Total Mods for Swimming Pool in Pending Review: 59

Total Mods for report: 59

Proposed Code Modifications

This document created by the Florida Department of Business and Professional Regulation - 850-487-1824

TAC: Swimming Pool

Total Mods for **Swimming Pool** in **Pending Review: 59**

Total Mods for report: 59

Sub Code: Building

SW7125

1

Date Submitted	6/9/2018	**Section**	454	**Proponent**	Robert Cohen
Chapter	4	**Affects HVHZ**	No	**Attachments**	Yes

TAC Recommendation Pending Review
Commission Action Pending Review

Comments

General Comments Yes **Alternate Language** No

Related Modifications

E6452

Summary of Modification

Revise Section 454.4.1.2 to reinsert provisions of 2014 that were deleted in 2017 Code. Chapter 27 and NEC have no requirements for illumination. Alternatively, add provisions for illumination based on the 2015 (or later) ICC Swimming Pool Code to follow a current national standard.

Rationale

Restore major life safety requirements that were deleted and that have no equivalent elsewhere in Florida Code or Law.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

Revert to 2014 Code level. No impact compared to recent (end of 2017) past practice.

Impact to building and property owners relative to cost of compliance with code

Revert to same cost impact as prior to December 31, 2017.

Impact to industry relative to the cost of compliance with code

Revert to same cost impact as prior to December 31, 2017.

Impact to small business relative to the cost of compliance with code

Revert to same cost impact as prior to December 31, 2017.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Restore deleted major life safety practices and requirements for drowning and electrocution prevention.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Restore deleted major life safety practices and requirements for drowning and electrocution prevention.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

No change to common past materials and practices.

Does not degrade the effectiveness of the code

Restore deleted major life safety practices and requirements for drowning and electrocution prevention.

1st Comment Period History

SW7125-G1

Proponent Kari Hebrank **Submitted** 2/13/2019 **Attachments** No

Comment:

The Florida Swimming Pool Association is OPPOSED to this code modification which reinserts provisions of the 2014 Code on illumination and lighting requirements.

454.1.4.2.3 Underwater lighting~~. Underwater luminaires shall comply with Chapter 27 of the Florida Building Code, Building~~. Underwater lighting shall utilize transformers and low-voltage circuits with each underwater light being grounded. The maximum voltage for each light shall be 15 volts and the maximum incandescent lamp size shall be 300 watts. The location of the underwater lights luminaires shall be such that the underwater illumination is as uniform as possible. and shall not be less than 18 inches (457 mm) below the normal operating water level determined by the center-line of the skimmer or top lip of the gutter. All underwater lights which depend upon submersion for safe operation shall have protection from overheating when not submerged. Underwater lighting requirements can be waived when the overhead lighting provides at least 15 footcandles (150 lux) of illumination at the pool water surface and pool wet deck surface. Alternative lighting systems which use 15 volts or less, or use no electricity in the pool or on the pool deck, such as LED (light emitting diode) fiber-optic systems, may be utilized if the manufactures specifications provide for the equivalency in watt output.

The changes to section 454.4.1 effectively eliminate all the provisions of the 2014 and prior Florida Codes and Heath Department Regulations (now repealed) that provide pool illumination for indoor or outdoor night swimming. Chapter 27 of the 2017 FBC referred to in 2017 FBC 454 has NO REQUIREMENTS FOR ILLUMINATION. The NEC has no requirements for illumination. Florida changed the requirements for residential pools to require low voltage (15 volts maximum) after several electrocutions.

Either restore the 2014 Code requirements or base FBC on the International Swimming Pool and Spa Code extracted below.

454.A Artificial lighting required.
When a pool is open during periods of low natural illumination, artificial lighting shall be provided so that all areas of the pool, including alt suction outlets on the bottom of the pool will be visible. Illumination shall be sufficient to enable a lifeguard or other persons standing on the deck or sitting on a lifeguard stand adjacent to the pool edge to determine if a pool user is lying on the bottom of the pool and that the pool water is transparent and free from cloudiness These two conditions shall be met when all suction outlets are visible from the edge of the deck at all times when artificial lighting is illuminated and when an 8+ inch-diameter (152 mm) black disk. placed at the bottom of the pool in the deepest point. is visible from the edge of the pool deck at all times when artificial lighting is illuminated.

454.A.1 Pool and deck illumination.
Overhead lighting, underwater lighting or both shall be provided to illuminate the pool and adjacent deck areas. The lighting shall be listed and labeled. The lighting shall be installed in accordance with NFPA 70.

454.A.2 Illumination intensity.
For outdoor pools, any combination of overhead and underwater lighting shall provide maintained illumination not less than 10 horizontal foot-candles (10 lumens per square foot) [108 lux] at the pool water surface_ For indoor pools. any combination of overhead and underwater lighting shall provide maintained illumination of not less than 30 horizontal foot-candles (30 lumens per square foot) [323 lux] at the pool water surface. Deck area lighting for both indoor and outdoor pools shall provide maintained illumination of not less than 10 horizontal foot-candles (10 lumens per square foot) [108 lux] at the walking surface of the deck.

454.A.3 Underwater lighting.
Underwater lighting shall provide not less than 8 horizontal foot-candles (8 lumens per square foot) (86 lux] at the pool water surface area, or not less than a total wattage of 1/2 watts/ft2 (5.4 watts/m2) of pool water surface for incandescent underwater lighting where the fixtures and lamps are rated in watts

> **Exception: The requirement of this section shall not apply where overhead lighting provides not less than 15 foot-candles (15 lumens per square foot) [161 lux] of maintained illumination at the pool water surface, the overhead lighting provides visibility, without glare. of all areas of the pool, and the requirements of Section 321.2.2 are met or exceeded.**

454.A.4 Emergency illumination.
Public pools and public pool areas that operate during periods of low illumination shall be provided with emergency lighting that will automatically turn on to permit evacuation of the pool and securing of the area in the event of power failure. Emergency lighting facilities shall be arranged to provide initial illumination that is not less than 0.1 foot-candle (0.1 lumen per square foot) [1 lux) measured at any point on the water surface and at any point on the walking surface of the deck, and not less than an average of 1 foot-candle (1 lumen per square foot) [11 lux]. At the end of the emergency lighting time duration, the illumination level shall be not less than 0.06 foot-candle (0.06 tumen per square

foot) (0.65 lux) measured at any point on the water surface and at any point on the walking surface of the deck, and not less than an average of 0.6 foot-candle (0.6 lumen per square foot) [6.46 lux]. A maximum-to-minimum illumination uniformity ratio of 40 to 1 shall not be exceeded.

SW7173

Date Submitted	11/2/2018	**Section**	454.1.9.2.3	**Proponent**	Michael Weinbaum
Chapter	4	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Comments

General Comments Yes

Alternate Language No

Related Modifications

454.1.9.2.1

Summary of Modification

The pump reservoir has a specific volume requirement. This requirement is cumbersome when applied to slides with plunge pools. A provision is added to the plunge pool section to make sure there is sufficient volume in that type of system.

Rationale

A pump reservoir is defined as carrying 3 minutes of water by itself. There is no need for most plunge pools to include such a large tank when they already include a large amount of water.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

This increases the complexity of the code, and adds a check for plunge pools.

Impact to building and property owners relative to cost of compliance with code

Owners have been required to construct large tanks for plunge pools without any justification in hydraulics. Instead the design engineer will do an additional calculation, and some of the overflow/skimming system in the design may need to be re-configured.

Impact to industry relative to the cost of compliance with code

No new technology is required.

Impact to small business relative to the cost of compliance with code

Less tanks may be required, but more gutter or skimmer fittings may also be required.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

This code provision ensures that the owner will be able to run the slides at the design flow rate. If there is not enough water in the system, the owner will be tempted to run the slide at a lower flow rate, potentially causing riders to get stuck or other unsafe outcomes.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

This provision ensures that floating scum is filtered out when slides are off and when they are on.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

No products or materials are mentioned. The methods and systems mentioned are more specific to the intended use of each.

Does not degrade the effectiveness of the code

A volume requirement remains in all cases.

1st Comment Period History

SW7173-G1

Proponent Kari Hebrank **Submitted** 2/17/2019 **Attachments** No

Comment:

The Florida Swimming Pool Association SUPPORTS this code proposal.

454.1.9.2.3 Pump reservoirs.

Pump reservoirs are only required for slides with run out lanes. Pump reservoirs shall be made of concrete or other impervious material with a smooth slip-resistant finish. Pump reservoirs shall be for the slide pump intakes, but where properly sized may also be used as a collector tank for the filter system. Pump reservoir designs shall meet the criteria of Sections 454.1.9.2.3.1 through 454.1.9.2.3.5.

...

454.1.9.2.1.7 Plunge Pool Volume

The total volume of a plunge pool and its collector tank or tanks shall be equal or greater than 3 minutes of the combined flow rate in gallons per minute of all filter and slide pumps. The design engineer must account for the water level in the pool both when the slide pumps are on and when they are off. If skimmers are used, skimmers must be placed at both levels if the variance is greater than 3 inches (76 mm). If perimeter overflow is used, half of the gutter outlets must be functional at each water level.

SW7174

Date Submitted	11/2/2018	**Section**	454.1.7.8	**Proponent**	Michael Weinbaum
Chapter	4	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Comments

General Comments Yes

Alternate Language Yes

Related Modifications

454.1.4.2, 454.1.9.8.4

Summary of Modification

Reduce lighting requirement in very shallow water, require low voltage underwater lights regardless of pool type

Rationale

There is no reason to require more light at an outdoor wading pool than at any other outdoor pool. Pools with very shallow water or no standing water are less dangerous and less light is acceptable.
The same low voltage requirements should apply to all bodies of water used by people.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

The local entity would have to learn the new rule and apply it if necessary.

Impact to building and property owners relative to cost of compliance with code

Pools with underwater lights in excess of 30 Volts will no longer be compliant

Impact to industry relative to the cost of compliance with code

This is standard practice at new pools. The required devices (transformers, DC power supplies, 12VAC LED lights) are already widely available.

Impact to small business relative to the cost of compliance with code

Pools with underwater lights in excess of 30 Volts will no longer be compliant. These lights are regularly replaced anyhow. A new transformer, sufficient for a smaller pool, costs less than $100. More wading pools and IWFs would be open at night without conflicting with the overall site ambiance.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

The existing code is to prevent people from accidentally falling in the pool and potentially drowning if the fall makes them lose consciousness. The 15 V requirement for lights in IWFs is to prevent injury from electric shock.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

15V is stricter than NEC. Revision matches NEC. Applies NEC requirements evenly to all pools.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

This eliminates a discrimination between 12V and 24V lights.

Does not degrade the effectiveness of the code

Lighting is still required for night time use, and more lighting is still required where the risk of drowning is higher. The low voltage requirement becomes the same for all features.

Alternate Language

1st Comment Period History

7174-A1

Proponent robert vincent **Submitted** 2/18/2019 **Attachments** Yes

Rationale

Both MOD paragraphs 454.1.7.8 and 454.1.9.8.4 propose that in pool water depth of less than 2" the author requests lighting allowance of 1 footcandle (10 lux). This should be changed to no less than 3 footcandles (30 lux). Reducing lighting levels from 6 foot-candles to 1 foot- candle is an extreme change on Wading pools and Interactive Water Features. The author only focuses on water depth, but fails to consider that IWF can have climbable features and adequate overall lighting is needed for both the patrons to use the feature safely and for adults to adequately supervise their children at IWFs and Wade pools. An applicant always has the right to ask for a specific variance for a particular project in which reduced lighting is desired.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No enforcement impact on local authority..

Impact to building and property owners relative to cost of compliance with code

Slight increase in electricity from 1 foot-candle to 3 foot-candles; however will be a cost reduction from the current code mandate of 6 foot-candles

Impact to industry relative to the cost of compliance with code

Slight increase in cost from 1 foot-candle to 3 foot-candles; however will be a cost reduction from the current code mandate of 6 foot-candles

Impact to Small Business relative to the cost of compliance with code

Pools with underwater lights in excess of 30 Volts will no longer be compliant. These lights are regularly replaced anyhow. A new transformer, sufficient for a smaller pool, costs less than $100. More wading pools and IWFs would be open at night without conflicting with the overall site ambiance.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Pool patron safety is better served with night lighting luminosity that is adequate for all patrons, all water features, and all egress/ingress points.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Will strengthen code if the 3 foot-candle lower limit is implemented versus the proposed 1 foot-candle. Does not degrade the code.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

No discrimination is expected

Does not degrade the effectiveness of the code

Does not degrade the code if 3 foot-candles is the lower code limit; and would degrade the code (for safety) if the 1 foot-candle is allowed.

Is the proposed code modification part of a prior code version? No

1st Comment Period History

SW7174-G1

Proponent Kari Hebrank **Submitted** 2/17/2019 **Attachments** No

Comment:

The Florida Swimming Pool Association SUPPORTS this code proposal.

1st Comment Period History

SW7174-G2

Proponent robert vincent **Submitted** 2/18/2019 **Attachments** No

Comment:

454.1.4.2.5 lighting mod should be technical input by FBC Electrical TAC.

Mod 7174-A1

The following are edits of the submitted SW7174, and no other language is revised. bob v

454.1.7.8 Lighting.

Wading pools are exempt from underwater lighting requirements but shall have lighting installed for night use of 10 foot candles (100 lux) if indoors or ~~6~~ 3 footcandles (~~60~~ 30 lux) for outdoor night use. Such illumination shall be provided over the pool water surface and the pool deck surface. ~~If the maximum depth of the wading pool is two inches (51 mm) or less, the outdoor, night use lighting requirement is reduced to 1 footcandle (10 lux).~~

…

454.1.9.8.4

If night operation is proposed, ~~6~~ 1 ~~footcandles (60~~ 10 ~~lux)~~ 3 footcandles (30 lux) of light shall be provided on the pool deck and the water feature area. ~~Lighting that may be exposed to the feature pool water shall not exceed 15 volts, shall be installed in accordance with manufacturer's specifications and be approved for such use by UL or NSF.~~

454.1.4.2.5

Underwater lighting, or lighting that may be exposed nozzle-directed pool water, shall not exceed 30 volts DC or 15 volts AC. Such lights shall be installed in accordance with manufacturer's specifications, and be approved for such use by UL or NSF.

...

454.1.7.8 Lighting.

Wading pools are exempt from underwater lighting requirements but shall have lighting installed for night use of 10 foot candles (100 lux) if indoors or ~~6~~ 3 footcandles (~~60~~ 30 lux) for outdoor night use. Such illumination shall be provided over the pool water surface and the pool deck surface. If the maximum depth of the wading pool is two inches (51 mm) or less, the outdoor, night use lighting requirement is reduced to 1 footcandle (10 lux).

...

454.1.9.8.4

If night operation is proposed, ~~6~~ 1 footcandles (~~60~~ 10 lux) of light shall be provided on the pool deck and the water feature area. ~~Lighting that may be exposed to the feature pool water shall not exceed 15 volts, shall be installed in accordance with manufacturer's specifications and be approved for such use by UL or NSF.~~

SW7175

Date Submitted	11/2/2018	**Section**	454.1.9.2.1	**Proponent**	Michael Weinbaum
Chapter	4	**Affects HVHZ**	No	**Attachments**	Yes

TAC Recommendation Pending Review
Commission Action Pending Review

Comments

General Comments Yes

Alternate Language No

Related Modifications

Summary of Modification

Plunge pool dimensional standards are deferred to the design engineer

Rationale

Manufacturers have been designing Florida-only slide termini. Manufacturers have successfully installed slide plunge pools (raft rides) with 18" and smaller depths all over the US.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

The code enforcement official will have to determine how much evidence is required to satisfy them.

Impact to building and property owners relative to cost of compliance with code

This does not affect existing installed slides

Impact to industry relative to the cost of compliance with code

The cost to slide manufacturers is reduced, no more "Florida-only" slides

Impact to small business relative to the cost of compliance with code

The design engineer is already expected to "Demonstrate to the jurisdictional building department's satisfaction" certain aspects of the design. "This complied with the earlier version of the code" should be an adequate "demonstration."

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Yes, it is easy for riders to be injured if a slide and plunge pool are not well-matched. Both the current code and the proposal prevent this injury.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Yes, this allows new types of plunge pool designs to be used that are more appropriate to new types of slides.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Additional latitude is granted in all cases.

Does not degrade the effectiveness of the code

All of these aspects still require the participation and satisfaction of the building official.

1st Comment Period History

SW7175-G1

Proponent Kari Hebrank **Submitted** 2/17/2019 **Attachments** No

Comment:

The Florida Swimming Pool Association SUPPORTS this code proposal.

1st Comment Period History

SW7175-G2

Proponent Kari Hebrank **Submitted** 2/17/2019 **Attachments** No

Comment:

The Florida Swimming Pool Association SUPPORTS this code amendment.

