - (iii) a copy of the course curriculum, including slides, handouts, talking points, script, videos, brochures, or any additional information used during the course, or full access to the online course; and
    - (iv) a copy of the exam questions, if applicable; and
  - (b) every five years from the date of initial approval by the department, submit an application to the department for training program revalidation.
- (6) A lifeguard shall:
- (a) obtain training and certification in:
    - (i) lifeguarding by the American Red Cross or an equivalent program approved by the department as described in Subsection (5);

- (ii) CPR, automated external defibrillator use, and other resuscitation skills consistent with the American Heart Association Guidelines; and
- (iii) first aid consistent with the American Heart Association Guidelines;
- (b) be on duty any time when the pool is open for use by bathers, except as provided in Subsection (3).
- (7) A lifeguard on duty shall only perform responsibilities related to the supervision, health, and safety of bathers.
- (8) Where lifeguard service is required, the manager shall ensure that the number of lifeguards is sufficient to allow for continuous supervision of bathers, and surveillance over each pool floor area in use.
- (9) The manager shall ensure that lifeguards:
  - (a) operate in a manner to provide an alternation of tasks such that no lifeguard conducts bather surveillance activities for more than 60 continuous minutes; and
  - (b) maintain coverage of the zone of bather surveillance during a lifeguard rotation.
- (10) An alternation of tasks, as described in Subsection (9)(a), may include any one of the following:
  - (a) a change of bather surveillance zone where the lifeguard must walk or be transported to another bather surveillance zone; or
  - (b) a period of at least 10 minutes of non-bather surveillance activity such as:
    - (i) taking a break;
    - (ii) conducting maintenance; or
    - (iii) conducting slide or ride dispatch.
- (11) The manager or lifeguard staff shall ensure that:
  - (a) any child under three years old, any child not toilet trained, or anyone who lacks control of defecation wears a water-resistant swim diaper and waterproof swimwear that has waist and leg openings fitted such that they are in contact with the waist and leg around the entire circumference; and
  - (b) diapers are changed only in restrooms.
- (12) Each bather shall comply with the following personal hygiene and behavior rules:
  - (a) a bather using the facility shall take a cleansing shower before entering the pool enclosure;
  - (b) any bather diagnosed with a communicable disease transmissible by water shall not use the pool;
  - (c) a bather with diarrhea within the last two weeks caused by an unknown source or from any communicable or fecal-borne disease shall not use the pool;
  - (d) any person who changes a diaper washes hands thoroughly with soap before returning to the pool.
  - (e) running, boisterous play, or rough play, except supervised water sports, are prohibited;
  - (f) where no lifeguard service is provided, children aged 14 years and under shall not use a pool without responsible adult supervision; and
  - (g) children aged five years and under shall not use a spa or hot tub.
- (13) The manager shall ensure a sign that meets the requirements of a rule sign in Subsection R392-302-32(1) is conspicuously posted in the pool enclosure, in each dressing room, and each lifeguard room that includes rules of personal hygiene and behavior, as described in Subsection (12).
- (14) The local health officer may approve alternative but equivalent signage language than those required in Subsection (13).

**R392-302-30. Lifeguard and Safety Related Equipment.**

- (1) The manager shall ensure that each pool facility has the following lifesaving equipment provided for each 2,000 square feet of pool water surface area or fraction thereof:
  - (a) a Coast Guard approved ring buoy with an attached rope equal in length to the maximum width of the pool plus ten feet; and
  - (b) a life pole or shepherd's crook type pole with blunted ends and a minimum length of 12 feet.
- (2) The manager shall ensure that the lifesaving equipment required in Subsection (1) is
  - (a) mounted;
  - (b) readily accessible;
  - (c) conspicuously located;
  - (d) in the pool area;
  - (e) in good repair; and
  - (f) maintained in an operable condition.
- (3) Where lifeguard service is provided, the manager may substitute a rescue tube for the lifesaving equipment required in Subsection (1).
- (4) The manager shall ensure that each pool facility is equipped with a first aid kit that:
  - (a) is accessible to bathers;
  - (b) is stored in a manner that prevents contamination;
  - (c) is restocked as needed; and
  - (d) includes a minimum of the following unexpired items:
    - (i) adhesive bandages of various sizes and applications;
    - (ii) compression bandages;
    - (iii) sterile gauze pads;



- (iv) medical tape;
- (v) scissors;
- (vi) instant cold packs;
- (vii) antiseptic wipes;
- (viii) sting relief wipes;
- (ix) eyewash solution;
- (x) single-use gloves; and
- (xi) tweezers.

