

Mod 8327 Comments – Bob Vincent

Mod # 8327 Comments & Please see attached A4 proposal by submitter with DOH added phrases to accommodate these.

While the Department of Health agrees with the remainder of this Alternative proposal, the Department does not concur on the bather load of 25 square feet per person as proposed here-in at 454.1.11.2.

The Department proposes using what was in the since-repealed Florida Administrative Code (FAC) 64E-9.013 rule for public bathing places which addressed bather density issue for public bathing places.

When the Department permitted public bathing places prior to 2012, FAC 64E-9.013 allowed 25 sq. ft. per bather in shallow swimming zones less than 4 feet deep and 75 sq. ft. per bather in deeper swimming zones. This rule was formulated using the data from the U.S. Centers for Disease Control's model aquatic health code annex as a guide.

As the Crystal Lagoons are currently considered a public bathing place, the Department would anticipate the facility to follow a similar formula when calculating their total bathing load for their location.

The non-treated lake or lagoon venues should have a slightly larger area in shallow zone to assimilate pathogens shed by bathers.

454.1.11 Public Bathing Places- Artificial Lagoons-

454.1.11.1 General

An artificial lagoon is a type of water impoundment used as a public bathing place as defined in Section 514.011, Florida Statutes, that is man-made and has either: a total water surface area of at least one-half acre (2,023.4 square meters) in size, with an impervious containment system such as an artificial liner, and incorporates a method of disinfection that results in a disinfectant residual in the swimming zone(s) that is protective of the public health; or has no impervious containment system or disinfectant system, and the water surface area of the artificial lagoon shall be at least 2 acres (8,093.9 sq. m.) in size. Such artificial lagoons shall be designed and constructed within the limits of sound engineering practice and the provisions of section 454.1.11.

454.1.11.2 Sizing and Sanitary Facilities for Artificial Lagoons

The maximum bathing load for an artificial lagoon with a disinfection system approved by the local authority shall be limited by total square footage of the entire lagoon area that allows for swimming or bathing with 25 square feet assigned per bather **in water 4 feet deep or less, and 75 sq. ft. in water over 4 feet deep**. The maximum bathing load for all other artificial lagoons shall be limited by total square footage of the entire lagoon area that allows for swimming or bathing with 50 square feet assigned per bather **in water 4 feet deep or less, and 75 sq. ft. in water over 4 feet deep**. Sanitary facilities serving patrons of an artificial lagoon shall meet the Florida plumbing code criteria and are exempt from the fixture count requirements in Section 454.1.6.1.1. All sanitary facilities shall be located as near to the designated swimming area(s) as prudent to ensure patron use, but not over 200 feet (61 m) walking distance from the designated swimming area(s).

454.1.11.3 Construction Standards for Artificial Lagoons

If an artificial liner is utilized as a containment system, the artificial liner used to contain the water shall consist of a material certified under NSF/ANSI Standard 61-2017, Drinking Water System Components-Health Effects, dated March 13, 2017, hereby incorporated by reference, which has been deemed copyright protected, and is available for review at the

Department of State, R.A. Gray Building, 500 South Bronough Street, Tallahassee, Florida 32399-0250. The liner or artificial bottom, floor, and the walls, if any, shall be white or light pastel in color and shall have the characteristic of reflecting rather than absorbing light. The liner material color shall have a dry lightness level (CIE L value) of 80.0 or greater and a wet luminous reflectance value (CIE Y value) of 50.0 or greater, as determined by test results provided by the manufacturer, utilizing testing methodology from American Standard ASTM D4086, ASTM E1477, or ASTM E1347. The design of such liner system is the responsibility of a professional engineer licensed in Florida. If any designated swimming area, or portion thereof, is designed with swimming pool features, including concrete vertical walls and floors, such areas of the artificial lagoon shall be designed in compliance with Sections 454.1.2.2.2, 454.1.2.2.3 and 454.1.2.2.4. Additionally, debris skimmers shall be provided in such areas at least every 40 linear feet. Zero depth entry areas of artificial lagoons shall be designed in compliance with Sections 454.1.11.5 and 454.1.11.6.

454.1.11.4 Access to Artificial Lagoons

Points of access shall be provided as needed to provide adequate entrance to and exit from the artificial lagoon. Means of access may consist of ladders, stairs, recessed treads, and swimouts, designed in compliance with Section 454.1.2.5, zero depth entry areas, and docks, in any number and combination that is appropriate for the intended use(s) of the artificial lagoon. Permanent or portable steps, ramps, handrails, lifts or other devices designed to accommodate handicapped individuals may be provided. Lifts mounted into the wet deck shall have a minimum 4-foot-wide (1219 mm) deck behind the lift mount.