1st Comment Period History

SW7175-G3

Proponent robert vincent **Submitted** 2/18/2019 **Attachments** No

Comment:

The current ASTM F2376 in dated 2017, the one proposed is dated 2013. Why is this older version used, since the ASTM workgroup has likely updated some safety criteria. Without incorporating this standard by reference into the FBC, and requiring all of the items in it be certified by the Professional Engineer or Architect that it complies with the standard, we anticipate another highly variable, and potentially unsafe set of conditions to implement statewide. Dept. of Health does not agree it is wise to delete the water depth, setbacks and the dimensions of the plunge pool from the existing FBC without further review of the newer 2017 ASTM standard. Please provide a copy of this newer standard for all TAC members to review.

454.1.9.2.1.1 ~~Plunge pool water depth~~Adequate space at terminus

The design engineer must demonstrate to the jurisdictional building department's satisfaction that the water depth, clear area, distance between adjacent slides, floor slope, rope line placement, and pool floor surface finish are all adequate to prevent injury or harm to riders or other users of the pool, making reference to ASTM F2376 Standard Practice for Classifcation, Design, Manufacture, Construction, and Operation of Water Slide Systems, as appropriate. ~~The minimum plunge pool operating water depth at the slide flume terminus shall be 3 feet (914 mm). This depth shall be maintained for a minimum distance of 10 feet (3048 mm) in front of the slide terminus from which point the plunge pool floor may have a constant upward slope to allow a minimum water depth of 2 feet (51 mm) at the base of the steps. The floor slope shall not exceed 1 in 10. The plunge pool water depth shall be commensurate with safety and the ease of exit from the plunge pool.~~

454.1.9.2.1.2 Reserved ~~Plunge pool dimension.~~

~~The plunge pool dimension between any slide flume exit or terminus and the opposite side of the plunge pool shall be a minimum of 20 feet (6096 mm) excluding steps.~~

454.1.9.2.1.3 Slide flume terminus.

~~454.1.9.2.1.3.1~~

The slide flume terminus shall be designed by the design engineer who can demonstrate to the jurisdictional building department's satisfaction that riders will be adequately slowed prior to discharge so as to prevent injury or harm to the rider upon impact with the plunge pool water. The design engineer must document the designed, safe location of the terminus relative to the plane of the pool wall and to the water level.~~The slide terminus shall be flush with the pool wall and located at or below the pool water level.~~

~~454.1.9.2.1.3.2~~

~~The minimum distance between any plunge pool side wall and the outer edge of any slide terminus shall be 5 feet (1524 mm). The minimum distance between adjacent slide flumes shall be 6 feet (18 288 mm).~~

~~454.1.9.2.1.3.3~~

~~A minimum length of slide flume of 10 feet (3048 mm) shall be perpendicular to the plunge pool wall at the exit end of the flumes.~~

...

Chapter 35 Referenced Standards

ASTM

F2376 Standard Practice for Classifcation, Design, Manufacture, Construction, and Operation of Water Slide Systems

454.1.9.2.1.1

Designation: F2376 – 13

Standard Practice for Classification, Design, Manufacture, Construction, and Operation of Water Slide Systems[1]

This standard is issued under the fixed designation F2376; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This practice applies to the classification, design, manufacture, construction, and operation of water slide systems. Water slide systems shall be defined as rides intended for use by riders in bathing attire where the action of the ride involves possible and purposeful immersion of the rider's body either in whole or in part in water, and uses circulating water to mobilize or lubricate the rider's transportation along a purpose built path. This includes slides used with or without vehicles as defined below. The terms water slides, waterslides, and slides shall be considered equivalent when used in this practice.

1.2 For the purposes of this practice, a water slide system includes:

1.2.1 The flume,

1.2.2 The water-circulation system,

1.2.3 The starting platform with associated means of access and egress,

1.2.4 The structural supports,

1.2.5 Vehicles or other aquatic accessories that are part of the water slide as defined by the manufacturer, and

1.2.6 Means of slide termination.

1.3 This practice shall not apply to:

1.3.1 Any water slides installed in private residences,

1.3.2 Water flume amusement rides where contact with water is merely incidental (for example, log flume rides, shoot-the-chutes),

1.3.3 Amusement rides and devices whose design criteria are specifically addressed in another ASTM standard,

1.3.4 Lazy river type attractions operating at constant elevation, constructed in the ground, and

1.4 Pre-existing designs manufactured after the effective date of publication of this practice if the design is service proven or previously compliant, as defined in Section 3.1.26 of Practice F2291, and the manufacturer provides:

1.4.1 A historical summary of the water slide, or major modification as defined in Terminology F747, and

1.4.2 A statement that the design is service proven or previously compliant. Water slides and major modifications to water slides may qualify as previously compliant for five years following the date of publication of this practice. Thereafter, water slides and major modifications to water slides must qualify as service proven or meet the requirements of this practice.

1.4.3 Service proven or previously compliant designs shall comply with Section 8.

1.5 The values stated in inch-pound units are to be regarded as standard. No other units of measurement are included in this standard.

NOTE 1—The conversion factor from inch-pound to metric units is 1 in. = 25.4 mm, and 1 lb = 4.4482 N.

1.6 This practice includes an Appendix, which provides additional information to enhance the user's understanding of and application of the criteria presented in this practice, for example, rationale, background, drawings, interpretation, or commentary. The information in the Appendix shall not be considered a mandatory part of this practice.

1.7 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 *ASTM Standards:*[2]

D570 Test Method for Water Absorption of Plastics

D638 Test Method for Tensile Properties of Plastics

D790 Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials

F747 Terminology Relating to Amusement Rides and Devices

[1] This practice is under the jurisdiction of ASTM Committee F24 on Amusement Rides and Devices and is the direct responsibility of Subcommittee F24.70 on Water Related Amusement Rides and Devices.

Current edition approved June 1, 2013. Published May 2014. Originally approved in 2006. Last previous edition approved in 2008 as F2376 – 08. DOI: 10.1520/F2376-13.

[2] For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

F770 Practice for Ownership, Operation, Maintenance, and Inspection of Amusement Rides and Devices
F846 Guide for Testing Performance of Amusement Rides and Devices (Withdrawn 2013)[3]
F853 Practice for Maintenance Procedures for Amusement Rides and Devices (Withdrawn 2014)[3]
F893 Guide for Auditing Amusement Rides and Devices (Withdrawn 2013)[3]
F1193 Practice for Quality, Manufacture, and Construction of Amusement Rides and Devices
F1305 Guide for Classification of Amusement Ride and Device Related Injuries and Illnesses (Withdrawn 2011)[3]
F2291 Practice for Design of Amusement Rides and Devices

2.2 *ACI Standard:*[4]
ACI-318 Building Code Requirements for Structural Concrete

2.3 *ASCE Standard:*[5]
ANSI/ASCE 7 Minimum Design Loads for Buildings and Other Structures

2.4 *USDA Document:*[6]
USDA-72 The Wood Handbook

3. Terminology

3.1 *Definitions of Terms Specific to This Standard:*

3.1.1 *landing pool*—pool intended to receive riders from a water slide.

3.1.2 *landing zone*—area in a landing pool intended for receiving riders from a particular slide.

3.1.3 *lifeguard*—individual specially trained in lifesaving and emergency procedures, responsible for monitoring patrons and responding to aquatic and other emergencies.

3.1.4 *owner/operator*—person or organization that is responsible for the maintenance and operation of a water slide system.

4. Slide Classification

4.1 Water slides are classified by their physical and intended use characteristics. The classification may be a combination of the specific rider vehicle used the type of geometric path, often serpentine or straight, and the designation as a speed slide if the rider's velocity exceeds 25 ft/s. The following are definitions of the types of water slides.

4.1.1 *body slides*—water slide used without a vehicle.

4.1.2 *children's slides*—Water slides generally intended only for use by persons under the height of 48 in. Water slide has a maximum fall distance of 3 in. from slide exit where the rider enters the water and water depth is no greater than 24 in.

4.1.3 *mat slides*—water slide used with a designated mat as a vehicle.

4.1.4 *serpentine slide*—curved path as viewed in geometric slide path.

4.1.5 *specialty slides*—proprietary water slide design, such as an uphill, half-pipe, or bowl ride, which does not conform to standard classification.

4.1.6 *specialty vehicle slides*—water slide used with a proprietary vehicle specified by the manufacturer.

4.1.7 *speed slide*—water slide where the rider(s) achieve a velocity of 25 ft/s or more during the course of the ride.

4.1.8 *tube slides*—water slide used with a single or multi-person water slide tube.

5. Materials

5.1 *Flume Material*—Any material that has the following basic properties and that meets all other requirements of this practice may be used to construct water slides.

5.1.1 Flumes riding surfaces shall be constructed to be smooth.

5.1.2 Flume material shall be demonstrated as strong enough to support specified loads as defined in Section 8.

5.1.3 Flume components, maintained using the manufacturer's instructions, shall not deteriorate over time in such a way that a hazard will develop.

5.2 *Support Materials*—Any material that has the following basic properties and that meets all other requirements of this practice may be used to construct water slide supports.

5.2.1 Supports for water slides shall be constructed from durable materials such as wood, metal, concrete, or engineered composites.

5.2.2 Supports for water slides fabricated from metal shall be either inherently corrosion resistant, or be finished in such a way as to provide protection from corrosion.

5.2.3 Wood materials shall be finished in such a way to provide protection against deterioration.

5.2.4 Support material shall be demonstrated as strong enough to support specified loads as defined in Section 7.

5.2.5 Supports shall be constructed to accommodate regular inspection and maintenance for structural integrity, material deterioration, or corrosion, or a combination thereof.

6. Notification Requirement

6.1 A water slide system shown to comply with this practice shall meet all applicable requirements specified in this practice. Anyone representing compliance with this practice shall keep such essential records as are necessary to document any claim that the requirements within this specification have been met.

6.2 The owner/operator of a water slide shall notify the appropriate manufacturer(s) of any known incident as specified in Guides F1305 and F893.

6.3 The manufacturer shall notify the appropriate owner(s)/operator(s) of similar water slides of an incident that resulted in a serious injury promptly upon the determination by the manufacturer that the incident is significantly repeatable.

6.3.1 Such manufacturer notification shall be a bulletin as specified in Sections 4.1.14.3 through 4.1.14.8 of Practice F853.

[3] The last approved version of this historical standard is referenced on www.astm.org.
[4] Available from American Concrete Institute (ACI), P.O. Box 9094, Farmington Hills, MI 48333.
[5] Available from The American Society of Civil Engineers (ASCE), 1801 Alexander Bell Dr., Reston, VA 20191.
[6] Available from U.S. Government Printing Office Superintendent of Documents, 732 N. Capitol St., NW, Mail Stop: SDE, Washington, DC 20401.

7. Structural Design of Water Slides

7.1 This section defines the loading and strength criteria that shall be used in the structural engineering of water slide flumes and supporting structures. The strength and stability of the water slide system shall be demonstrated by generally accepted engineering methods certified by a professional engineer.

7.2 *Dead Loads (symbol DL)*—Forces resulting from weight of all components of the ride and includes all loads that do not fluctuate with respect to time.

7.3 *Operational Loads*—Forces from water, riders, or vehicles, or a combination thereof, in the ride under normal operations.

7.3.1 *Water Load (symbol WL)*—In free flowing water slides where water does not collect in pools or streams greater than 2 in. deep, the water load shall be a minimum of 15 lbs/linear ft for every 1000 gal/min of flow. Where the flow is such that water collects in pools or streams greater than 2 in. deep, the actual maximum water load shall be determined and used in calculation, design, or load tests, or a combination thereof.

7.3.2 *Rider Load (symbol RL)*—The manufacturer shall specify the rider vehicle and the maximum number of riders that are to ride in the flume at one time.

7.3.2.1 For water slides intended for multiple rider use, the weight assigned to each rider shall be, at a minimum, the weight specified for an adult rider in Section 8.6.1 of Practice F2291.

7.3.2.2 For single rider water slides, the rider weight shall be a maximum of 300 lb.

7.3.2.3 For water slides intended for use by children only, the weight assigned to a child shall be as specified in Section 8.6.2 of Practice F2291.

7.3.2.4 Ride loads shall be so arranged to cause the greatest realistic operational load to the system.

7.3.2.5 Lateral centripetal forces shall be considered in curved sections of flume. Predicted rider speeds should be used to calculate these forces. If speeds cannot be predicted, then a minimum of 15 ft/s for flumes under 15 % slope and 30 ft/s for all other flumes shall be used.

7.3.2.6 If the manufacturer places maximum rider total weight limits on a slide, then that restricted load may be used.

7.3.2.7 The weight of the rider vehicle shall be included in determining rider load.

7.4 *Environmental Loads*—Forces from environmental conditions of the site such as wind, precipitation, earthquake, and changes in temperature.

7.4.1 Loads and forces due to environmental conditions shall be in accordance with applicable local code requirements or ANSI/ASCE 7, or other equivalent national standard.

7.4.2 The manufacturer/designer shall clearly indicate the environmental loads the water slide was designed for in the operating and maintenance instructions as specified in the sections on Manufacturer's Responsibility of Practices F770 and F853. In addition to the environmental load information, any restriction, limitations, or special procedures associated with water slides exposed to these environmental loads shall be included.

7.4.3 *Lateral Wind Load (symbol LWL)*—For outdoor slides, the minimum wind load for all types of water slides shall be calculated based on 100-mph wind (3-s gust) for non-operational conditions. Lateral wind load may be reduced by an importance factor of less than 1.0, where appropriate, for water slide structures that are unoccupied during extreme weather.

7.4.4 *Reduced Lateral Wind Load (symbol RLWL)*—For outdoor slides, the minimum wind load for all types of water slides shall be calculated based on Section 8.13.1 of Practice F2291 for operational conditions.

7.4.5 *Other Lateral Loads (symbol OLL)*—A minimum lateral load equivalent to 10 % of the dead weight of the structure shall be included.

7.4.6 *Snow Load (symbol SL)*—The snow load for all types of water slides shall be calculated in accordance with the relevant local ground snow load(s).

7.5 *Overload*—Forces from water, riders, or vehicles, or a combination thereof, under extraordinary operational conditions due to user overload.

7.5.1 Calculations for extraordinary operational conditions that consider user overload shall be based on conditions specified by the manufacturer and need not consider any other live load in combination with such overload.

7.6 *Load Combinations*—Engineering calculations may use either allowable stress methods (ASD) or load and resistance factor methods (LRFD). Engineering calculations shall consider load conditions and combinations of loads in accordance with generally accepted engineering methods. Calculations shall consider that water slide systems may not be occupied during extremes of weather.

7.7 *Metal Structures*—Strength of steel structures under or above noted loads shall be designed in accordance with current AISC, ASCE standards,[5] or equivalent national standards.

7.8 *Wood Structures*—Strength of timber structures under or above noted loads shall be designed in accordance with current USDA-72, ASCE standards,[5] or equivalent national standards.

7.9 *Concrete Structures*—Strength of concrete structures under above noted loads shall be designed in accordance with current ACI-318 or equivalent national standards.

7.10 *Plastic and Plastic Composite Structures:*

7.10.1 Strength of plastic structures under above noted loads shall be designed in accordance with generally accepted engineering methods. Assessment shall be performed in a manner suitable for the specific material and structure.

7.10.2 Fiberglass reinforced plastic or other composite materials used structurally shall have samples tested for strength with accelerated aging in accordance with Test Methods D570, D638, and D790.

7.10.3 Loads from normal operational conditions shall demonstrate a minimum of 5 to 1 factor of safety against rupture for fiberglass reinforced plastic or other composite materials.

7.10.4 Calculations for extraordinary operational conditions from user overload shall demonstrate a minimum of 2 to 1 factor of safety against rupture of fiberglass reinforced plastic or other composite materials.

8. Performance Requirements

8.1 *General Requirements:*

8.1.1 The following are minimum requirements and should not be substituted where manufacturer experience suggests more acrimonious values.

8.1.2 Surfaces in reach by slide attendants and riders shall be made in such a way as to reduce the potential for injury.

8.1.3 A water slide shall be designed and constructed so that forces on riders allow the rider to use the slide in accordance with the rules and instructions under normal operating conditions.

8.2 *Slide Access:*

8.2.1 *General*—Fencing, guardrails, and handrails shall be installed in accordance with Section 14 of Practice F2291.

8.2.2 If the water slide system includes a starting platform and the platform is more than 21 in. above surrounding terrain, the platform shall provide at least 36 in. in distance between the slide entry and the top of stairs or ramp. Sufficient space shall be provided on the platform for slide attendant workspace, signage, and any communication devices needed for operation. Except where a stair or ramp or slide entry joins it, the platform shall be surrounded on all sides by a guardrail in accordance with Section 14 of Practice F2291.

8.2.3 Surface of steps, access ramp, and deck shall be slip-resistant and self-draining.

8.2.4 Slide entry section should interface with the platform guardrail so that a 4 in. sphere cannot pass between the slide entry component and the adjacent guardrail component.

8.3 *Open Flume Geometry:*

8.3.1 Flume cross-section shape shall be configured to contain the rider(s) or vehicle, or both, under all reasonable operating conditions. Total depth of section and shape of cross-section of a flume may be created in a single piece or more than one piece.

8.3.2 Open water slide flumes shall be kept clear of obstacles within the water slide clearance envelope as shown in Figs. 1 and 2. Flume riser sections may be added to block access to anything encroaching in the area.