(5) The manager shall ensure that each pool facility has a sign that meets the requirements of a two-inch safety sign as described in Subsection R392-302-32(1), that includes a heading containing a safety signal such as warning, caution, or attention, posted in the pool area that states the emergency telephone number including 911 or other local emergency numbers.

(6) Where lifeguard service is provided as required in Subsection R392-302-29(2), the manager shall provide:

- (a) a minimum number of elevated lifeguard stations in accordance with Table 6 that:
  - (i) are located to provide a clear, unobstructed view of the pool floor by the lifeguards on duty; and
  - (ii) provide safe access and egress for the lifeguard;
- (b) at least one backboard designed with straps and head stabilization capability; and
- (c) a readily accessible area designated for first aid equipment and emergency first aid care.

(7) In areas of a pool with water depth greater than six feet or a maximum width greater than 40 feet and a depth greater than four feet, the manager shall provide for a minimum number of elevated lifeguard stations in accordance with Table 6.

(8) Where lifeguard service is not provided, the manager shall ensure that:

(a) a warning sign that meets the requirements of a four-inch safety sign, as described in Subsection R392-302-32(1), is posted that states: "Warning - No Lifeguard on Duty"; and

(b) in addition to the sign required in Subsection (8)(a), a sign that meets the requirements of two-inch safety sign, as described in Subsection R392-302-32(1), is posted that states:

- (i) "Bathers should not swim alone"; and
- (ii) "Children aged 14 years and under shall not use pool without responsible adult supervision".

TABLE 6 Lifesaving Equipment		
SAFETY EQUIPMENT	POOLS WITH LIFEGUARD	POOLS WITH NO LIFEGUARD
Elevated lifeguard station	One per 2,000 square feet of pool area or fraction thereof	None
Backboard	One per facility	None
Room for Emergency Care	One per facility	None
Ring Buoy with and attached rope equal in length to the maximum width of the pool plus ten feet	None	One per 2,000 square feet or pool area or fraction thereof
Rescue Tube used as a substitute for ring buoys, shepherd crook, and life pole when lifeguards are present	One per 2,000 square feet of pool area or fraction thereof	None
Life pole or shepherd's crook	None	One per 2,000 square feet of pool area or fraction thereof
First Aid Kit	One per facility	One per facility

**R392-302-31. Visitor and Spectator Areas.**

- (1) The manager shall ensure that:
  - (a) visitors, spectators, or animals are not allowed within ten horizontal feet of the pool edge;
  - (b) food or drink is not consumed:
    - (i) within ten horizontal feet of the pool edge; or
    - (ii) from a glass or ceramic container;
  - (c) solid waste containers are provided and maintained as required in Section R392-302-8; and
  - (d) each visitor and spectator area is maintained free of litter, and in a clean, sanitary condition.
- (2) The local health officer may allow a service animal on a pool deck, but not within a pool or interactive water feature.

**R392-302-32. Signs.**

- (1) The manager shall ensure that:
  - (a) signs required in this rule are placed to alert and inform bathers in enough time that the bathers may take appropriate actions;
  - (b) signs are written in a lettering style, stroke width, spacing, and contrast with the background such that the sign is clearly visible; and
  - (c) sign lettering shall meet one or more of the following minimum size standards:
    - (i) each heading of a four-inch safety sign as required in Subsections R392-302-12(2)(a), R392-302-14(b), R392-302-16(3), R392-302-22(3)(d), R392-302-23(6)(a), R392-302-32(11)(b), and R392-302-37(24):
      - (A) is written in capital letters;
      - (B) is at least four inches in height; and
      - (C) includes a signal word as the sign heading;
    - (ii) each heading of a two-inch safety sign as required in Subsections R392-302-20(7)(c), R392-302-21(8), R392-302-23(6)(b), and R392-302-23(8):
      - (A) is written in capital letters;
      - (B) is at least two inches in height;
      - (C) includes a signal word as the sign heading;
    - (iii) except for the heading, the sign text is written in letters at least 1/2 inch in height; and
    - (iv) if the sign can only be viewed from a distance more than ten feet, the letter height shall be larger in the same proportion as the required viewing distance at ten feet.
- (2) The local health officer may approve alternative letter sizes to those required in Subsection (1)(c).