454.1.11.5 Decks and Walkways for Artificial Lagoons

Decks and walkways, if utilized to access a designated swimming area, shall be designed in compliance with Sections 454.1.3.1.1 and 451.1.3.1.2. Zero depth entry areas may slope toward the water for no more than 7 feet (2133 mm), as measured from the water's edge outward. Beyond this area, the deck or other surface shall slope away from the lagoon at a minimum of 2 percent to a maximum of 4 percent. Docks for aquatic activities such as

sailing or kayaking, located outside of designated swimming areas, are exempt from this section.

454.1.11.6 Safety for Artificial Lagoons

The portion(s) of artificial lagoons designated for swimming shall meet the safety requirements in Section 454.1.3.3. Such designated swimming area(s) shall be visually separated from the rest of the artificial lagoon using a buoyed safety line(s) or similar device(s) approved by the local authority. Additionally, the floor slope at any designated swimming area(s) shall be continuous from the water's edge to the deepest point and not exceed 1-unit vertical in 10-units horizontal. The depth at the deepest point in any designated swimming area shall be indicated, along with the other rules and regulations signage required in Section 454.1.2.3.5. Where access to a portion of the artificial lagoon with a vertical wall is not blocked or obstructed by an approved substantial barrier, NO DIVING markers and depth markers shall be installed in accordance with 454.1.2.3.1, except that markers are not required on inside vertical walls of an artificial lagoon. Signage may be substituted for markers if approved by the local authority, and such markers or signs are required only along the accessible perimeter of the lagoon. Markings shall be of such materials that will not fade over time. Artificial lagoons are exempt from the fencing requirements of Section 454.1.3.1.9, except that separate swimming pools designed for small children shall be fenced when located within 50 feet (15 240 mm) of an artificial lagoon. If installed, underwater seat bench construction shall be in compliance with section 454.1.2.6. -2. If installed, sun shelf construction shall be in compliance with sections 454.1.2.6 -3. and applicable sections of 454.1.2.8. Where water slides or climbable water activity features are used in or adjacent to the artificial lagoon, a lifeguard safety plan shall be submitted to the health department for approval and implemented by the owner/operator. Slides and water activity features shall be reviewed and approved by the local authority to conform with the same criteria for public swimming pools. If boating is allowed in the lagoon, provisions for bather safety and injury prevention must be specified and provided to the health department.

454.1.11.7 Electrical Systems for Artificial Lagoons

Electrical equipment wiring and installation, including the bonding and grounding of components, shall comply with Chapter 27 of the Florida Building Code, Building. Outlets supplying pump motors connected to single-phase 120-volt through 240-volt branch circuits, whether by receptacle or by direct connection, and outlets supplying other electrical equipment and underwater luminaires operating at voltages greater than the low voltage contact limit, connected to single-phase, 120 volt through 240 volt branch circuits, rated 15 or 20 amperes, whether by receptacle or by direct connection, shall be provided with ground-fault circuit interrupter protection for personnel. Any portions of the artificial lagoon designated for swimming at night shall comply with the lighting requirements in Sections 454.1.4.2.1. and 454.1.4.2.3.

454.1.11.8 Equipment Rooms

Equipment rooms for artificial lagoons shall comply with Section 454.1.5.

454.1.11.9 Treatment Systems for Artificial Lagoons

If continuous or intermittent chemical disinfection and/or non-chemical disinfection is provided to the artificial lagoon water, the equipment that feeds or generates the chemical shall be NSF/ANSI Standard 50 certified and subject to review and approval by the local authority. The disinfectant chemical shall be applied in accordance with the manufacturer's instructions, and must be a NSF/ANSI Standard 60 certified chemical, or a US EPA registered microbial biocide. Any other chemicals applied to the water for water quality treatment must be applied in accordance with the manufacturer's instructions and must be an NSF/ANSI Standard 60 or Standard 50 certified chemical. If remote chemical monitoring sensors are used, one (1) chemical sensor shall be installed in or directly adjacent to each designated swimming area. Vacuum systems shall not be used in designated swimming area(s) while such area(s) is(are) open for swimming, and all suction outlets shall comply with the requirements of section 514.0315, Florida Statutes.