8.3.3 Water slides shall have additional sidewall height provided by a flume riser section on the outside part of all horizontal curves to contain the rider. This flume riser shall be concave facing the center of the cross-section. The flume riser may be an integral or separate part from the main flume component.

8.3.3.1 *Flume Riser Transition*—Flume riser parts shall be transitioned from sections without flume risers to sections with flume risers with a maximum angle of 45° from the horizontal. See Fig. 3.

8.3.3.2 *Other Additions*—Where a cover, a tube entrance, or a flume riser is fitted other than at the beginning of the slide, the sides of the slide shall have a smooth transition from horizontal to vertical. Maximum angle of transition will be 45°. The inside height of the entrance to the cover or flume riser shall be at least 48 in.

8.3.4 Body slides with curved bottom flume sections such that the cross-section of the bottom and the sides are a continuously curving surface shall have:

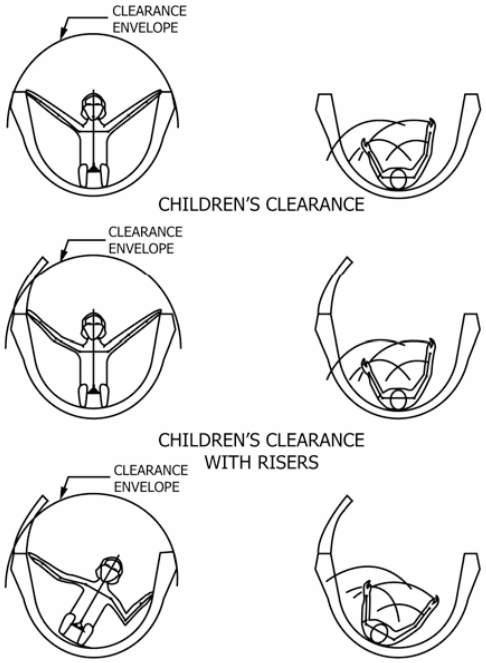


FIG. 1 Water Slide Clearance Envelope

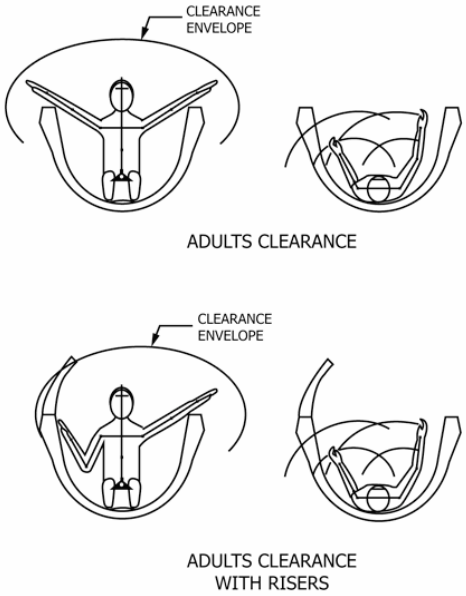


FIG. 2 Water Slide Clearance Envelope

8.3.4.1 Minimum inside width of 30 in., minimum sidewall height of 15 in., and

8.3.4.2 The top 1 in. of curved sidewalls shall be within 10° of vertical.

8.3.5 Tube slides with flat bottom flume sections shall have:

8.3.5.1 Minimum width of 48 in. inside sidewalls,

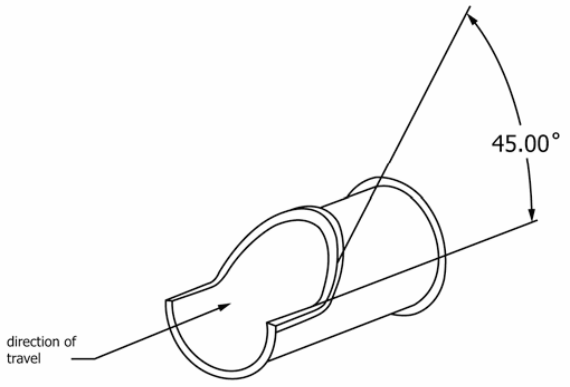


FIG. 3 Flume Riser

8.3.5.2 Minimum sidewall height of 24 in, and

8.3.5.3 Sidewalls that are straight may diverge from vertical a maximum of 2 in. measured at 24 in. from bottom.

8.3.6 Tube slides with curved bottom flume sections such that the cross-section of the bottom and the sides are a continuously curving surface shall have:

8.3.6.1 Minimum inside width of 52 in.,

8.3.6.2 Minimum sidewall height of 26 in., and

8.3.6.3 The top 1 in. of curved sidewalls shall be within 10° of vertical.

8.3.7 Mat slides that are straight in plan shall have:

8.3.7.1 Minimum width of 22 in. inside sidewalls,

8.3.7.2 Minimum sidewall height of 16 in.,

8.3.7.3 Sidewalls that are straight may diverge from vertical a maximum of 6 in. measured at 16 in. from bottom, and

8.3.7.4 The top 1 in. of curved sidewalls shall be within 10° of vertical.

8.3.8 *Multiple Parallel Lane Flumes*—Where more than one flume runs in parallel straight-line path (in plan).

8.3.8.1 The outermost sections shall have sidewalls a minimum of 24 in. in height.

8.3.8.2 Where the flume path runs adjacent, there shall be a dividing barrier a minimum of 8 in. high between the lanes.

8.3.8.3 Each lane shall be a minimum of 22 in. inside width.

8.3.9 Water slides such as specialty slides that cannot be classified above shall conform to the requirements of 9.4.

8.3.10 Combination rides may be designed such that sections of the slide conform to the requirements of the respective specifications above.

8.4 *Closed Flume Geometry:*

8.4.1 The following are minimum requirements and should not be substituted where manufacturer experience suggests more conservative values. Total shape of cross-section of a flume may be created in two or more pieces.

8.4.2 Body slides with curved bottom flumes shall have a minimum inside dimension of 30 in.

8.4.3 Tube slides with flat bottom closed flume sections shall have a minimum inside dimension of 48 in.

8.4.4 Tube slides with curved bottom closed flume sections shall have a minimum inside dimension of 52 in.

8.5 *Flow Rate*—The water flow in each slide has an effect on the performance of the sliding surface.

8.5.1 The manufacturer shall determine the flow rate and shall set a fixed range of acceptability for each installation at the time of commissioning.

8.5.2 The water flow valves shall be secured from interference or adjustment by unauthorized personnel.

8.5.3 Flow meters, calibrated means of flow measurement, or marker(s) indicating proper operational water flow/level shall be provided for each flume.

8.6 *Run Out Lanes:*

8.6.1 Run out sections shall be designed to contain, decelerate, and stop riders to allow them to exit the slide.

8.6.2 A weir or other device shall regulate the water level in the run out to the correct level given correct flow rate for the ride.

8.6.3 To facilitate proper deceleration, a marker shall be provided to indicate the operational water level in the run out, which the slide attendant/lifeguard may verify prior to allowing the next rider entry to the slide.

8.7 *Landing Pools:*

8.7.1 Landing pools shall be designed to decelerate and stop riders and allow them to exit the water slide without encountering an obstruction.

8.7.2 The exit path for riders shall not cross with the landing zone of other slides. The designated pool exit shall be such as to force the riders to move forward and away from the paths of riders from other flumes.

8.7.3 Water slides entering a landing pool shall have a landing pool of sufficient length to decelerate and stop riders and minimize the potential for contact with the pool wall or stationary objects (stair, ladder, railing, and so forth) in the landing pool. Water slides classified as speed slides (rider velocity over 25 ft/s) will require additional pool length.

8.7.4 Pool depth in the landing zone for water slides for persons over 48 in. tall shall have a minimum pool depth of 3 ft.

8.7.5 Flume geometry at pool entry shall be straight viewed in plan for the last 8 ft of the water slide entering a pool.

8.7.6 Landing pools for waterslides with a fall distance greater than 6 in. shall have an increase in pool depth from the 3 ft minimum according to manufacturer recommendation to minimize potential impact with pool bottom.

8.7.7 If water supply for the slide(s) is drawn directly from landing pools or other areas accessible to the public, the suction line shall be divided into at least two lines, where connected to the pool, such that one person cannot block more than one suction line. The fittings and piping details shall be designed so that the full volume of water for the slide may be drawn through the remaining fittings at a velocity not to exceed 1 ft/s, assuming one suction fitting is fully blocked.

8.7.8 *Body Slide Landing Pools:*

8.7.8.1 Body slides entering a landing pool shall have a minimum distance between the inside of the widest part of the flume riding surface and the closest pool wall of 5 ft. The place of measurement in the pool shall be at any point from water level to 3 ft below water level and 6 ft in front of the flume

termination. The lateral pool wall shall be parallel to or diverge from the axis of the slide. See Fig. 4.

8.7.8.2 Body slides entering a common landing pool should be arranged so as to minimize the potential for riders to come in contact with each other when exiting the flumes of adjacent slides simultaneously.

8.7.9 *Tube Slide Landing Pools:*

8.7.9.1 Tube slides entering a landing pool shall have a minimum distance between the inside of the widest part of the flume riding surface and the closest pool wall of 4.5 ft. The place of measurement in the pool shall be at any point from water level to 3 ft below water level and 6 ft in front of the flume termination. The pool wall shall be parallel to or diverge from the axis of the slide. See Fig. 4.

8.7.9.2 Tube slides entering a common landing pool should be arranged to minimize the opportunity for contact with other riders when exiting the flumes of adjacent slides simultaneously.

8.8 *Openings and Apertures in Flume Surfaces:*

8.8.1 Openings may be provided in flume surfaces for introduction of water, drains, special effects, light, and other similar purposes. All edges in openings within reach of riders shall be smooth with a minimum radius of ⅛ in. Openings shall not present an entrapment risk.

8.8.2 Openings at the slide start for the main water supply do not require guards or gratings unless the rider stands, sits, walks, or slides over the face of the opening during normal slide operation, or if the configuration of the opening is such that a rider moving in the usual direction of travel would not become entrapped. Grating shall have a maximum width of slot or hole diameter of ½ in.

8.9 *Seams and Joints:*

8.9.1 The surface of the sliding section shall form a smooth, secure, and continuous surface. If adjacent edges of lateral joints are not perfectly tangent, the upstream edge shall be set above the downstream edge on the riding surface a maximum of 3⁄16 in. to ensure that riders will not hit the edge of a lateral joint. (For the purposes of this section, riding surface shall be taken to mean the part of the flume where the path of riders is expected or found to pass over, for example, the outside half of a curved flume section.)

8.9.2 Longitudinal joints on the riding surface shall be made tangent.

8.9.3 Edges of lateral joints on body slides may have a radius of up to 3⁄16 in. Edges of longitudinal joints in closed flumes may have a radius of up to ¼ in. Edges of longitudinal joints in open flume risers may have a radius of up to ⅜ in.

8.9.4 Edges of lateral joints on mat and tube slides may have a radius of up to ½ in.

8.10 *Accelerations:*

8.10.1 Slide paths shall be designed so riders in seated or prone (laying face down) positions do not experience greater than 2 Gs acceleration from gravity and centrifugal acceleration vectors added together. This limit may be increased to 3 Gs if the duration is less than 1 s.

8.10.2 Slide paths shall be designed so that riders in supine (laying face up) positions do not experience greater than 3 Gs acceleration from gravity and centripetal acceleration vectors added together.

8.11 *Slide Vehicles:*

8.11.1 Slide vehicle(s), if specifically required by the manufacturer, shall be utilized.

8.11.2 Alternative slide vehicles shall be approved for use on water slides in writing from the manufacturer prior to guest use.

8.11.3 In the event the manufacturer does not provide written documentation of approval for an alternative slide vehicle, testing shall be performed and documented to determine if the proposed alternative vehicle is acceptable as outlined in Section 9.

8.11.4 Slide vehicles shall be maintained in operating condition, including but not limited to all handles or other holding devices, and conditions of vehicle surfaces in contact with the slide surface.

8.11.5 Slide vehicles should be removed from service for repair or replacement when components are missing or damage is detected, or both.

8.11.6 Slide vehicles shall be constructed to have a cushioning effect for riders who can come into contact with another vehicle during normal operation of the slide.

8.11.7 Slide vehicles shall float when used in a landing pool.

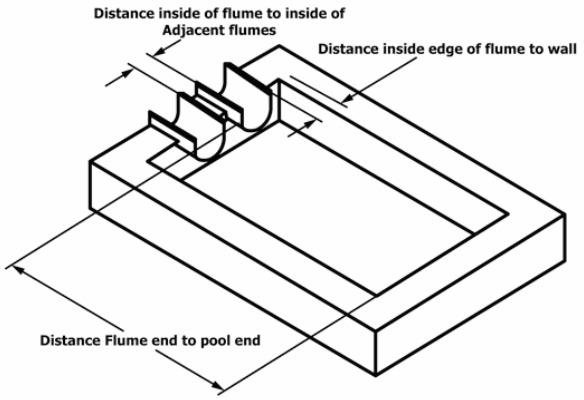


FIG. 4 Body Slide Landing Pool

9. Test and Inspection Methods

9.1 The manufacturer of a new slide or major modification to an existing slide shall specify prior to commissioning or re-certification, test or inspection procedures, or both, in compliance with Guide F846 and Practice F1193, including but not limited to the following.

9.2 *Operational Testing*—As specified in Guide F846, Section 7.

9.3 The manufacturer shall provide a written report to the owner/operator, which provides detail of the installation and operational test procedures, time and place of test, test results and supporting data, and identification of the person conducting the test.

9.4 *Special Testing*—In the event that a new or innovative product or method is used in the design, construction, or operation of a water slide that does not comply with Section 8, such a product shall be deemed acceptable as follows.

9.4.1 The manufacturer shall prepare a testing procedure, this procedure shall be designed to verify the performance of the slide that does not otherwise comply with Section 8 of this practice.

9.4.2 The test procedure shall include riders that represent the largest and the smallest body types that shall be allowed on the slide.

9.4.3 The test procedure shall be reviewed and approved by a third party consultant experienced and an expert in water slide operations.

10. Identification Marking

10.1 Installed water slides shall be identified in accordance with Practice F1193, Section 10.

11. Manufacturer Responsibilities

11.1 The following instructions outline requirements under Practice F770 as applicable to water slides and include requirements not specified in Practice F770 which are necessary and unique to water slides. Manufacturers are responsible for determining the following:

11.2 Water flow rate requirements for water slide operation and point at which water level in run outs or landing pools are benchmarked.

11.3 Maximum total passenger weight and maximum number of passengers per slide vehicle.

11.4 Recommended patron dispatch intervals.

11.5 Recommended warnings concerning forces and actions that could aggravate physical conditions such as heart conditions, pregnancy, neck and back conditions, and so forth.

11.6 Specifications for inspection, maintenance and repair of the slide that shall include, but not be limited to, the following:

11.6.1 A phone number or fax number to be used by the owner/operator to secure maintenance or operating assistance from the manufacturer.

11.6.2 Periodic minimum service and component inspection checklists.

11.6.3 Cleaning, waxing, repairing, and patching instructions to include recommended materials.

11.6.4 Description of the recommended, daily pre-opening inspection to be performed by slide attendants or maintenance personnel, or both, prior to daily operations should include but not be limited to:

11.6.4.1 Obstruction in the slide path,

11.6.4.2 Cracks, chips, or bubbles in the sliding surface,

11.6.4.3 Rough patch work at joints or cracks,

11.6.4.4 Leaking seals or joints,

11.6.4.5 Loose flume risers in turns,

11.6.4.6 Excessive movement of the flume,

11.6.4.7 Joint openings,

11.6.4.8 Signage placement,

11.6.4.9 Communication device functional,

11.6.4.10 Water flow rate in operating range,

11.6.4.11 Landing pool or run out water level in operating range,

11.6.4.12 Visual check of slide vehicles, and

11.6.4.13 Visual inspection of entrances, exits, stairways, and ramps.

12. Owner/Operator Responsibilities

12.1 As specified in Section 4 of Practice F770, the following instructions outline requirements as applicable to water slides and include requirements not specified in Practice F770 which are necessary and unique to water slides.

12.2 Each owner/operator shall have written operating procedures for the individual water slide, which are an integral part of their staff-training program. These procedures shall include but not be limited to:

12.2.1 Specific water slide operation policies and procedures with pertinent information from the manufacturer's instructions including dispatch procedures. Dispatch procedures shall be established for each water slide should include, but not be limited to, the following:

12.2.1.1 Informing each patron of the proper rider position.

12.2.1.2 Established dispatch time intervals for each water slide.

12.2.1.3 Established communication system between the slide attendant and lifeguard positioned at the landing pool or run-out section.

12.2.1.4 Limiting the number of patrons in the dispatch pool as required by the manufacturer specifications.

12.2.1.5 Established dispatch procedures shall be followed by slide attendants prior to dispatching each rider.

12.3 Verbal instructions, when required by the manufacturer, concerning water slide rules that shall be announced to patrons prior to each ride cycle. Pre-ride instructions may include, but not be limited to: the required position of hands and feet, rider conduct, exiting procedures, and other instructions deemed appropriate.