**R392-302-33. Cleaning Pools.**

- (1) The manager shall ensure that:
  - (a) the bottom of each pool is cleaned as often as needed to keep the pool free of visible dirt;
  - (b) the surface of each pool is cleaned as often as needed to keep the pool free of visible scum or floating matter; and
  - (c) each pool facility is maintained clean, sanitary, and in good repair.
- (4) The manager shall respond to any known fecal matter release into a pool in accordance with the Centers for Disease Control and Prevention, Fecal Accident Response Recommendations for Aquatic Staff, released June 22, 2018, which is incorporated by reference.
- (5) The manager shall include a record as required in Subsection R392-302-34(2) with information about any fecal matter release into a pool including:
  - (a) date;
  - (b) time;
  - (c) location that the fecal matter was discovered;
  - (d) whether the fecal matter was diarrheal or formed; and
  - (e) the response taken by pool staff.
- (6) The local health officer may approve alternative fecal accident response recommendations from those required in Subsection (4) if the manager can achieve equivalent protection with other operational or engineering controls.

**R392-302-34. Pool Operation and Record Keeping.**

- (1) The manager shall ensure that:
  - (a) pools are operated by a pool operator who is certified or recertified by a program of training and testing approved by the department; and
  - (b) before opening a pool, a written plan regarding the operation, maintenance, and sanitation of the pool is developed that:
    - (i) includes the measurement frequency of the parameters specified in Subsection (2)(c);
    - (ii) specifies who is responsible to take and record the measurements; and
    - (iii) is available for inspection by the local health officer.
- (2) The pool operator shall ensure that:
  - (a) written or digital records are maintained to include any information pertinent to the operation, maintenance, and sanitation of each pool;

- (b) records are available for review and are easily accessible to the local health officer upon request;
- (c) records include:
  - (i) disinfectant residual in the pool water;
  - (ii) pH of the pool water;
  - (iii) temperature of the pool water;
  - (iv) flow rate;
  - (v) quantity of pool treatment chemicals used;
  - (vi) filter backwash or cartridge filter replacement schedule;
  - (vii) cleaning and disinfecting schedule for pool decks, showers, restrooms, and dressing rooms;
  - (viii) occurrences of fecal release into the pool water or onto the pool deck;
  - (ix) bather load; and
  - (x) other information required by the local health officer; and
- (d) records are maintained and stored at the facility for at least two operating seasons.

(3) The local health officer may determine the appropriate number of pools any one certified pool operator may supervise using criteria based on pool compliance history, local considerations of time and distance, and the individual pool operator's abilities.

**R392-302-35. Cryptosporidiosis Outbreak Watches and Warnings.**

(1) The local health officer may issue a cryptosporidiosis outbreak watch or warning in coordination with the department:

- (a) as a method of intervention for a likely or indicated outbreak of cryptosporidiosis;
- (b) if there is a heightened likelihood of a cryptosporidiosis outbreak; or
- (c) if there have been reports of cryptosporidiosis above the background level reported for the disease.

(2) For any issued cryptosporidiosis outbreak watch or warning, the local health officer, in coordination with the department, shall include:

- (a) the geographic area of the cryptosporidiosis outbreak watch or warning;
  - (b) each pool type affected by the cryptosporidiosis outbreak watch or warning; and
  - (c) and any persons restricted from public pool use.
- (3) If a cryptosporidiosis outbreak watch or warning has been issued, the manager shall post a notice sign meeting the two-inch safety sign as described in Subsection R392-302-32(1) that includes a "warning" heading.

(4) The local health department or the department shall provide a digital or printed copy of a sign that meets the requirements of Subsection (3) to the manager upon request.

(5) The manager shall ensure that the notice sign:

- (a) is at least 17 inches wide by 11 inches in length;
- (b) has the words "Crypto Disease Prevention" written in capital letters and centered immediately below the heading as required in Subsection R392-302-32(1);
- (c) includes the following bulleted statements written in capital black letters at least 0.39 inches high:
  - (i) "Any bather with diarrhea in the past two weeks may not use the pool";
  - (ii) "Each bather shall shower with soap before pool entry and after using the toilet";
  - (iii) "Any bather wearing a diaper or any bather younger than three years old shall wear a water-resistant swim diaper and waterproof swimwear";

(iv) "Diapers shall only be changed in restrooms or changing stations"; and

(v) "Bathers shall avoid taking pool water into their mouth".

(6) If a cryptosporidium outbreak warning has been issued, each manager of a pool subject to the warning shall maintain the following pool water chemistry balance measures:

(a) disinfectant concentration is within the range of 2.0 ppm to 10.0 ppm for chlorine, or 4.0 ppm to 10.0 ppm for bromine;

(b) pH is between 7.2 and 7.5; and

(c) the cyanuric acid level meets the requirement of Subsection R392-302-25(1)(f), except the maximum level shall be reduced to 30 ppm.