12.4 Signage shall be placed by the owner/operator as specified in Practice F770, subsection 4.3. For water slides, these signs shall include safety, warning, and instructional signage reflecting manufacturer recommendations. Signage shall be prominently displayed at the slide entrance or other appropriate area, or both, and shall include but not be limited to the following:

12.4.1 Instructions, which include:

12.4.1.1 Proper riding position,

12.4.1.2 Expected rider conduct,

12.4.1.3 Dispatch procedures,

12.4.1.4 Exiting procedures, and

12.4.1.5 Obey slide attendant/lifeguard instructions.

12.4.2 Warnings, which include:

12.4.2.1 Slide characteristics, such as descriptions of speed or attraction rating, and

12.4.2.2 Water depth of landing zone.

12.4.3 Requirements which include:

12.4.3.1 Riders being free of medical conditions, including but not limited to pregnancy and heart, back, or musculoskeletal problems,

12.4.3.2 Maximum/minimum height and weight, and

12.4.3.3 Any swimming or physical ability requirement, or both.

12.5 *Major Modifications*—As specified in Terminology F747, major modifications shall not occur without written approval from the manufacturer.

12.5.1 In the event the manufacturer does not provide written approval for a major modification, the owner/operator may retain a different manufacturer or designer/engineer to complete or approve the major modification, or both.

12.5.2 Testing shall be performed and documented in accordance with Guide F846 to verify the modification is acceptable as outlined in Section 9 of this practice.

12.6 The owner/operator shall maintain appropriate water quality in accordance with local requirements for bathing facilities.

12.7 *Inspection and Maintenance Program*—Based on the water slide manufacturer's recommendations, each owner shall implement a program of maintenance, testing, and inspection, providing for the duties and responsibilities necessary to care for the water slide, safety equipment, and the slide facilities.

12.7.1 Inspections shall be conducted in accordance with the procedures as specified in Practices F770 and F853.

12.8 Visual checks of safety signs, slide entry, flume, run out, landing pool, and structural components, water flow, landing pool water level, and run out water level shall be maintained according to the manufacturer's specifications.

13. Rider Responsibility

13.1 See Practice F770.

14. Keywords

14.1 construction; design; flume; manufacture; water slide

APPENDIXES

(Nonmandatory Information)

X1. ADDITIONAL DEFINITIONS

X1.1 *Definitions:*

X1.1.1 *closed flume* —flume that encloses the rider in a pipe-like cross-section.

X1.1.2 *fall distance* —vertical distance between the terminus of the slide surface and the water surface of the landing pool.

X1.1.3 *flow meter* —device used to measure the water flow for a water slide.

X1.1.4 *flume*—that part of the water slide that contains the rider(s) and defines the path of the water slide within which sliding takes place.

X1.1.5 *flume riser (splashguard)*—extension of the sidewall of an open flume to contain riders or water and is capable of use as a riding surface.

X1.1.6 *instructional signage*—signage displayed in public view prior to the entrance of the ride with information provided to the rider, which informs them of instructions for proper use, riding position, and expected rider behavior.

X1.1.7 *mat*—flexible sheet usually made of plastic or foam, suitable for use as a vehicle in a water slide flume to carry a rider.

X1.1.8 *open flume* —flume that does not completely encircle or enclose the rider.

X1.1.9 *rider*—any person who is in the act of entering the flume, using the flume, or getting off of the flume.

X1.1.10 *run-out section*—flume surface of a water slide where riders are intended to decelerate or come to a stop, or both.

X1.1.11 *slide attendant* —individual trained in facility and ride-specific operating and emergency procedures.

X1.1.12 *slide entry section*—that part of the water slide where riders enter the flume from the starting platform.

X1.1.13 *slide height* —difference in elevation from the centerline of the flume at the slide exit to the centerline of the flume at slide entry, measured at the riding surface.

X1.1.14 *slide path* —geometric layout of the flume sections that make up the water slide.

X1.1.15 *slide vehicle* —device intended for use on a water slide upon which the rider(s) sits or lays while sliding.

X1.1.16 *specialty vehicle*—proprietary vehicle sufficiently different from other vehicles designated by the slide manufacturer as suitable for use in a water slide.

X1.1.17 *starting platform*—deck structure, usually of separate construction from the water slide, from which a given water slide starts.

X1.1.18 *water flow* —water volume per unit time for a given water slide.

X1.1.19 *water slide* —see definition in Section 1.

X1.1.20 *water slide clearance envelope*—design clearance to minimize the opportunity for contact between the rider and other objects, outside of the flume, where said contact is likely to cause injury. See Figs. 1 and 2.

X1.1.21 *water slide system*—see definition in Section 1.

X1.1.22 *water slide tube*—inflated vehicle that floats in a stable fashion in a pool intended for rider use on water slides.

The vehicle may have a bottom or have a hole intended for seating and contains one or more riders as they ride in the flume; often called a raft, boat, or tube.

X2. COMMENTS

X2.1 Section 3.1, Terminology

X2.1.1 Many terms have a common accepted use in the water slide industry that is unique. This is to establish a basic common vocabulary as well as a basis for classification that differentiates design parameters. All terms in this practice are candidates for inclusion in Terminology F747.

X2.2 Section X1.1.20, Clearance Envelope

X2.2.1 Water slides are distinct from other amusement rides in that riders are not restrained and may assume unusual and arbitrary positions. Hence the methodology of assuming a statistical dimension of a body part restrained in a vehicular harness is not applicable to slide designs. Historically, manufacturers have set individual internal standards. The desire in this practice is to establish generally agreed upon values that have provided historically safe rides.

X2.3 Section 5.2, Support Materials

X2.3.1 Many materials have been used for water slide supports including: steel, concrete, wood, aluminum, and fiberglass reinforced plastics. Corrosion has proved the major issue for metal construction primarily for cosmetic concerns. With respect to corrosion of metals, maintenance has proved the most effective factor in minimizing occurrence. Requirements are left deliberately open and emphasize the performance issue of durability and strength.

X2.4 Section 7, Structural Design of Waterslides

X2.4.1 Fundamentally, water slides and related access structures should not be considered the same as buildings. Some loading conditions commonly accepted for buildings simply will not occur for water slides. Therefore, complete adherence to building codes requires unreasonable load combinations. The simplest example is loads from high winds. No water slide is operated during a storm. Water slides are not intended to provide the function of shelter. Section 8.13 of Practice F2291 recognizes this for amusement rides where operational loads are calculated with 34 mph wind.

X2.4.2 Some manufacturers depend on designs prepared for an example job for all jobs. Some use load-testing criteria. In Europe, TUV will perform tests on water slides using proof loads if calculations are not submitted.

X2.4.3 The intent here is to establish a commonly acceptable base standard for designs. If individual jurisdictions decide to require application of local building codes that is their right.

X2.4.4 Combinations of loads for design analysis or for determining test forces:

DL + WL + RL
DL + SL + LWL
DL + LWL
DL + RL + (RLWL)
DL + RL + OLL

X2.5 Section 9, Test and Inspection Methods

X2.5.1 Water slides are distinct from amusement rides in that they are mechanically very simple. The only moving component of a slide is the rider. Pumps and mechanical devices are separate and isolated from the rider. One could argue slides have no moving parts. Therefore, requirements for testing and inspection do not require the level of care common with machines. NDT testing of bearings, shafts, and moving parts is unnecessary. The requirements of Guide F846 are not applicable for the most part. Inspection/testing commonly occurs at three points in water slide manufacture: (*1*) material supply QA, (*2*) manufacture/fabrication QA, (*3*) installation, and (*4*) operation. The last has two aspects, one being verification of the structure often by engineers, and the other being the actual performance of the slide. The following has been modified from the basic Guide F846 requirements to reflect common practice.

X2.6 Section 9.4, Special Testing

X2.6.1 This section has been added to address concerns that many of the provisions of the performance section would inhibit or prevent innovation. A radical or new ride may introduce a safe feature that goes against requirements in this practice that are based on past experience. Demonstrating this with testing is an obvious solution. However, a higher degree of care and completeness in such testing is required compared to products that have dozens or hundreds of previous successful examples. The use of respected third party consultants is a normal part of water slide operations and management. Therefore, this provides a high level of confidence to verification tests of this type of slide.

X2.7 Section 13, Rider

X2.7.1 Responsibility is based on Section 5.x of Practice F770, as already accepted by F24.

SW7176

Date Submitted	11/2/2018	**Section**	454.1.4.2	**Proponent**	Michael Weinbaum
Chapter	4	**Affects HVHZ**	No	**Attachments**	Yes

TAC Recommendation Pending Review
Commission Action Pending Review

Comments

General Comments No

Alternate Language No

Related Modifications

Summary of Modification

Add reference to lumens in code based on lumen output of common halogen bulbs

Rationale

Most lights installed today are LED lights, giving substantial energy and replacement cost savings. The manufacturers often publish the "watt equivalent" of these LED bulbs, but not always, and the building official may not trust these numbers, or may be confused when they see the actual watts consumed by these fixtures, which is much less. Soon manufacturers may stop publishing the "watt equivalent" as it refers to an older, obsolete technology.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

This change uses vocabulary that the manufacturers are more likely to use.

Impact to building and property owners relative to cost of compliance with code

The same lights are still allowed before and after

Impact to industry relative to the cost of compliance with code

No new technology is required, distributors can expect fewer questions if either equivalent watts or lumens are mentioned

Impact to small business relative to the cost of compliance with code

The same lights are still allowed before and after

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

The code makes sure people see the water and the people in the water, and that doesn't change.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

This explains the amount of light that is expected in clearer terms, and creates an option to ignore the "watt equivalent" term that may be obsolete soon.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

This eliminates a possible discrimination.

Does not degrade the effectiveness of the code

The same lights are still allowed before and after

454.1.4.2.1Outdoor pool lighting.

Lighting shall provide a minimum of 3 footcandles (30 lux) of illumination at the pool water surface and the pool wet deck surface. Underwater lighting shall be a minimum of $^{1}/_{2}$ watt incandescent equivalent, or 10 lumens, per square foot of pool water surface area.

454.1.4.2.2Indoor pool lighting.

Lighting shall provide a minimum of 10 foot candles (100 lux) of illumination at the pool water surface and the pool wet deck surface. Underwater lighting shall be a minimum of $^{8}/_{10}$ watt incandescent equivalent, or 15 lumens, per square foot of pool surface area.

Bulbs.com
The LED Authority

Today's Offers | FREE SHIPPING on orders over $99 | Account

Search for Pr

Speak with a lighting specialist
1-888-455-2800
Weekdays 8am-7pm EST

Shop All Products | BulbFinder | Business Center | Learning Center

7 results

5000 - 9999 Lumens Halogen Light Bulbs, 300W - 399W

Category
Light Bulbs ›
Halogen

Wattage Range
300W - 399W

Lumens Range
5000 - 9999

Brand
- Eiko (3)
- Sylvania (1)
- Bulbrite (1)
- Ushio (1)
- Philips Lighting (1)

Price Range
- Under $10 (5)
- $10 - $50 (2)

Base
- Recessed Single Contact (5)
- GY9.5 (1)
- Medium Bi-Pin (1)

Shape
- T-3 (5)
- T-8 (1)
- T-7 (1)

Length (in)
- 3.5 (1)
- 4.1 (1)
- 4.7 (5)

Capsules

Double Ended

Sort By: Most Popular

Page 1 of 1

☐ Select to compare

Philips 300W 120V T3 Clear Halogen Double Ended Bulb

SKU: 392829 |
Ordering Code: 300T3Q/CL (120V) |
UPC: 46677392826

4.8
(5 reviews)

Recessed Single Cont
Base
5200 Lumens
Soft White Bulb Color
3000K Color Tempera
0.4" Diameter
300W Energy Used
4.7" Length
T-3 Shape
120 Volts

More details

$5.99 per bulb

1 Bulb

ADD TO CART

Diameter (in)

0.4 (5)
0.7 (1)
0.8 (1)

Lumens Range

5000 - 5999 (3)
6000 - 6999 (2)
7000 - 7999 (1)
8000 - 8999 (1)

Color Temperature (Kelvin)

2800-3200 (7)
3200-3600 (1)

Voltage Range

20V - 119V (1)
120V - 129V (4)
130V - 199V (1)
200V+ (1)

Average Rated Life

Under 2,000 hrs (2)
2,000 - 5,999 hrs (5)

☐ Select to compare

Eiko 300W 220V T3 Clear Halogen Bulb

SKU: **W-Q300T3/CL/220V** | Ordering Code: **Q300T3/CL/220V** | UPC: **31293151681**

$1.49 per bulb

1 Bulb
ADD TO CART

Recessed Single Cont Base
5000 Lumens
Soft White Bulb Color
2900K Color Tempera
0.4" Diameter
300W Energy Used
4.7" Length
T-3 Shape
220 Volts

More details

☐ Select to compare

Eiko 300W 120V T3 Clear Halogen Bulb

SKU: **W-Q300T3/CL/120V** | Ordering Code: **Q300T3/CL/120V** | UPC: **31293151643**

5.0
(3 reviews)

$1.49 per bulb

1 Bulb
ADD TO CART

Recessed Single Cont Base
6000 Lumens
Soft White Bulb Color
2850K Color Tempera
0.4" Diameter
300W Energy Used
4.7" Length
T-3 Shape
120 Volts

More details

☐ Select to compare

Bulbrite 300W 120V T3 Clear Halogen Bulb

SKU: 600301 |
Ordering Code: Q300T3CL (120V) |
UPC: 739698600307

5.0
(1 review)

Recessed Single Cont Base
5000 Lumens
Soft White Bulb Color
3000K Color Tempera
0.4" Diameter
300W Energy Used
4.7" Length
T-3 Shape
120 Volts

More details

$1.99 per bulb

1 Bulb

ADD TO CART

☐ Select to compare

Eiko 300W 130V T3 Clear Halogen Bulb

SKU: W-Q300T3/CL/130V |
Ordering Code: Q300T3/CL/130V |
UPC: 31293151667

CLEARANCE

Recessed Single Cont Base
6000 Lumens
Soft White Bulb Color
2900K Color Tempera
0.4" Diameter
300W Energy Used
4.7" Length
T-3 Shape
130 Volts

More details

$1.49 per bulb

1 Bulb

ADD TO CART

Sylvania 375W Heat Sink Base Medium Bipin Base

SKU: 54649 |
Ordering Code: HPL375/115/X |
UPC: 046135546495

$18.99 per bulb

1 Bulb

ADD TO CART

☐ Select to compare

Medium Bi-Pin Base
8000 Lumens
Warm White Bulb Col
2950K Color Tempera
100 CRI
0.7" Diameter
375W Energy Used
4.1" Length
T-8 Shape
115 Volts

☐ Select to compare

Ushio 300W 120V Halogen FKW Bulb

SKU: 1000540 | Ordering Code: FKW, JCS120V-300WC/UA | UPC: 48777135280

$16.99 per bulb

1 Bulb

ADD TO CART

CLEARANCE

GY9.5 Base
7800 Lumens
Soft White Bulb Color
3200K Color Tempera
0.8" Diameter
300W Energy Used
3.5" Length
T-7 Shape
120 Volts

More details

Page 1 of 1

Sign up to receive our best offers

example@youremail.com SUBSCRIBE

Stay connected with Bulbs.com

Trusted

Partners

Company Info
About Us
Our Promise
Our Lighting Specialists
Testimonials
Case Studies
Press Room

Business Center
Pro Business Account
Your Lighting Project
Lighting Rebates
Try LED Risk-free
Credit Application
International Customers

Customer Service
Contact Us
FAQs
Privacy Policy
Terms of Sale
Shipping Policy
Returns and Exchanges
BulbTrack

Resources
The Learning Center
Energy Savings Calculator
Base, Shape and Filament Reference Charts

Blogs
The Li

Overview

Current News

1-888-455-2800 Email Us

Accepted Payments

SW7177

Date Submitted	11/2/2018	**Section**	454.1.3.1.2	**Proponent**	Michael Weinbaum
Chapter	4	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Comments

General Comments Yes **Alternate Language** No

Related Modifications

Summary of Modification

Allowing longer infinity edges

Rationale

This is the part of the code intended to make sure that a bystander with a shepherd's hook can reach a bather in distress. The deck being up to 36" below the water's edge does not impede the bystander from using the deck to help people.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

Pools with these features are rejected today. The local entity would have to learn the new rule and apply it if necessary.

Impact to building and property owners relative to cost of compliance with code

Pools that are compliant today are still compliant

Impact to industry relative to the cost of compliance with code

No new devices or materials are required

Impact to small business relative to the cost of compliance with code

Pools that are compliant today are still compliant

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

The limitation of deck obstructions is to allow bystanders to assist bathers in distress. This modification is intended to preserve that.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Overflowing edges on pools are attractive and beautiful to people

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

No method of construction or product is mentioned here.

Does not degrade the effectiveness of the code

This is not a blanket allowance for all overflowing edges. They are limited to be only 36" tall or else they will still be considered obstructions.

1st Comment Period History

SW7177-G1

Proponent Kari Hebrank **Submitted** 2/14/2019 **Attachments** No

Comment:

The Florida Swimming Pool Association SUPPORTS this code proposal.

1st Comment Period History

SW7177-G2

Proponent robert vincent **Submitted** 2/18/2019 **Attachments** No

Comment:

Five issues with this proposal: 1) no code definition of infinity edge,
2) Reference to section 454.1.3.1.4 must be incorrect, as this Section is about wet deck slope, its finish, and a 10” curb, , please provide correct reference,
3) Any other type of pool constructed would not have to follow the ten-inch maximum curb height. A conventional swimming pool that has no extra features could install a raised beam with no maximum height/step over from the top step.
4) Justification assumes that any pool patron on the pool deck could use a shepherd’s hook to assist a bather in distress. If you put a 36” high barrier in front of that person, they may not have the physical strength, or height, to lift a distressed patron with the hook. A 36” high elevated swimming pool, can completely block the view of the pool from the lower pool deck so that a parent could not see over the “wall” to see if anyone was in distress in the swimming pool. Having a 36” high barrier impends the ability of emergency response personnel from removing a distressed or diving accident patient from the pool by creating a barrier to lift the person over.
5) In section 454.1.3.1.6, the proposed change to exclude an infinity edge from the 20% total deck obstruction allows for unlimited amounts of the deck to be inaccessible for visual viewing and safety. When combining an infinity edge with an additional 20% obstruction, it is possible to create a pool that have extremely limited deck access.

454.1.3.1.2

Pool wet decks shall be uniformly sloped at a minimum of 2 percent to a maximum of 4 percent away from the pool or to deck drains to prevent standing water. Textured deck finishes that provide pitting and crevices of more than $^{3}/_{16}$ inch (4.8 mm) deep that accumulate soil are prohibited. If settling or weathering occurs that would cause standing water, the original slopes shall be restored or corrective drains installed. ~~When~~If a curb or overflowing infinity edge is provided, and the deck ~~shall not be~~is more than 10 inches (254 mm) below the top of the curb or edge, a means of access from the deck to the top of the curb or edge shall be provided wherever a means of access into the pool is required by 454.1.2.5. The deck shall not be more than 36″ below the top of the curb or edge.

...

454.1.3.1.6

Twenty percent of the deck along the pool perimeter may be obstructed as long as any one obstruction does not exceed 10 percent of the pool perimeter or 20 feet (6096 mm), whichever is less, in any one area where water depth is 5 feet (1524 mm) or less. Obstructions shall have a wet deck area behind or through them, with the near edge of the walk within 15 feet (4572 mm) of the water except approved slide obstructions shall have the near edge of the walk within 35 feet (10 668 mm) of the water. These obstructions must be protected by a barrier or must be designed to discourage patron access. Obstructions shall not include pool exit points. When an obstruction exists in multiple areas around the pool, the minimum distance between obstructions shall be 4 feet (1219 mm). Infinity edges that comply with 454.1.3.1.2 are not obstructions.

SW7178

Date Submitted	11/2/2018	**Section**	454.1.9.2.6	**Proponent**	Michael Weinbaum
Chapter	4	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Comments

General Comments Yes **Alternate Language** No

Related Modifications

Summary of Modification

No special requirements added for filters on waterslides

Rationale

Extra filter area does not promote public health, other requirements are already in earlier parts of code or are unenforceable

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

Simplifies their approach, they are not required to put a tape measure on strainer baskets or define the amount of dirt associated with "peak bather load" or take NTU measurements of installed systems.

Impact to building and property owners relative to cost of compliance with code

If there is any impact, it will be reduction of cost.

Impact to industry relative to the cost of compliance with code

If there is any impact, it will be reduction of cost.

Impact to small business relative to the cost of compliance with code

If there is any impact, it will be reduction of cost.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Filters and strainers are already called for in other parts of the code

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

This eliminates special requirements that have no proven benefit.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Currently there is a discrimination against installing waterslides, which would be eliminated here.

Does not degrade the effectiveness of the code

Filters and strainers are already called for in other parts of the code

1st Comment Period History

SW7178-G1

Proponent Kari Hebrank **Submitted** 2/14/2019 **Attachments** No

Comment:

The Florida Swimming Pool Association SUPPORTS this code proposal.

1st Comment Period History

SW7178-G2

Proponent Kari Hebrank **Submitted** 2/17/2019 **Attachments** No

Comment:

The Florida Swimming Pool Association SUPPORTS this code modification.

1st Comment Period History

SW7178-G3

Proponent robert vincent **Submitted** 2/18/2019 **Attachments** No

Comment:

454.1.9.2.6 The Dept. of Health intent when placing this requirement in the code many years ago was to ensure that water clarity could be maintained and during peak pool usage, a minimum water clarity standard could be achieved. Rather than an ambiguous state of clarity, a measurable standard of 5/10 NTU was established. The turbidity standard should be left in the FBC, and the smaller filter systems as designed and operated should achieve this performance standard.
454.1.9.2.6.3 All suction pumps should be designed with hair and lint strainers to capture debris before it enters a recirculation pump. However, this is strictly a maintenance issue. If debris is routinely captured in the pump impellers, maintenance staff can evaluate this issue and add a hair and lint strainer at a future date.

~~**454.1.9.2.6.2Filter areas.**~~

~~Minimum filter area requirements shall be twice the filter areas specified for the recirculation rates stipulated in Section 454.1.6.5.5.1. The filtration system shall be capable of returning the pool water turbidity to $^{5}/_{10}$ NTU within 8 hours or less after peak bather load.~~

~~**454.1.9.2.6.3Hair and lint strainer.**~~

~~Any filtration system pump which takes suction directly from the plunge pool and reservoir shall have a minimum 8-inch (208 mm) diameter hair and lint strainer on the suction side of the pump.~~

SW7179

Date Submitted	11/2/2018	**Section**	454.1.2.3.5	**Proponent**	Michael Weinbaum
Chapter	4	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Comments

General Comments Yes

Alternate Language Yes

Related Modifications

454.1.3.1.7, 454.1.9.8.7.1

Summary of Modification

Allow drinks/beverages at public pools and public pool decks

Rationale

Drinks or beverages near pools do not pose a public health risk on their own.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

Training on new rule

Impact to building and property owners relative to cost of compliance with code

No new costs; owners would not be required to change signs if they don't want to allow drinks or beverages

Impact to industry relative to the cost of compliance with code

No new costs

Impact to small business relative to the cost of compliance with code

No new costs

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Health, safety and welfare are considered in maintaining the bans on food, glass, and animals - which are all possible sources of disease and injury.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Reducing unnecessary restrictions in the code improves the code.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

None of this is mentioned

Does not degrade the effectiveness of the code

Health, safety and welfare are considered in maintaining the bans on food, glass, and animals - which are all possible sources of disease and injury.

Alternate Language

1st Comment Period History

7179-A1

Proponent Michael Weinbaum **Submitted** 2/18/2019 **Attachments** Yes

Rationale

People doing water aerobics will want to bring water bottles to the water's edge, and this is not a public health risk. To the extent that spilled drinks and increased urination may increase chlorine demand, an automated chemical controller will catch that and react accordingly.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

Training would be required on the nuances of this proposal

Impact to building and property owners relative to cost of compliance with code

No impact

Impact to industry relative to the cost of compliance with code

No impact

Impact to Small Business relative to the cost of compliance with code

No new costs

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

It is reasonable to prevent food and glass and animals from being anywhere near the water.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Proposal may incentivize pools that do not have automated chemical control to install it.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not.

Does not degrade the effectiveness of the code

Adds nuance, still enforceable.

1st Comment Period History

SW7179-G1

Proponent Kari Hebrank **Submitted** 2/13/2019 **Attachments** No

Comment:

The Florida Swimming Pool Association SUPPORTS this code proposal which allows drinks and beverages in the public pool and deck area.

1st Comment Period History

SW7179-G2

Proponent robert vincent **Submitted** 2/18/2019 **Attachments** No

Comment:

Similar to 7217-

This proposal goes further by also allowing beverage service to be within 12 feet of the waters' edge, such as a swim up bar adjoining the swimming pool and serve beverages to patrons while in the swimming pool. These changes to the building code would be detrimental to public health and safety. Spilled food and drink in the pool would create a additional chlorine demand, thus inhibit rapid disinfection, and potentially allow for pathogens to be retained longer in water than they are presently. Debris, organics and oils from these consumables would likely affect filtration equipment efficacy. This allowance also encourages pool patrons to remain in the pool instead of leaving the pool area to use the restroom when necessary. Other unintended and unforeseen negative consequences may result.

454.1.2.3.5 Rules and regulations signage.

Rules and regulations for bathers shall be installed in minimum 1-inch (25.4 mm) letters which must be legible from the pool deck, and shall contain the following:

1. No food ~~or beverages~~ in pool or on pool wet deck.

...

454.1.3.1.7

Food ~~or drink~~ service facilities shall not be located within 12 feet (3658 mm) of the water's edge.

...

454.1.9.8.7.1

Rules and regulations for water theme parks shall be posted in minimum 1-inch (305 mm) letters at each entrance to the park and shall contain the following:

1. No food, ~~drink,~~ glass or animals in or on the pool decks.

454.1.2.3.5 Rules and regulations signage.

Rules and regulations for bathers shall be installed in minimum 1-inch (25.4 mm) letters which must be legible from the pool deck, and shall contain the following:

1. No food or beverages other than water in pool or on pool wet deck.

...

454.1.2.3.5.1

Beverages other than water may be allowed on the pool wet deck provided that the pool has automated oxidation reduction potential (ORP) and pH controllers with sensing probes. For these pools, the rules sign may indicate

1. No food in pool or on pool wet deck.

...

454.1.3.1.7

Food ~~or drink~~ service facilities shall not be located within 12 feet (3658 mm) of the water's edge. However, drinks may be served within 12 feet if:

1. the pool serves a transient facility
2. The pool is equipped with automated oxidation reduction potential (ORP) and pH controllers with sensing probes
3. The pool has a three hour turnover or less,

...

454.1.9.8.7.1

Rules and regulations for water theme parks shall be posted in minimum 1-inch (305 mm) letters at each entrance to the park and shall contain the following:

1. 1.No food, ~~drink,~~ glass or animals in or on the pool decks.

Date Submitted	11/2/2018	**Section**	454.1.2.3.5	**Proponent**	Michael Weinbaum
Chapter	4	**Affects HVHZ**	No	**Attachments**	No
TAC Recommendation	Pending Review				
Commission Action	Pending Review				

Comments

General Comments Yes

Alternate Language Yes

Related Modifications

Summary of Modification

Maximum pool depth added to pool rules sign

Rationale

Pool users sometimes survey all depth markers to decide if the pool is safe for them or their children. They might not notice the one depth marker signifying the deep point of the pool, and putting this info on the rules sign simplifies the search for information

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

Checking for this language should become part of their routine for resurfacing inspections after adoption so as many pools as possible make the change before the deadline

Impact to building and property owners relative to cost of compliance with code

Signs fade out over time anyhow, new text on the sign is not a significant cost.

Impact to industry relative to the cost of compliance with code

None

Impact to small business relative to the cost of compliance with code

Placing the deadline two years in the future should allow all owners to roll this change into their ordinary maintenance.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

All of the rules are for health, safety, and welfare.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

This rule was specifically suggested in sworn testimony from a mother after her child's drowning death in a commercial pool.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

No materials, products, methods, or systems are mentioned

Does not degrade the effectiveness of the code

This change does not allow anything that is restricted today.

Alternate Language

1st Comment Period History

7180-A1

Proponent Michael Weinbaum **Submitted** 1/18/2019 **Attachments** Yes

Rationale

Owners commonly ask for chaise lounge chairs to be placed in the pool, and this does not create health risk.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

The code becomes simpler.

Impact to building and property owners relative to cost of compliance with code

Property owners who desire this arrangement can have it. The code takes something away from them today.

Impact to industry relative to the cost of compliance with code

Nil

Impact to Small Business relative to the cost of compliance with code

Placing the deadline two years in the future should allow all owners to roll this change into their ordinary maintenance.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Removable furniture does not create any new nuisance to health, safety, or welfare

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

The code becomes simpler.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Discrimination is removed

Does not degrade the effectiveness of the code

All the other portions of the rules sign are still required. Rules signs themselves don't go away.

1st Comment Period History

SW7180-G1

Proponent Kari Hebrank **Submitted** 2/13/2019 **Attachments** No

Comment:

The Florida Swimming Pool Association SUPPORTS this code modification.

454.1.2.3.5 Rules and regulations signage.

Rules and regulations for bathers shall be installed in minimum 1-inch (25.4 mm) letters which must be legible from the pool deck, and shall contain the following:

1. No food or beverages in pool or on pool wet deck.
2. No glass or animals in the fenced pool area (or 50 feet (15 240 mm) from unfenced pool).
3. Bathing load: ___ persons.
4. Pool hours: __ a.m. to __ p.m.
5. Shower before entering.
6. Pools of 200 square feet (18.58 m2) in area or greater without an approved diving well configuration shall have “NO DIVING”, in 4 inch (102 mm) letters included with the above listed pool rules.
7. Do not swallow the pool water. This statement shall be added to signs at pools that conduct alterations as that term is defined.
8. If the pool includes a sun shelf, “WARNING: DROP OFF AT SUN SHELF EDGE IS _×_ FEET DEEP” in 4-inch (102 mm) letters.
9. If the pool includes a sun shelf, “DO NOT PLACE FURNITURE IN POOL.”
10. By January 1, 2022, all pools shall add: "POOL MAXIMUM DEPTH: _x_ FEET," in 2" (51 mm) letters with the above listed pool rules

454.1.2.3.5 Rules and regulations signage.

Rules and regulations for bathers shall be installed in minimum 1-inch (25.4 mm) letters which must be legible from the pool deck, and shall contain the following:

1. No food ~~or beverages~~ in pool or on pool wet deck.

2. No glass or animals in the fenced pool area (or 50 feet (15 240 mm) from unfenced pool).

3. Bathing load: ___ persons.

4. Pool hours: __ a.m. to __ p.m.

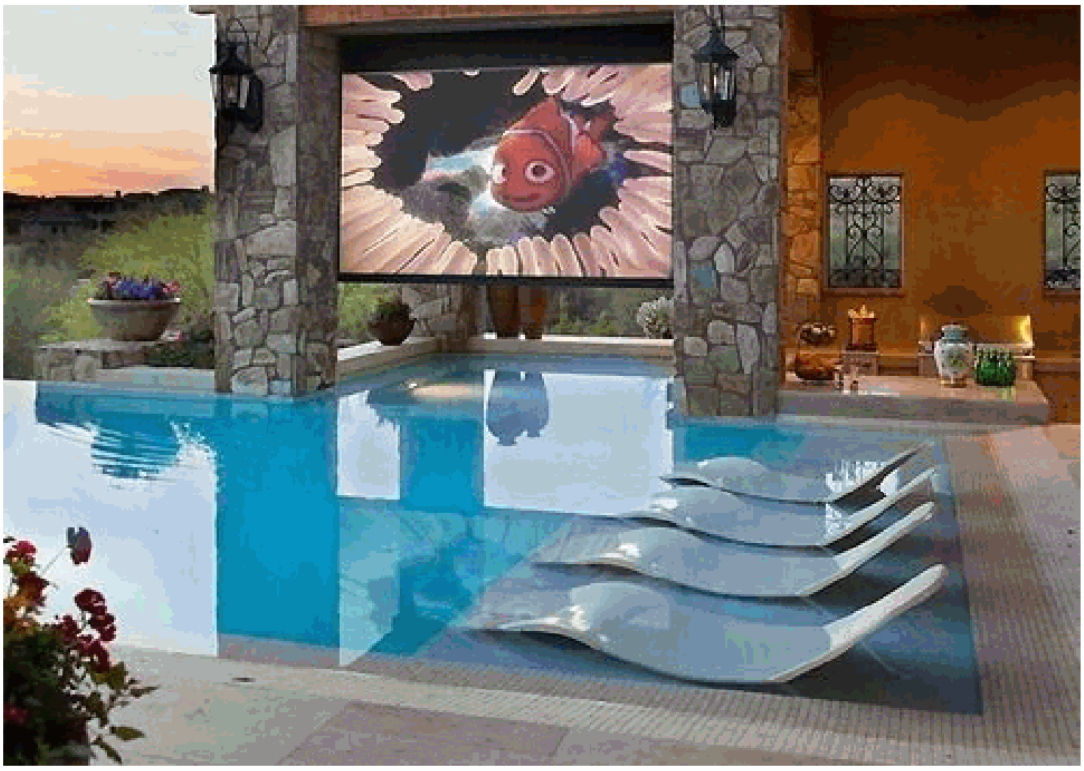
5. Shower before entering.

6. Pools of 200 square feet (18.58 m^2) in area or greater without an approved diving well configuration shall have "NO DIVING", in 4 inch (102 mm) letters included with the above listed pool rules.

7. Do not swallow the pool water. This statement shall be added to signs at pools that conduct alterations as that term is defined.