(7) If a cryptosporidium outbreak warning has been issued, in addition to the requirements listed in Subsection (6), the manager shall implement any of the following cryptosporidium countermeasures:

(a) Hyperchlorination using a non-stabilized chlorine product such as sodium hypochlorite or calcium hypochlorite at least twice weekly to achieve a free chlorine residual concentration multiplied by a time value of 15,300 mg/L minutes as found in Table 7;

(b) a full flow ultraviolet treatment system that meets the requirements of standard NSF/ANSI 50-2015, which is incorporated by reference, for ultraviolet light process equipment;

(c) an ozone treatment system installed and operated according to the manufacturer's recommendations that meets the requirements of the NSF/ANSI 50-2015 standard for ozone process equipment, which is incorporated by reference, and a flow-through rate at least four times the volume of the pool every three and a half days;

(d) a cryptosporidium oocyst-targeted filter system installed and operated according to the manufacturer's recommendations in addition to any installed filtration system as required in Section R392-302-23; or

- (e) another engineered or operational cryptosporidium countermeasure approved by the local health officer.
- (8) The manager shall ensure that the cryptosporidium countermeasure selected from Subsections (7)(b) through (7)(e) has manufacturer's documentation available for inspection at the request of the local health officer and is:
  - (a) installed and operated according to the manufacturer's recommendations;
  - (b) able to achieve a 99.9% inactivation of cryptosporidium oocysts at pool design flow rate and normal operating conditions; and
  - (c) operated to assure safety for swimmers and pool operators.
- (9)(a) If a pool continues to pose a cryptosporidium outbreak threat to the public after cryptosporidium countermeasures as described in Subsections (6) through (8) have been implemented, the local health officer shall order the pool to close.
  - (b) The manager may not reopen the pool until the local health officer has rescinded the pool closure order.

TABLE 7 Chlorine Concentration and Contact time to achieve CT for Cryptosporidium	
Chlorine Concentration	Contact Time
1.0 mg/l	15,300 minutes or 255 hours
10 mg/l	1,530 minutes or 25.5 hours
20 mg/l	765 minutes or 12.75 hours

**R392-302-36. Advisory Committee.**

- (1) An advisory committee to the department regarding regulation of public pools is authorized.
- (2) The advisory committee members shall be appointed by the department and include representation from local health departments, pool engineering, construction, or maintenance companies, and pool managers or pool operators.
- (3) Consistent with Rule R380-1, the department may seek the advice of the advisory committee regarding interpretation of this rule, the granting of variances, and related matters.

**R392-302-37. Special Purpose Pools: Spa Pools.**

- (1) The manager shall ensure that each spa pool:
  - (a) meets any applicable requirement of this rule in addition to this section;
  - (b) meets the bather load requirement of Subsection R392-302-26(3)(a);
  - (c) does not exceed a maximum water depth of four feet;
  - (d) is equipped with at least one handrail, as described in Subsection R392-302-13(3) for each 50 linear feet of perimeter, or portion thereof, evenly spaced around the perimeter to designate the point of entry and exit and provide an unobstructed entry and exit;
  - (e) that is constructed adjacent to another pool and shares a common pool sidewall separating the two pools is constructed such that:
    - (i) the top surface of the common pool sidewall does not exceed 18 inches in width;
    - (ii) the top surface of the common pool sidewall has a marking or icon sign indicating "No walking" provided in block letters at least four inches in height, as required by Subsection R392-302-32(1) in a contrasting color on the horizontal surface of the common sidewall; and
    - (iii) the deck space around the rest of the spa is a minimum of five feet;
  - (f) has a minimum of one turnover each 30 minutes as described in Table 1;
  - (g) has a minimum number of surface skimmers based on one skimmer for each 100 square feet of surface area;
  - (h) is equipped with an ORP controller that monitors chemical demands, including pH and disinfectant demands, and regulates the amount of chemical fed into the pool circulation system; and
  - (i) meets the total alkalinity requirements of Subsection R392-302-25(1)(h).
- (2) The manager may allow a pool deck to be included as part of the spa deck if the pools are separated by a minimum of five feet.
- (3) The manager shall ensure that each spa pool with an air induction system meets the requirements of Subsection R392-302-19(8) including jet or water agitation systems.
- (4) The manager shall ensure that each spa pool filtration system inlet is a wall-type inlet, and the number of inlets is based on a minimum of one for each 20 feet, or fraction thereof, of pool perimeter.
- (5) The manager shall ensure that each spa pool suction outlet meets the requirements of Section R392-302-21.
- (6) The manager shall ensure that each spa pool that has multiple suction outlets that the outlets are spaced at least three feet apart from each other as measured from the centers of the drain covers or grates, or a third drain is provided and the separation distance between individual outlets is at the maximum possible spacing.
- (7) The manager shall ensure that the maximum water temperature for a spa pool is 104 degrees Fahrenheit.