8. If the pool includes a sun shelf, "WARNING: DROP OFF AT SUN SHELF EDGE IS _×_ FEET DEEP" in 4-inch (102 mm) letters.

~~9. If the pool includes a sun shelf, "DO NOT PLACE FURNITURE IN POOL."~~



Date Submitted	11/5/2018	**Section**	454.1.3.1.2	**Proponent**	Michael Weinbaum
Chapter	4	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Comments

General Comments Yes

Alternate Language Yes

Related Modifications

Summary of Modification

Harmonize code for wet deck slope with ADA cross slope

Rationale

The current building code and current ADA standards leave our builders dealing with a 0.1% construction tolerance at ADA accessible areas.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

The acceptable construction tolerance goes up to 1%, creating less headaches

Impact to building and property owners relative to cost of compliance with code

Less risk of getting into a fight with either Florida DOH or Federal DOJ

Impact to industry relative to the cost of compliance with code

Costs decrease for industry

Impact to small business relative to the cost of compliance with code

Costs decrease for owners

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

The deck must slope away from the pool to minimize the potential for contamination of the pool. This revision still requires some slope in most cases, just less in the specific areas that the disabled population is directed towards.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

In some cases the state code is currently being ignored to minimize exposure to federal problems.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not.

Does not degrade the effectiveness of the code

Does not.

Alternate Language

1st Comment Period History

7190-A1

Proponent Michael Weinbaum **Submitted** 1/3/2019 **Attachments** Yes

Rationale

Original submission 7190 doesn't read as clearly.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

same as original submission

Impact to building and property owners relative to cost of compliance with code

same as original submission

Impact to industry relative to the cost of compliance with code

same as original submission

Impact to Small Business relative to the cost of compliance with code

Costs decrease for owners

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

same as original submission

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

same as original submission

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

same as original submission

Does not degrade the effectiveness of the code

same as original submission

1st Comment Period History

SW7190-G1

Proponent Kari Hebrank **Submitted** 2/14/2019 **Attachments** No

Comment:

The Florida Swimming Pool Association SUPPORTS this code modification.

Pool wet decks shall be uniformly sloped at a minimum of 2 percent to a maximum of 4 percent away from the pool or to deck drains to prevent standing water. The minimum slope for the wet deck shall be one percent less than the maximum allowable cross slope given by the most recent edition ADA Standards for Accessible Design, in the portions of the deck intended to be accessible to disabled persons. Textured deck finishes that provide pitting and crevices of more than 3/16 inch (4.8 mm) deep that accumulate soil are prohibited. If settling or weathering occurs that would cause standing water, the original slopes shall be restored or corrective drains installed. When a curb is provided, the deck shall not be more than 10 inches (254 mm) below the top of the curb.

Pool wet decks shall be uniformly sloped ~~at a minimum of 2 percent to a maximum of 4 percent~~ away from the pool or to deck drains to prevent standing water. The minimum slope for the wet deck is 2 percent, but in the portions of the deck intended to be accessible to disabled persons, it may be one percent less than the maximum allowable cross slope given by the most recent edition ADA Standards for Accessible Design. The maximum slope is 4 percent. Textured deck finishes that provide pitting and crevices of more than 3/16 inch (4.8 mm) deep that accumulate soil are prohibited. If settling or weathering occurs that would cause standing water, the original slopes shall be restored or corrective drains installed. When a curb is provided, the deck shall not be more than 10 inches (254 mm) below the top of the curb.

SW7217

Date Submitted	11/8/2018	**Section**	454.1.2.3.5	**Proponent**	Bruce Petricca
Chapter	4	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Comments

General Comments Yes

Alternate Language No

Related Modifications

As per the change in the DOH rule 64E-9 now allows beverages within the Wet Deck area. this change went into effect in July of 2016. I am requesting the Building department not post signage that is in conflict with this change

Summary of Modification

As per the change in the DOH rule 64E-9 now allows beverages within the Wet Deck area. this change went into effect in July of 2016. I am requesting the Building department not post signage that is in conflict with the DOH change

Rationale

Private 55+ communities still enforce the DOH rule 64E-9 which discriminates against seniors right to have easy access to hydration while taking aerobic therapy. Persons with medical conditions are not allowed easy access to water if this outdated DOH rule is posted at private condo pool areas.

The signage the building dept. requires pool owners in private condo and HOA communities is in conflict with the modifications to the DOH rule change to 64E-9 in July of 2016: Commmunities have removed the verbiage which bans beverage from the wet deck area. Kindly modify the signage in private pools that remove this verbiage. Only glass containers should be banned from the pool wet deck and pool area...as you can see, condo communities are posting conflicting information as per the DOH in Talahassee

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact

Impact to building and property owners relative to cost of compliance with code

This proposed change allows seniors and handicapped persons allowing easy access to hydration, which is essential to senior health

Impact to industry relative to the cost of compliance with code

None

Impact to small business relative to the cost of compliance with code

None

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Seniors must keep hydrated in the heat of the Florida sun while in their community pools. Forcing seniors and handicapped individuals to climb a set of stairs, exit a pool to take c sip of water is detrimental to senior health and welfare

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

The DOH has modified their rule 64E-9, the Building dept signage is now in clnflict

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate

Does not degrade the effectiveness of the code

dose not...the health Department will support this building code modification

1st Comment Period History

Proponent Kari Hebrank **Submitted** 2/13/2019 **Attachments** No

SW7217-G1

Comment:

The Florida Swimming Pool Association SUPPORTS this code proposal.

I m requesting the words *OR BEVERAGES* be removed:

454.1.2.3.5 Rules and regulations signage. Rules and regulations for bathers shall be installed in minimum 1-inch (25.4 mm) letters which must be legible from the pool deck, and shall contain the following:

1. No food ~~**or beverages**~~ in pool or on pool wet deck.
2. No glass or animals in the fenced pool area (or 50 feet (15 240 mm) from unfenced pool).
3. Bathing load: ___ persons.
4. Pool hours: __ a.m. to __ p.m.
5. Shower before entering.
6. Pools of 200 square feet (18.58 m_2) in area or greater without an approved diving well configuration shall have “NO DIVING”, in 4 inch (102 mm) letters included with the above listed pool rules.
7. Do not swallow the pool water. This statement shall be added to signs at pools that conduct alterations as that term is defined.
8. If the pool includes a sun shelf, “WARNING: DROP OFF AT SUN SHELF EDGE IS _:_ FEET DEEP” in 4-inch (102 mm) letters.
9. If the pool includes a sun shelf, “DO NOT PLACE FURNITURE IN POOL.”

T

SW7222

Date Submitted	11/8/2018	**Section**	454	**Proponent**	Robert Cohen
Chapter	4	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Comments

General Comments Yes

Alternate Language Yes

Related Modifications

none

Summary of Modification

Change section 454.1.4.2.3 from that in the 2017 FBC back to that in the 2014 FBC

Rationale

There are NO requirements in Chapter 27 of the 2017 FBC specific to swimming pool underwater luminaires.
The wording of the 2014 FRC is more complete and specifically makes it much easier to determine that LED or similar luminaires are acceptable.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

Much easier to determine acceptability of alternate (LED) luminaires for underwater swimming pool lighting.

Impact to building and property owners relative to cost of compliance with code

None or reduced.

Impact to industry relative to the cost of compliance with code

None or reduced

Impact to small business relative to the cost of compliance with code

None or reduced

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Provide better safety for underwater swimming pool lighting.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Makes it much easier to determine Code compliance of alternate luminiaires.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

None. Provides for alternate products

Does not degrade the effectiveness of the code

NO, it improves it.

Alternate Language

1st Comment Period History

7222-A1

Proponent Robert Cohen **Submitted** 2/18/2019 **Attachments** Yes

Rationale

Revised proposed change 7222 in response to comments G1 and G2.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

none - reverts to 2014 level of requirements

Impact to building and property owners relative to cost of compliance with code

unknown - reverts to 2014 level of requirements

Impact to industry relative to the cost of compliance with code

unknown - reverts to 2014 level of requirements

Impact to Small Business relative to the cost of compliance with code

None or reduced

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Provides for outdoor night swimming and indoor swimming life safety protections as in the 2014 FBC and years of prior practice in Florida.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Provides for outdoor night swimming and indoor swimming life safety protections as in the 2014 FBC and years of prior practice in Florida.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Yes - incorporates easier rules for alternate luminaires

Does not degrade the effectiveness of the code

no

1st Comment Period History

SW7222-G1

Proponent Kari Hebrank **Submitted** 2/13/2019 **Attachments** No

Comment:

The Florida Swimming Pool Association is OPPOSED to this code proposal which would revert to the 2014 FBC underwater lighting standards.

1st Comment Period History

SW7222-G2

Proponent James LePetrie **Submitted** 2/15/2019 **Attachments** No

Comment:

If this passes there ought to be language for LED lights that allows depth of submersion to be according to manufacturer's specifications. 18" is not necessary for these types of lights.

454.1.4.2.3 Underwater lighting. ~~Underwater luminaires shall comply with Chapter 27 of the Florida Building Code, Building. The location of the underwater luminaires shall be such that the underwater illumination is as uniform as possible. Underwater lighting requirements can be waived when the overhead lighting provides at least 15 footcandles (150 lux) of illumination at the pool water surface and pool wet deck surface.~~

Underwater lighting shall utilize transformers and low-voltage circuits with each underwater light being grounded. The maximum voltage for each light shall be 15 volts and the maximum incandescent lamp size shall be 300 watts. The location of the underwater lights shall be such that the underwater illumination is as uniform as possible and shall not be less than 18 inches (457 mm) below the normal operating water level determined by the center-line of the skimmer or top lip of the gutter. All underwater lights which depend upon submersion for safe operation shall have protection from overheating when not submerged. Underwater lighting requirements can be waived when the overhead lighting provides at least 15 footcandles (150 lux) of illumination at the pool water surface and pool wet deck surface. Alternative lighting systems which use 15 volts or less, or use no electricity in the pool or on the pool deck, such as LED (light emitting diode) fiber-optic systems, may be utilized if the manufactures specifications provide for the equivalency in watt output.

Revise Sections 454.1.4.2.1, 454.1.4.2.2 and 454.1.4.2.3 as follows:

454.1.4.2.1 Outdoor pool lighting. Lighting shall provide a minimum of 3 footcandles (30 lux) of illumination at the pool water surface and the pool wet deck surface. The location of the underwater lights shall be such that the underwater illumination is as uniform as possible and shall not be less than 18 inches (457 mm) below the normal operating water level determined by the center-line of the skimmer or top lip of the gutter or as required or recommended by the luminaire manufacturer. Underwater lighting shall be a minimum of ~~1/2~~0.5 watt per square foot of pool water surface area when incandescent luminaires are used. Alternative lighting systems such as LED (light emitting diode) or fiber-optic systems, may be utilized if the manufacturer's specifications provide for the equivalency to incandescent illumination provided at 0.5 watt per square foot or where a professional engineer certifies that the equivalent illumination will be provided.

454.1.4.2.2 Indoor pool lighting. Lighting shall provide a minimum of 10 foot candles (100 lux) of illumination at the pool water surface and the pool wet deck surface. The location of the underwater lights shall be such that the underwater illumination is as uniform as possible and shall not be less than 18 inches (457 mm) below the normal operating water level determined by the center-line of the skimmer or top lip of the gutter or as required or recommended by the luminaire manufacturer. Underwater lighting shall be a minimum of ~~8/10~~ 0.8 watt per square foot of pool water surface area when incandescent luminaires are used. Alternative lighting systems such as LED (light emitting diode) or fiber-optic systems, may be utilized if the manufacturer's specifications provide for the equivalency to incandescent illumination provided at 0.8 watt per square foot or where a professional engineer certifies that the equivalent illumination will be provided..

454.1.4.2.3 Underwater lighting. Underwater luminaires shall comply with Chapter 27 of the *Florida Building Code, Building*. The location of the underwater luminaires shall be as specified in 454.1.4.2.1 or 454.1.4.2.2 and shall be such that the underwater illumination is as uniform as possible. Underwater lighting requirements ~~can~~ may be waived when the overhead lighting provides at least 15 footcandles (150 lux) of illumination at the pool water surface and pool wet deck surface.

Comment response re: mod 7222-G1. February 18, 2019 robert.cohen92023@gmail.com 703-618-1753

FBC 2014	FBC 2017	PROPOSED FBC 2020	PROPOSED CHANGES from 2017 to 2020
454.1.4 Electrical systems.	**454.1.4 Electrical systems.**	**454.1.4 Electrical systems.**	**none**
454.1.4.1 Electrical equipment and wiring. Electrical equipment wiring and installation, including the grounding of pool components shall conform with Chapter 27 of this code.	**454.1.4.1 Electrical equipment and wiring.** Electrical equipment wiring and installation, including the grounding of pool components shall conform with Chapter 27 of this code.	**454.1.4.1 Electrical equipment and wiring.** Electrical equipment wiring and installation, including the grounding of pool components shall conform with Chapter 27 of this code.	**none**
454.1.4.2 Lighting. Artificial lighting shall be provided at all swimming pools which are to be used at night or which do not have adequate natural lighting so that all portions of the pool, including the bottom, may be readily seen without glare.	**454.1.4.2 Lighting.** Artificial lighting shall be provided at all swimming pools which are to be used at night or which do not have adequate natural lighting so that all portions of the pool, including the bottom, may be readily seen without glare.	**454.1.4.2 Lighting.** Artificial lighting shall be provided at all swimming pools which are to be used at night or which do not have adequate natural lighting so that all portions of the pool, including the bottom, may be readily seen without glare.	**none**
454.1.4.2.1 Outdoor pool lighting. Lighting shall provide a minimum of 3 footcandles (30 lux) of illumination at the pool water surface and the pool wet deck surface. Underwater lighting shall be a minimum of 1/2 watt per square foot of pool water surface area.	**454.1.4.2.1 Outdoor pool lighting.** Lighting shall provide a minimum of 3 footcandles (30 lux) of illumination at the pool water surface and the pool wet deck surface. Underwater lighting shall be a minimum of 1/2 watt per square foot of pool water surface area.	**454.1.4.2.1 Outdoor pool lighting.** Lighting shall provide a minimum of 3 footcandles (30 lux) of illumination at the pool water surface and the pool wet deck surface. The location of the underwater lights shall be such that the underwater illumination is as uniform as possible and shall not be less than 18 inches (457 mm) below the normal operating water level determined by the center-line of the skimmer or top lip of the gutter or as required or recommended by the luminaire manufacturer. Underwater lighting shall be a minimum of 1/2 watt per square foot of pool water surface area when incandescent luminaires are used. Alternative lighting systems such as LED (light emitting diode) or fiber-optic systems, may be utilized if the manufacturer's specifications provide for the equivalency to incandescent illumination provided at 0.5 watt per square foot or where a professional	**Revised to be equivalent to underwater illumination levels as in the 2014 and 2017 FBC and as suggested by Mod comments 7222-G1 and G2.**

		engineer certifies that the equivalent illumination will be provided.	
454.1.4.2.2 Indoor pool lighting. Lighting shall provide a minimum of 10 foot candles (100 lux) of illumination at the pool water surface and the pool wet deck surface. Underwater lighting shall be a minimum of 8/10 watt per square foot of pool surface area.	**454.1.4.2.2 Indoor pool lighting.** Lighting shall provide a minimum of 10 foot candles (100 lux) of illumination at the pool water surface and the pool wet deck surface. Underwater lighting shall be a minimum of 8/10 watt per square foot of pool surface area.	**454.1.4.2.2 Indoor pool lighting.** Lighting shall provide a minimum of 10 foot candles (100 lux) of illumination at the pool water surface and the pool wet deck surface. The location of the underwater lights shall be such that the underwater illumination is as uniform as possible and shall not be less than 18 inches (457 mm) below the normal operating water level determined by the center-line of the skimmer or top lip of the gutter or as required or recommended by the luminaire manufacturer. Underwater lighting shall be a minimum of 8/10 watt per square foot of pool water surface area when incandescent luminaires are used. Alternative lighting systems such as LED (light emitting diode) or fiber-optic systems, may be utilized if the manufacturer's specifications provide for the equivalency to incandescent illumination provided at 0.8 watt per square foot or where a professional engineer certifies that the equivalent illumination will be provided..	**Revised to be equivalent to underwater illumination levels as in the 2014 and 2017 FBC and as suggested by Mod comments 7222-G1 and G2.**
454.1.4.2.3 Underwater lighting. Underwater lighting shall utilize transformers and low-voltage circuits with each underwater light being grounded. The maximum voltage for each light shall be 15 volts and the maximum incandescent lamp size shall be 300 watts. The location of the underwater lights shall be such that the underwater illumination is as uniform as possible and shall not be less than 18 inches (457 mm) below the normal	**454.1.4.2.3 Underwater lighting.** Underwater luminaires shall comply with Chapter 27 of the *Florida Building Code, Building*. The location of the underwater luminaires shall be such that the underwater illumination is as uniform as possible. Underwater lighting requirements can be waived when the overhead lighting provides at least 15 footcandles (150 lux) of illumination at the pool water surface and pool wet deck surface.	**454.1.4.2.3 Underwater lighting.** Underwater luminaires shall comply with Chapter 27 of the *Florida Building Code, Building*. The location of the underwater luminaires shall be as specified in 454.1.4.2.1 or 454.1.4.2.2 and shall be such that the underwater illumination is as uniform as possible. Underwater lighting requirements ~~can~~ may be waived when the overhead lighting provides at least 15 footcandles	**Revised to add cross references.**

operating water level determined by the center-line of the skimmer or top lip of the gutter. All underwater lights which depend upon submersion for safe operation shall have protection from overheating when not submerged. Underwater lighting requirements can be waived when the overhead lighting provides at least 15 footcandles (150 lux) of illumination at the pool water surface and pool wet deck surface. Alternative lighting systems which use 15 volts or less, or use no electricity in the pool or on the pool deck, such as LED (light emitting diode) fiber-optic systems, may be utilized if the manufactures specifications provide for the equivalency in watt output.		(150 lux) of illumination at the pool water surface and pool wet deck surface.	
454.1.4.2.4 Overhead wiring. Overhead service wiring shall not pass within an area extending a distance of 10 feet (3048 mm) horizontally away from the inside edge of the pool walls, diving structures, observation stands, towers or platforms. Allowances for overhead conductor clearances to pools that meet the safety standards in the *National Electrical Code* may be used instead. Electrical equipment wiring and installation, including the grounding of pool components, shall comply with Chapter 27 of this code.	**454.1.4.2.4 Overhead wiring.** Overhead service wiring shall not pass within an area extending a distance of 10 feet (3048 mm) horizontally away from the inside edge of the pool walls, diving structures, observation stands, towers or platforms. Allowances for overhead conductor clearances to pools that meet the safety standards in the *National Electrical Code* may be used instead. Electrical equipment wiring and installation including the grounding of pool components shall comply with Chapter 27 of the *Florida Building Code, Building*.	**454.1.4.2.4 Overhead wiring.** Overhead service wiring shall not pass within an area extending a distance of 10 feet (3048 mm) horizontally away from the inside edge of the pool walls, diving structures, observation stands, towers or platforms. Allowances for overhead conductor clearances to pools that meet the safety standards in the *National Electrical Code* may be used instead. Electrical equipment wiring and installation including the grounding of pool components shall comply with Chapter 27 of the *Florida Building Code, Building*.	