- (8) The manager shall ensure that:
- (a) water jets and air induction ports on a spa pool are controlled by an automatic timer that limits the duration of their use to 15 minutes per each cycle of operation;
  - (b) the timer switch is mounted in a location that requires the bather to exit the spa pool before the timer can be reset for another 15-minute cycle or part thereof;
  - (c) a clearly labeled emergency shutoff or a control switch that stops the motor providing power to the recirculation system, jet system, and water feature systems is installed:
    - (i) at a point readily accessible to a bather;
    - (ii) not less than five feet away from the spa pool;
    - (iii) adjacent to the spa pool; and
    - (iv) within sight of the spa pool; and
  - (d) a non-lifeguarded spa pool has an audible alarm sound when the emergency shutoff or control switch is activated.
- (9) The manager shall post a sign that meets the requirements of a two-inch safety sign as described in Subsection R392-302-32(1), that contains the following information:
- (a) a sign heading with the safety signal word "caution" centered at the top of the sign;
  - (b) sign text that states:
    - (i) "elderly persons and those suffering from heart disease, diabetes or high blood pressure should consult a physician before using the spa pool";
    - (ii) "persons suffering from a communicable disease transmissible via water may not use the spa pool";
    - (iii) "persons using prescription medications should consult a physician before using the spa";
    - (iv) "individuals under the influence of alcohol or other impairing chemical substances should not use the spa pool";
    - (v) "bathers should not use the spa pool alone";
    - (vi) "pregnant women should not use the spa pool without consulting a physician";
    - (vii) "bathers should not spend more than 15 minutes in the spa in any one session";
    - (viii) "children age 14 years and younger must be accompanied and supervised by at least one responsible adult over the age of 18 years, when lifeguards are not on duty";
    - (ix) "children age five years and younger are prohibited from bathing in a spa pool or hot tub"; and
    - (x) "running or engaging in unsafe activities or horseplay in or around the spa pool is prohibited".
- (10) The local health officer may exempt a spa pool from:
- (a) Subsection R392-302-9(1)(c) to allow a spa pool shell to be a color other than white or light pastel;
  - (b) Subsection R392-302-13(1)(a) to allow a spa pool to be equipped with a single entry or exit point;
  - (c) Subsection R392-302-13(2)(d) to allow the bottom rise to be a maximum of 14 inches, if the bottom step serves as a bench or seat;
  - (d) Subsection R392-302-15(1) to allow a spa pool to have a continuous, unobstructed deck that is at least three feet wide around 25% or more of the spa pool;
  - (e) Subsection R392-302-15(3)(d)(iii) to allow a spa pool deck or steps to be made of sealed heart redwood;
  - (f) Section R392-302-30, except that a spa pool is equipped with a first aid kit as described in Subsection R392-302-30(4);
  - (g) the maximum water depth as described in Subsection (1)(d) if the spa pool is used for instruction, treatment, or therapy; or
  - (h) the requirement to locate outlets at the deepest point in the pool if the outlets are located on sidewalls within three inches of the pool floor and a wet vacuum is available on site to remove any water left in the pool after draining if the spa pool is an acrylic or fiberglass spa pool.
- (11) A spa pool constructed and approved before September 16, 1996 is exempt from Subsection (1)(h) if the spa pool can meet bacteriological quality standards required in Subsections R392-302-25(11) and R392-302-25(12).

**R392-302-38. Special Purpose Pools: Wading Pools.**

- (1) The manager shall consult with the local health officer before opening a wading pool.
- (2) The manager shall ensure that each wading pool:
  - (a) meets any applicable requirement of this rule in addition to this section;
  - (b) is separate from other pools;
  - (c) does not share common circulation, filtration, chemical treatment systems, or a wall with other pools;
  - (d) does not exceed a maximum water depth of two feet;
  - (e) has a minimum of one turnover per hour as described in Table 1;
  - (f) has a minimum of two equally spaced inlets around the perimeter of the wading pool, if the wading pool has wall inlets;
    - (g) with a perimeter that exceeds 20 feet, has wall inlets that are spaced at a minimum of one in each 20 feet or fraction thereof; and
    - (h) has a drain to waste for wastewater disposal as described in Section R392-302-7 through a quick opening valve to facilitate emptying the wading pool for a fecal release or other contamination.
- (3) The local health officer may allow the deck of a wading pool to be included as part of adjacent pool decks.