SW7258

Date Submitted	11/13/2018	**Section**	454.1.6.5.8	**Proponent**	Michael Weinbaum
Chapter	4	**Affects HVHZ**	No	**Attachments**	Yes

TAC Recommendation Pending Review
Commission Action Pending Review

Comments

General Comments Yes

Alternate Language Yes

Related Modifications

454.1.6.5.10.2,
454.1.7.3.2,
454.1.9.2.1.4,
454.1.9.2.3.5,
454.1.9.2.3.6,

Summary of Modification

Allow designers to exceed 3 ft/s and 1.5 ft/s rule so long as design otherwise complies with ANSI/APSP 16

Rationale

Here the building code conflicts with national standards and current practice from leading drain grate manufacturers. Note the attached drawing. This popular drain grate is stamped with a maximum, national code compliant flow rate of 816 gallons per minute, but only accepts an 8" pipe. In Florida currently, a pool builder can only route about 500 gallons per minute through this drain, legally, because any faster would violate the 3 ft/s rule for pipes. Further, flows above about 570 gallons per minute would violate the 1.5 ft/s rule.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

Code enforcement becomes simpler

Impact to building and property owners relative to cost of compliance with code

The costs to owners are reduced as fewer drains and pipes are needed.

Impact to industry relative to the cost of compliance with code

This revision is intended to make full use of products that industry is already providing.

Impact to small business relative to the cost of compliance with code

Small businesses will see reduced costs.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Yes, it is of paramount importance to prevent suction entrapment.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Yes, the national codes mirror the Florida code in the case of field-built sumps, requiring no more than 1.5 ft/s at the grate. With manufactured sumps, specific tests are done to verify the safety of higher flow rates

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

This code allows manufactured sumps and grates to be specified within the full extent of their tested capabilities

Does not degrade the effectiveness of the code

Yes, the national codes mirror the Florida code in the case of field-built sumps, requiring no more than 1.5 ft/s at the grate. With manufactured sumps, specific tests are done to verify the safety of higher flow rates

Alternate Language

1st Comment Period History

7258-A1

Proponent Michael Weinbaum **Submitted** 2/18/2019 **Attachments** Yes

Rationale

ANSI/APSP compliant sumps and grates are often designed to be safe while more than 3 ft/s flows through the drain piping.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

One less thing to check

Impact to building and property owners relative to cost of compliance with code

Smaller pipes and fewer sumps may be used

Impact to industry relative to the cost of compliance with code

Makes better use of what industry already offers

Impact to Small Business relative to the cost of compliance with code

Small businesses will see reduced costs.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

The 1.5 ft/s rule on grates concerns a part of the pool that users will actually touch. The 6 ft/s on suction pipes prevents cavitation. The 10 ft/s on discharge pipes prevents erosion. This 3 ft/s rule does not help the same way and should go.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Allows the designer to use product as the manufacturer intended

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Allows the designer to use product as the manufacturer intended

Does not degrade the effectiveness of the code

Allows the designer to use product as the manufacturer intended

1st Comment Period History

SW7258-G1

Proponent Michael Weinbaum **Submitted** 1/8/2019 **Attachments** No

Comment:

What I wrote under "rationale" has a math error.
The 1.5 ft/s rule would actually limit the grate shown in the attached drawing to 855 gallons per minute, not 570 like I wrote. But the ANSI/APSP-16 rating is less, 816 gpm is stamped on the grate. As written, Florida code requires the engineer and the building department official to check three things: the ANSI/APSP-16 flow rate, and the open area, and the pipe connection size, and then do math to figure out which of the three works out to less flow. This seems like unnecessary work in light of how much testing the manufacturers perform to obtain their ANSI/APSP-16 flow rate.

1st Comment Period History

SW7258-G2

Proponent Kari Hebrank **Submitted** 2/13/2019 **Attachments** No

Comment:

The Florida Swimming Pool Association is OPPOSED to this code modification because it exceeds all other design standards and there are safety concerns with maximum flow velocity.

1st Comment Period History

SW7258-G3

Proponent robert vincent **Submitted** 2/18/2019 **Attachments** No

Comment:

This Mod will weaken the code for anti-entrapment and would likely violate the federal law for pool suction outlet anti-entrapment which references the national suction outlet standard in the FBC, as does also the Florida Statute at s.514.0315(1). There is no need to eliminate the 1.5 ft/s flow through main drains as all professional designers are familiar with the FBC and the gravity drainage criteria. When a lab using the nationally referenced standard tests a drain grate at 1.4 ft/s or less, this is reflected in published spec sheets of the manufacturer and compiled in a code compliant drain list by the Dept. of Health on the public swimming pool webpage: http://www.floridahealth.gov/environmental-health/swimming-pools/index.html
Florida's gravity flow systems to collector tanks, combined with the current maximum flow velocities through main drain gates, suction, gravity and pressure lines has served the citizens of this State well – without a single documented suction entrapment. The issue of direct suction vacuum ports is recognized and a proposed code modification has been submitted to address this issue.

454.1.6.5.8 Flow velocity.
Pressure piping shall not exceed 10-feet per second (2038 mm/s), except that precoat lines with higher velocities may be used when necessary for agitation purposes. The flow velocity in suction piping shall not exceed 6-feet per second (1829 mm/s) except that flow velocities up to 10-feet per second (3048 mm/s) in filter assembly headers will be acceptable. ~~Main drain systems and s~~Surface overflow systems which discharge to collector tanks shall be sized with a maximum flow velocity of 3-feet per second (914 mm/s). The filter and vacuuming system shall have the necessary valves and piping to allow filtering to pool, vacuuming to waste, vacuuming to filter, complete drainage of the filter tank, backwashing for sand and pressure D.E.- type filters and precoat recirculation for D.E.-type filters.

...

454.1.6.5.10.2
Outlets shall comply with ASME A112.19.8 and ANSI/APSP-16.If these standards are deprecated, or if a revision to them, or a novel design approach, casts doubt on their applicability, outlets shall instead be covered by a secured grating which requires the use of a tool to remove and whose open area is such that the maximum velocity of water passing through the openings does not exceed $1^1/_2$ feet per second (457 mm/s) at 100 percent of the design recirculation flow. ~~Main drain covers/grates shall comply with the requirements of ANSI/APSP-16 and the water velocity of this section.~~

...

454.1.7.3.2

The grate cover shall be sized ~~so as not to allow the flow to exceed $1^1/_2$ feet per second (457 mm/s)~~ to comply with 454.1.6.5.10.2when the equalizer line is operating.

...

454.1.9.2.1.4 Plunge pool main drains.

The plunge pool shall have a minimum of one main drain with separate piping and valve to the filtration system collector tank. The ~~velocity through the openings of the~~ main drain grate shall comply with 454.1.6.5.10.2 ~~not exceed $1^1/_2$ feet per second (457 mm/s)~~ at the design flow rate of the recirculation pump. ~~The main drain piping shall be sized to handle 100 percent of the design flow rate of the filtration system with a maximum flow velocity of 3 feet (914 mm) per second.~~

...

454.1.9.2.3.5 Pump reservoir main drains.
The pump reservoir shall have a minimum of one main drain with separate piping and valve to the filtration system collector tank and ~~the velocity through the openings of the main drain grates shall not exceed 11/2 feet per second (457 mm/s)~~ comply with 454.1.6.5.10.2 at the design flow rate of the filtration system pump. ~~The main drain piping shall be sized to handle 100 percent of design flow rate of the filtration system pump with a maximum flow velocity of 3 feet per second (914 mm/s).~~

454.1.9.2.3.6
The pump reservoir shall be fed by main drains within the plunge pool itself (either in the floor or side wall). They shall comply with 454.1.6.5.10.2. ~~have the maximum flow velocity of 11/2 feet per second (457 mm/s) through the main drain grating and 3 feet per second (3962 mm/s) through the reservoir piping.~~

454.1.6.5.8Flow velocity.

Pressure piping shall not exceed 10-feet per second (2038 mm/s), except that precoat lines with higher velocities may be used when necessary for agitation purposes. The flow velocity in suction piping shall not exceed 6-feet per second (1829 mm/s) except that flow velocities up to 10-feet per second (3048 mm/s) in filter assembly headers will be acceptable. ~~Main drain systems and s~~Surface overflow systems which discharge to collector tanks shall be sized with a maximum flow velocity of 3-feet per second (914 mm/s). The filter and vacuuming system shall have the necessary valves and piping to allow filtering to pool, vacuuming to waste, vacuuming to filter, complete drainage of the filter tank, backwashing for sand and pressure D.E.- type filters and precoat recirculation for D.E.-type filters.

...

454.1.9.2.1.4 Plunge pool main drains.

The plunge pool shall have a minimum of one main drain with separate piping and valve to the filtration system collector tank. The velocity through the openings of the main drain grate shall not exceed $1^1/_2$ feet per second (457 mm/s) at the design flow rate of the recirculation pump. ~~The main drain piping shall be sized to handle 100 percent of the design flow rate of the filtration system with a maximum flow velocity of 3 feet (914 mm) per second.~~

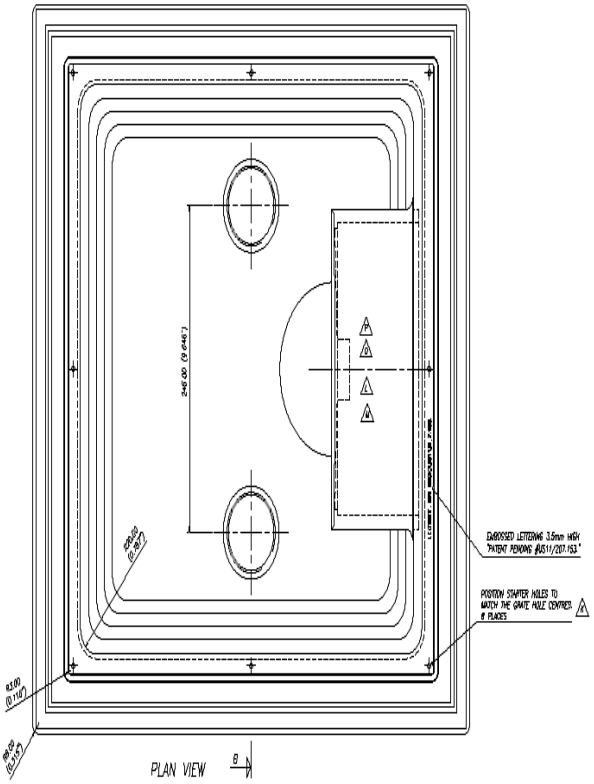
...

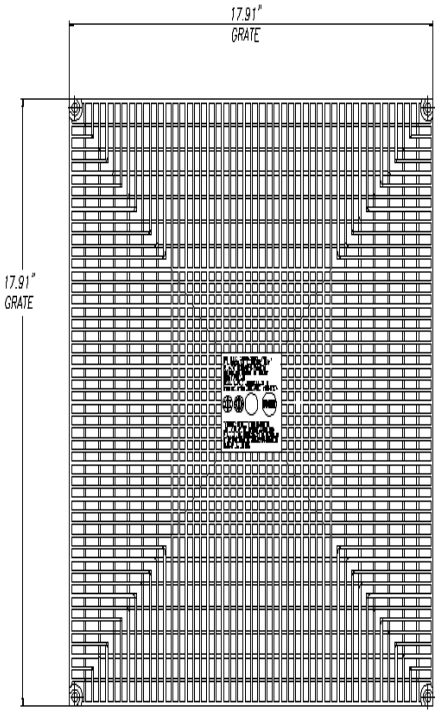
454.1.9.2.3.5 Pump reservoir main drains.

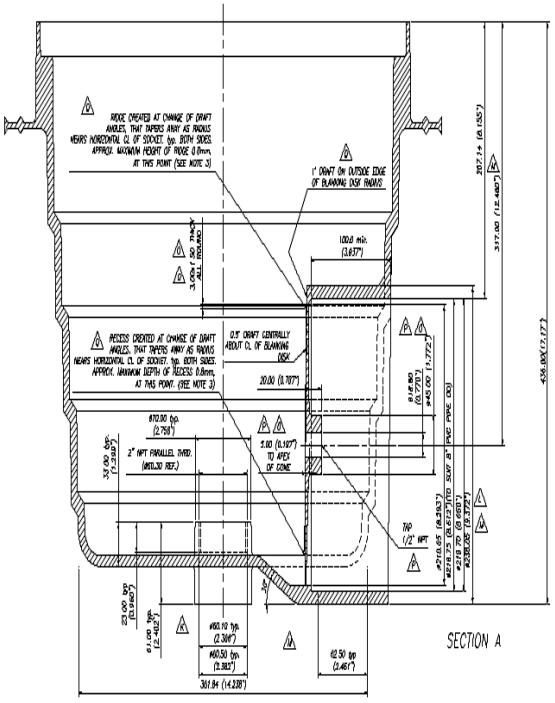
The pump reservoir shall have a minimum of one main drain with separate piping and valve to the filtration system collector tank and the velocity through the openings of the main drain grates shall not exceed $1^1/_2$ feet per second (457 mm/s) at the design flow rate of the filtration system pump. ~~The main drain piping shall be sized to handle 100 percent of design flow rate of the filtration system pump with a maximum flow velocity of 3 feet per second (914 mm/s).~~

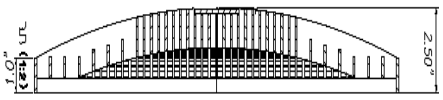
454.1.9.2.3.6

The pump reservoir shall be fed by main drains within the plunge pool itself (either in the floor or side wall). They shall have the maximum flow velocity of 11/2 feet per second (457 mm/s) through the main drain grating ~~and 3 feet per second (3962 mm/s) through the reservoir piping.~~









All drawing dimensions supplied by Lawson Aquatics Inc. website are for reference only. All CAD files were created using AutoCAD file (*dwg.) and were posted on the website as a service to our customers using AutoCAD. Errors sometimes occur during this process and with software incompatibility upon opening a file. Lawson Aquatics Inc. and/or any authorized distributor of our products will not be held responsible for problems arising from files which have been converted and does not warranty the documents against deficiencies or typographical errors of any kind. We recommend that all measurements are verified with actual physical product before any custom fabrication in the field occurs.

ITEM #	MOULDED LABELLING: PVC WHITE ONLY	SCALE :	LAWSON AQUATICS
MLD-SG-1818-WT(WHITE)	PVC WHITE / BLACK	REVISED	DRAWING NAME: 18" X 18" MAIN DRAIN SUMP AND GRATE
MLD-SG-1818-BK(BLACK)		DRAWING No: MLD-SG-1818	

SW7259

Date Submitted	11/13/2018	**Section**	454.1.1.1	**Proponent**	Michael Weinbaum
Chapter	4	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Comments

General Comments Yes **Alternate Language** No

Related Modifications

Summary of Modification

Sizing code revised

Rationale

Owners are struggling to comply with the existing code, giving unexpected and undesirable results.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

The code actually becomes simpler because the math will be the same regardless of pool classification.