**R392-302-39. Special Purpose Pools: Therapy Pools.**

- (1) The manager shall consult with the local health officer before opening a therapy pool.
- (2) The manager shall ensure that each therapy pool:
  - (a) meets any applicable requirement of this rule in addition to this section; and
  - (b) complies with Sections R392-302-25 Disinfection and Quality of Water, R392-302-33 Cleaning of Pools, and R392-302-34 Pool Operation and Record Keeping unless it is drained, cleaned, and sanitized after each individual use.
- (3) The local health officer may exempt a therapy pool from any other requirement of this rule, if the therapy pool is used exclusively for aquatic therapy, physical therapy, or rehabilitation to treat a diagnosed injury, illness or medical condition and is under the direct supervision of a person licensed by the Utah Division of Professional Licensing to perform the assigned task.
- (4) The manager shall allow the local health officer to enter and investigate the use of a therapy pool in response to a complaint, to assure that use of the pool is properly supervised, to examine records of testing and sampling, and to take samples to assure that water quality and cleanliness are maintained.

**R392-302-40. Special Purpose Pools: Water Slides and Splash Pools.**

- (1) The manager shall consult with the local health officer before opening a water slide or a splash pool.
- (2) The manager shall ensure that each waterslide or splash pool meets any applicable requirement of this rule in addition to this section.
- (3) The manager shall ensure that each waterslide flume:
  - (a) within an enclosed waterslide is designed to prevent accumulation of hazardous concentrations of toxic chemical fumes;
  - (b) curve, turn, or tunnel is designed so that body contact with the flume or tunnel does not present an injury hazard and that the waterslide flume is banked to keep the slider's body safely inside the flume;
  - (c) is free of hazards including joints, mechanical attachments, separations, splinters, holes, cracks, or abrasive characteristics;
  - (d) wall thickness is thick enough so that the continuous and combined action of hydrostatic, dynamic, and static loads and normal environmental deterioration will not cause structural failures that could result in injury; and
  - (e) exit provides a safe entry into a splash pool that includes design features for safe entry such as a water backup, and a deceleration distance adequate to reduce the slider's exit velocity to a safe speed.
- (4) The local health officer may approve other methods for safe exiting from the waterslide flume if the safe exiting method is demonstrated to the local health officer.
- (5) The manager shall ensure that multiple-flume waterslides have parallel exits or are constructed so that the projected path of their centerlines does not intersect within less than eight feet beyond the point of forward momentum of the heaviest bather permitted by the engineered design.
- (6) The manager shall ensure that repairs or patchwork maintains originally designed levels of safety and structural integrity and that repairs or patchwork is performed in accordance with the manufacturer's guidelines.
- (7) The manager shall ensure that each flume clearance has a distance:
  - (a) of at least four feet provided between the side of a waterslide flume exit and a splash pool sidewall;
  - (b) of at least six feet between the nearest sides of adjacent waterslide flume exits;
  - (c) of at least 20 feet between a waterslide flume exit and the opposite end of the splash pool, excluding steps;
  - (d) of at least six feet between the side of the vehicle flume exit and the pool sidewall;
  - (e) of at least eight feet between the nearest sides of adjacent vehicle slide flume exits; and
  - (f) between a vehicle slide flume exit and the opposite end of the splash pool, excluding steps, that is long enough to provide clear, unobstructed travel for at least eight feet beyond the point of forward momentum of the heaviest bather permitted by the engineered design.
- (8) The manager shall ensure that the operating depth of a waterslide splash pool at the end of a horizontally oriented slide flume exit is:
  - (a) a minimum of three feet deep;
  - (b) the minimum depth is maintained for a distance of at least 20 horizontal feet from the slide flume exit; and
  - (c) if the waterslide splash pool extends more than 20 horizontal feet from the slide flume exit, the floor slope may have a constant slope from deep to shallow that is not steeper than a one to ten ratio.
- (9) The local health officer may require the depth of a waterslide splash pool at the end of a horizontally oriented waterslide flume to be deeper if the pool design incorporates special features that may increase risks to bathers as determined by the local health officer.
- (10) The manager shall ensure that the operating water depth of a vehicle slide splash pool at the flume exit is:
  - (a) a minimum of three feet six inches;
  - (b) the minimum depth is maintained to the point that forward travel of the vehicle ends; and
  - (c) from the point at which forward travel ends, the floor may have a constant slope from deep to shallow at a ratio that is not steeper than a one to ten ratio.
- (11) The local health officer may exempt minimum depth and distance requirements for a splash pool and approve a special exit system if the designer can demonstrate to the local health officer that a safe exit from the flume into the splash pool can be assured.

- (12) The manager shall ensure that;
  - (a) a walkway, ramp, or set of stairs with a minimum width of four feet is provided between the splash pool deck and the top of the waterslide flume;
  - (b) if stairs are provided between the splash pool deck and the top of the water slide flume, the stairs;
    - (i) have uniform stair risers that meet building code requirements;
    - (ii) are constructed of slip-resistant material; and
    - (iii) drain standing water away from the walkway;
  - (c) waterslide vehicles, including toboggans, sleds, inflatable tubes, and mats are:
    - (i) designed and manufactured of materials that do not present an injury hazard; and
    - (ii) constructed of a smooth, easily cleanable, durable material that can withstand the continuous and combined action of hydrostatic, dynamic, and static loads and natural environmental deterioration;
  - (d) each splash pool overflow reservoir:
    - (i) has sufficient volume to contain at least two minutes of flow from the splash pool overflow and maintain a constant water depth in the splash pool; and
    - (ii) circulates water through the circulation system when flume supply service pumps are turned off;
  - (e) flume pumps and motors are sized as specified by the flume manufacturer, and meet NSF/ANSI 50-2015, which is incorporated by reference;
  - (f) the splash pool and the splash pool overflow reservoir is designed to prevent bather entrapment as water flows from the splash pool to the overflow reservoir;
  - (g) perimeter overflow gutter systems meet the requirements of Section R392-302-22, except that gutter systems are not required directly under slide flumes or along the weirs that separate splash pools and splash pool overflow reservoirs; and
  - (h) pump reservoir areas are accessible for cleaning and maintenance.

(13) The manager shall post a sign that meets the requirements of a two-inch safety sign as described in Subsection R392-302-32(1) that:

- (a) includes the waterslide manufacturer's recommendations;
- (b) the heading of the waterslide sign says, "Slide Instructions, Warnings, and Requirements";
- (c) the body of the waterslide sign includes the following waterslide riding instructions:
  - (i) proper riding position;
  - (ii) expected rider conduct;
  - (iii) dispatch procedures;
  - (iv) exiting procedures; and
  - (v) that riders shall obey slide attendant or lifeguard instructions; and
- (d) the body of the waterslide sign includes the following warnings:
  - (i) slide characteristics such as speed;
  - (ii) depth of water in splash zone; and
  - (iii) requirements that include riders are free of medical conditions identified by the manufacturer such as pregnancy, heart conditions, back conditions, or musculoskeletal conditions.

**R392-302-41. Special Purpose Pools: Interactive Water Features.**

- (1) The manager shall consult with the local health officer before opening an interactive water feature.
- (2) The manager shall ensure that each interactive water feature:
  - (a) meets any applicable requirement of this rule in addition to this section;
  - (b) component is designed, constructed, maintained, and operated so there is no slip, fall, or other safety hazards; and
  - (c) meets the standards of Title 15a, State Construction and Fire Codes Act.
- (3) If an interactive water feature is constructed of a non-cementitious material, the manager shall ensure that documentation is submitted to the local health department with plans as described in Section R392-302-5 including that the surface material has been tested and passed by an American National Standards Institute (ANSI) accredited testing facility using one of the following standards that is appropriate to the material used:
  - (a) for pools built with prefabricated pool sections or pool members, the ISO 19712-1:2008 - Plastics -- Decorative solid surfacing materials -- Part 1: Classification and specifications, which is incorporated by reference; or
  - (b) a standard that has been approved by the local health officer based on whether the standard applies to the surface and whether it determines compliance with the requirements of Section R392-302-9.
- (4) The manager shall ensure that each interactive water feature collection zone:
  - (a) meets the construction material requirements described in Section R392-302-9;
  - (b) is free of cracks or open joints, except for structural expansion joints or openings that allow water to drain to the collector tank; and
  - (c) openings that drain to the collector tank do not pass a one-half inch sphere.
- (5) The manager shall ensure that:
  - (a) any nozzle that sprays from the ground level is flush with the ground, with openings no greater than 1/2 inch in diameter;
  - (b) if the spray nozzle extends above ground level the spray nozzle is clearly visible and does not present a trip hazard;

- (c) each area adjacent to the water feature collection zone is sloped away from the interactive water feature at a minimum of 2% to deck drains or other approved surface water disposal systems;
- (d) each interactive water feature has a continuous deck at least three feet wide as measured from the edge of the collection zones and extends completely around the interactive water feature;
- (e) water discharged from each interactive water feature fountain or spray feature freely drains by gravity flow through a main drain fitting to a below grade sump or collection system that discharges to a collector tank;
- (f) when the interactive water feature is not in operation, water drains freely so there is no ponding; and
- (g) each interactive water feature fogger or mister that produces finely atomized mist is supplied directly from a potable water source and not from the underground reservoir.
- (6) The manager shall ensure that an interactive water feature:
  - (a) has an automated ORP and pH controller installed and in operation when the feature is open for use that is capable of maintaining disinfection and pH levels within the requirements for special purpose pools described in Table 3; and
  - (b) has an approved secondary disinfection system that meets the requirements described in Subsection R392-302-35(8).
- (7) The manager shall post a sign that meets the requirements of a two-inch safety sign as described in Subsection R392-302-32(1) that contains the following information:
  - (a) a sign heading with the safety signal word "caution" centered at the top of the sign; and
  - (b) sign text that states:
    - (i) "no running on or around the interactive water feature";
    - (ii) "children age 12 and under must have adult supervision";
    - (iii) "no food, drink, glass or pets are allowed on or around the interactive water feature"; and
    - (iv) "diapers shall only be changed in restrooms".
- (8) If the interactive water feature is operated at night, the manager shall ensure that five foot-candles of light are provided in the each area of the water feature and lighting is:
  - (a) installed in accordance with manufacturer's specifications; and
  - (b) meets the requirements of building code as defined.
- (9) The manager shall ensure that:
  - (a) the interactive water feature filter system:
    - (i) is capable of filtering and treating the entire water volume of the water feature within 30 minutes;
    - (ii) has a minimum of four equally spaced inlet fittings that pump from the collector tank and return filtered and treated water to the tank, and that the inlet spacing meets the requirements of Section R392-302-20;
  - (b) the interactive water feature circulation system is on a separate loop and not directly interconnected with the interactive water feature pump;
  - (c) the suction intake of the interactive water feature pump in the underground reservoir is located adjacent to the circulation return line and is located to maximize uniform circulation of the tank;
  - (d) the suction intake from the interactive water feature circulation pump is in the lowest portion of the underground reservoir;
  - (e) an automated water level controller is provided for the interactive water feature, and the potable water line that supplies the feature meets the requirements of Section R392-302-6;
  - (f) the water velocity through each feature nozzle of the interactive water feature meets manufacturer's specifications and does not exceed 20 feet per second;
  - (g) the minimum size of the interactive water feature sump or collector tank is equal to the volume of three minutes of the combined flow of each feature pump and the filter pump;
  - (h) access lids or doors for the sump and collection tank are provided that:
    - (i) are sized to allow easy maintenance;
    - (ii) provide security from unauthorized access; and
    - (iii) have stairs or a ladder provided, as needed, to ensure safe entry into the tank for cleaning and inspection; and
  - (j) a means of vacuuming and completely draining the interactive water feature tank is provided.
- (10) The local health officer may exempt interactive water feature from:
  - (a) Subsection R392-302-9(1)(c) to allow an interactive water feature to be a color other than white or light pastel;
  - (b) Section R392-302-11. Walls;
  - (c) Section R392-302-12. Diving Areas;
  - (d) Section R392-302-13. Pool Entry and Exits;
  - (e) Section R392-302-14. Depth Markings, Safety Markings and Safety Ropes;
  - (f) Section R392-302-16. Handholds;
  - (g) Section R392-302-17. Fencing and Barriers;
  - (h) Section R392-302-22. Overflow Gutters and Skimming Devices;
  - (i) Section R392-302-27. Dressing Rooms;
  - (j) Section R392-302-28, if a toilet, hand washing sink, and changing table is available within 150 feet;
  - (k) Section R392-302-30, except that an interactive water feature is equipped with a first aid kit as described in Subsection R392-302-30(4); and
  - (l) Subsection R392-302-24(4), water clarity and temperature requirements.



**R392-302-42. Special Purpose Pools: Instructional Pools.**

(1) The manager shall ensure that an instructional pool meets the requirements this rule except that an instructional pool is exempt from Subsection R392-302-11(5) that restricts the use of teaching implements, including underwater ledges.

**R392-303-43. Enforcement and Penalties.**

A manager who violates this rule may be subject to criminal and civil penalties as provided in Section 26B-1-224.

**KEY:** pools, spas, swimming, water

**Date of Last Change:** August 22, 2023

**Notice of Continuation:** October 21, 2021

**Authorizing, and Implemented or Interpreted Law:** 26B-1-202; 26B-7-402; 26B-1-224