Impact to building and property owners relative to cost of compliance with code

Owners will have more and less expensive options to comply with the code.

Impact to industry relative to the cost of compliance with code

No new products are required

Impact to small business relative to the cost of compliance with code

New and remodeled facilities will have lower costs for adding pools

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Overcrowded pools give an ugly image and can overwhelm pool sanitation systems

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

This creates a stronger tie between the intended use of the pool and the required rate of cleaning the pool water.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

This eliminates a discrimination between pools vs. spas and IWFs

Does not degrade the effectiveness of the code

Higher turnover rates are still encouraged where usage is expected to be high.

1st Comment Period History

SW7259-G1

Proponent Kari Hebrank **Submitted** 2/13/2019 **Attachments** No

Comment:

The Florida Swimming Pool Association SUPPORTS this proposed code modification.

454.1.1.1 Sizing.

The bathing load for conventional swimming pools, spas, wading pools, interactive water features, water activity pools ~~less than 24 inches (610 mm) deep~~ and special purpose pools shall be computed either on the basis of one person per 5 gpm (0.32 L/s) of recirculation flow, or ~~. The bathing load for spa type pools shall be based on~~ one person per each 10 square feet (0.9 m^2) of surface area, whichever is less. ~~The filtration system for swimming pools shall be capable of meeting all other requirements of these rules while providing a flow rate of at least 1 gpm (0.06 L/s) for each living unit at transient facilities and $^3/_4$ gpm (0.04 L/s) at nontransient facilities.~~ The pools provided at a transient facility shall be able to accommodate one bather per five living units, while the bathing load at a non-transient facility shall be at least one bather per seven living units. Recreational vehicle sites, campsites and boat slips designated for live-aboards shall be considered a transient living unit. For properties with multiple pools, this requirement includes the cumulative total ~~gpm~~ bathing load of all swimming pools, ~~excluding~~ spas, wading pools and interactive water features. All other types of projects shall be sized according to the anticipated bathing load and proposed uses. ~~For the purpose of determining minimum pool size only, the pool turnover period used cannot be less than 3 hours.~~

SW7549

Date Submitted	12/4/2018	**Section**	454.1.9.8	**Proponent**	Nikki Barney
Chapter	4	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Comments

General Comments No

Alternate Language No

Related Modifications

454.1.9.8.3

Summary of Modification

Mod to require pH adjustment chemicals to be fed ONLY into Holding tank and ORP tested in Holding Tank in regards to Interactive Water Features

Rationale

In 454.1.9.8 there is not a definitive location stated for pH adjustment chemicals for pH balancing. In current and previous years (Jan 1, 2015-Present day)Engineers and pool builders / operators are locating the pH adjustment chemicals into a closed pipe after filtration as the final treatment alongside the required disinfection chemical feeder into the closed water pipe going directly to the feature. The introduction of Acid and other chemicals for pH balance are not being diluted when this occurs and is sending a high quantity of "Acid' to the patrons of the water feature. The soft surfacing, AquaFlex, we manufacture and Install for safety and protection from slip and fall injuries, gets damaged within six months to one year of its life, where expected life-cycle is seven years. This shortening of life cycle in our soft surface is a tell-tale sign the patrons of the water features are being exposed to high amounts of Acid. In the beginning of our companies AquaFlex installations in Florida (2008) until 2014, the surface would survive the chemicals in treated pool water for approximately 7 years, starting in 2015 through current day, as the FBC pool code is written now, our surface is attacked by Acid and is only serving the end-users for approximately one year before repairs and or replacement is required. Through our in-house and 3rd-party testing, we are sure it is the Acid component in the water that is destroying the surface. Our manufacturer installs this surfacing product worldwide and ONLY sees the damaged (softening / sticky) surface in Florida. The pH balancing chemicals are only injected into the holding tank and pH is only balanced in the holding tank in all other states of the United States. Florida is the only state with Acid going directly to the features without dilution. The code needs to be revised to give more direction of proper location of pH balancing chemical introduction.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No Impact

Impact to building and property owners relative to cost of compliance with code

They will save money in maintaining their soft surface and protect their patrons better.

Impact to industry relative to the cost of compliance with code

No Impact, only change in design and location of injection for pH balancing chemicals

Impact to small business relative to the cost of compliance with code

Relocation of pH balancing chemicals should not have a huge cost associated for the operators. The cost of damage to their soft surfaces and patrons outweighs any monetary cost of the relocation of injection site.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Since 2015 the engineers / designers place the acid injection next to Chlorine injection, of which CL is required in return line to features. When this occurs, the pH levels intermittently reaching the feature is in the lower 6's or even 5's. Very dangerous for peoples health.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Proposed Mod will be better for patrons and the life cycle of the soft surfacing operators prefer using to protect patrons from slip and fall injuries. Water should always be balanced in holding tank.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

the proposed mod is fair and actually protects our product from becoming obsolete in the market, due to high concentration of acid exposure, our surface is only lasting 1-2 years compared to original life cycle in FL of 5-7 years.

Does not degrade the effectiveness of the code

Absolutely not. Actually protects patrons better than way code is interpreted now.

454.1.9.8 Interactive Water Features

454.1.9.8.3 Chemical Feeders shall be in accordance with section 454.1.6.5; except that the disinfection feeder shall be capable of feeding 12ppm of free chlorine to the pressure side of the recirculation system or the collector tank (based on hypothetical 30-minute turnover of contained volume within the system) Automated oxidation reduction potential (ORP) and pH controllers with sensing probes shall be installed to assist in maintaining proper disinfection and pH levels. pH Adjustment Chemicals to be introduced in the Holding Tank Only. pH Balance to be probe tested and achieved in Holding Tank before water is pumped to the filters and water feature.

SW7656

Date Submitted	12/3/2018	**Section**	454.1.6.5.12	**Proponent**	Kari Hebrank
Chapter	4	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Comments

General Comments Yes

Alternate Language Yes

Related Modifications

Summary of Modification

This proposed modification addresses gravity suction on vacuum lines and is intended to prevent injuries (typically to children) by removing the direct suction line out of the pool. There have been more than 1400 citations in the last year by Dept. of Health for safety violations with covers.

Rationale

1.Rationale: There have been numerous accidents resulting in serious injuries where people (mostly children) have gotten limbs and other appendages stuck in the vacuum port. Sometimes this has led to the pool wall being cut out in order to free the person. The locking cover that is supposed to protect the vacuum port is poorly designed and requires an adapter in order to insert the vacuum hose. The adapter is frequently lost and if the cover is removed, the vacuum hose fits. This leads service personnel to loosen the cover for ease of removal which then frequently gets lost. It is responsible for many safety violations cited each year by the Dept. of Health.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None

Impact to building and property owners relative to cost of compliance with code

None for new construction and is a safer approach

Impact to industry relative to the cost of compliance with code

None

Impact to small business relative to the cost of compliance with code

None

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Yes, provides a safer approach and will reduce the number of injuries and safety violations

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Yes, it removes the source of the danger from the pool and reduces safety violations. During the last year, the Florida Dept. of Health has issued more than 1400 violations for vacuum-related issues at public pools.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

The proposed amendment does not discriminate against materials, products, methods or systems of construction of demonstrated capabilities.

Does not degrade the effectiveness of the code

The amendment does not degrade the effectiveness of the code.

Alternate Language

1st Comment Period History

7656-A2

Proponent Kari Hebrank **Submitted** 2/17/2019 **Attachments** Yes

Rationale

The latest ANSI/APSP-16 version is 2017, not 2011.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

This code modification provides clarity for the local building officials for code enforcement.

Impact to building and property owners relative to cost of compliance with code

There is no negative cost impact to the building and property owners.

Impact to industry relative to the cost of compliance with code

This code change makes sure the industry utilizes the latest referenced standard in compliance with the building code.

Impact to Small Business relative to the cost of compliance with code

None

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

This code change makes sure the health, safety and welfare of the general public is protected by referring to the latest industry referenced standard.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

This change improves the code by keeping it current with the latest standard.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

This code proposal does not discriminate against products, methods or systems of construction of demonstrated capabilities.

Does not degrade the effectiveness of the code

This code change does not degrade the effectiveness of the building code.

1st Comment Period History

SW7656-G1

Proponent Kari Hebrank **Submitted** 2/13/2019 **Attachments** No

Comment:

The Florida Swimming Pool Association (FSPA) SUPPORTS this code change as it will enhance pool safety and prevent injuries by removing the direct suction line out of the pool.

454.1.6.5.12 Cleaning system.

A portable, robotic, or plumbed in vacuum cleaning system shall be provided. All vacuum pumps shall be equipped with hair and lint strainers. When the system is plumbed in, the vacuum fittings shall be located to allow cleaning the pool with a 50-foot (15 240 mm) maximum length of hose. Vacuum fittings shall be ~~mounted no more than 15 inches (381 mm) below the water level, flush with the pool walls, and shall be provided with a spring-loaded safety cover which shall be in place at all times when the pool is not being vacuumed~~ located remotelyin the pool deck. Remote vacuum assemblies shall be installed with an equalizer valve and an equalizer line when the vacuum piping system is connected directly to pump suction and the suction line shall be protected with a threaded plug when not in use. The equalizer valve shall be a spring-loaded vertical check valve which will not allow direct suction on the equalizer line. Float valves are prohibited. The equalizer line inlet shall be installed at least 1 foot (305 mm) below the normal pool water level and the equalizer line inlet shall be protected by an ANSI/APSP-16 compliant cover/grate. The equalizer line shall be sized to handle the expected flow with a 2-inch (51 mm) minimum line size. The provision of a filtered, chemically-treated water supply to the equalizer piping shall be provided to assist in preventing algae from forming within the equalizer piping arrangement. Bag-type cleaners, which operate as ejectors on potable water supply pressure, shall be protected by a vacuum breaker. Cleaning devices shall not be used while the pool is open to bathers.

Also, revise Chapter 35, Reference Standards, to add ANSI/APSP-16 2011 to reference the standard year. See Code Modification 7681.

Also, revise Chapter 35, Reference Standards, to add ANSI/APSP-16 -2017 to reference the standard year. See Code Modification 7681.

SW7658

Date Submitted	12/3/2018	**Section**	454.1.10.1.6	**Proponent**	Kari Hebrank
Chapter	4	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Comments

General Comments Yes

Alternate Language No

Related Modifications

Summary of Modification

Currently, there are older pools that are still in use that were built with 12 inch step risers. When the pools are being resurfaced, the costs to make the step rises comply with 10 inch risers is cost-prohibitive. These risers were approved when the steps were originally built.

Rationale

Currently, there are older pools that are still in use that were built with 12 inch step risers. When the pools are being resurfaced, the costs to make the step rises comply with 10 inch risers is cost-prohibitive. These risers were approved when the steps were originally built.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None

Impact to building and property owners relative to cost of compliance with code

This amendment will make resurfacing projects less expensive for older pools with 12 inch risers.

Impact to industry relative to the cost of compliance with code

None

Impact to small business relative to the cost of compliance with code

None

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Florida Dept. of Health Rule 64E-9 previously allowed for 12 inch risers on renovations only. Returning to this standard may facilitate the renovation of pools in a more timely fashion which leads to safer pools.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

This amendment strengthens the code by providing that older pools may be resurfaced without the need to redesign step risers.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

This amendment does not discriminate against materials, products, methods or systems of construction of demonstrated capabilities.

Does not degrade the effectiveness of the code

This amendment does not degrade the effectiveness of the code.

1st Comment Period History

SW7658-G1

Proponent Kari Hebrank **Submitted** 2/13/2019 **Attachments** No

Comment:

The Florida Swimming Pool Association SUPPORTS this code proposal to return step riser height to 12-inches for resurfacing projects rather than 10 inches.

454.1.10 Resurfacing ~~Modifications.~~

454.1.10.1.6 Should resurfacing works affect the step riser heights, no riser shall exceed 12 ~~10~~ inches (305 ~~254~~ mm) for pools and 12 inches (305mm) for spas, and the intermediate risers shall be made uniform.

SW7798

Date Submitted	12/9/2018	**Section**	454.1.6.1	**Proponent**	Mo Madani
Chapter	4	**Affects HVHZ**	No	**Attachments**	Yes

TAC Recommendation Pending Review
Commission Action Pending Review

Comments

General Comments Yes

Alternate Language No

Related Modifications

Table 406.3 Plumbing

Summary of Modification

Incorporating Commission's declaratory statements as required by 553.73(7)(d), Florida Statutes. DS2018-040

Rationale

To clarify that the square footage of interactive water features are required to be considered when calculating the "size of pool" for purpose of determining the type and number of fixtures for sanitary facilities.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

There is no fiscal impact on the local entity relative to enforcement.

Impact to building and property owners relative to cost of compliance with code

There is no fiscal impact to building and property owners relative to the cost of compliance.

Impact to industry relative to the cost of compliance with code

There is no fiscal impact to industry relative to the cost of compliance.

Impact to small business relative to the cost of compliance with code

There is no fiscal impact to small business relative to the cost of compliance.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Has a reasonable and substantial connection with the health and safety and welfare of the general public - the code change clarifies the code

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Strengthens or improves the code by making the code requirements clearer to the user.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate against materials, products, methods, or systems of construction.
The proposed code change provides clarification to the code.

Does not degrade the effectiveness of the code

Does not degrade the effectiveness of the code.

The code change improves the effectiveness of the code by making it more clear.

1st Comment Period History

SW798-G1

Proponent Kari Hebrank **Submitted** 2/13/2019 **Attachments** No

Comment:

The Florida Swimming Pool Association is OPPOSED to this code modification.

FBC, Building

Revise table to add Note 1

TABLE 454.1.6.1

PUBLIC SWIMMING POOL—REQUIRED FIXTURE COUNT

(No change to the Table)

Note:

[1] Square Footage of Interactive water features are required to be included when calculating the "size of pool" for the purposes of determining the type and number of fixtures for the sanitary facilities.

FBC, Plumbing

Revise table to add Note 1

TABLE 406.3

PUBLIC SWIMMING POOL—REQUIRED FIXTURE COUNT

(No change to the Table)

Note:

[1] Square Footage of Interactive water features are required to be included when calculating the "size of pool" for the purposes of determining the type and number of fixtures for the sanitary facilities.

STATE OF FLORIDA
BUILDING COMMISSION

In the Matter of

G.B. COLLINS ENGINEERING, P.A.

DS 2018-040

Petitioner.
_____/

DECLARATORY STATEMENT

The foregoing proceeding came before the Florida Building Commission (Commission) by a Petition from Samuel A. Liberatore, for G.B. Collins Engineering, P.A. (Petitioner) that was received May 23, 2018. Based on the statements in the petition, the material subsequently submitted and the subsequent request by the Petitioner, the Commission states the following:

Findings of Fact

1. The petition is filed pursuant to, and must conform to the requirements of Rule 28-105.002, Florida Administrative Code.

2. Petitioner's representative in this matter is Samuel A. Liberatore, 300 Alternate 19 North, Suite A, Palm Harbor, FL 34683.

3. Petitioner is a professional design engineering company that is considering undertaking two projects, each of which would include a public swimming pool and interactive water features. The first project would feature a swimming pool with an area of 1,330 square feet, and an interactive water feature with an area of 1,256 square feet. The second project would feature a swimming pool with an area of 1,060 square feet, and an interactive water feature with an area of 2,490 square feet.

4. Petitioner seeks clarification of section 454.1.6.1.1, Florida Building Code, Building, 6th Edition (2017), as it pertains to the provision of sanitary facilities for the projects in question.

5. Specifically, the Petitioner requests an answer to the following question based upon the projects described within the petition for declaratory statement:

> For the prospective projects, should the proposed interactive water features be considered when calculating the "size of pool" for the purpose of determining the type and number of fixtures for sanitary facilities at the accompanying public swimming pools?

Conclusions of Law

6. The Commission has the specific statutory authority pursuant to Section 553.775(3)(a), Florida Statutes (2018) to interpret the provisions of the Florida Building Code by issuing a declaratory statement.

7. Section 454.1, Florida Building Code, Building, 6th Edition (2017), states:

> **Public swimming pools and bathing places.**
> Public swimming pools and bathing places shall comply with the design and construction standards of this section.
>
> **Exceptions:**
> 1. A portable pool used exclusively for providing swimming lessons or related instruction in support of an established educational program sponsored or provided by a school district may not be regulated as a public pool. Such pool shall be regulated as a private swimming pool under Section 454.2.
> 2. A temporary pool may not be regulated as a public pool. Such pool shall be regulated as a private swimming pool under Section 454.2.

8. Section 454.1.1, Florida Building Code, Building, 6th Edition (2017), states:

> **Flood hazard areas.**
> Public swimming pools installed in flood hazard areas established in Section 1612.3 shall comply with Section 1612.

Note: Other administrative and programmatic provisions apply. See Department of Health (DOH) Rule 64E-9, Florida Administrative Code and Chapter 514, Florida Statutes. The regulation and enforcement of the initial and annual operation permit for public pools are preempted to the DOH. The construction permit holder is responsible for obtaining an operation permit issued by DOH, as a public swimming pool shall not be put into operation without an inspection and operation permit issued from the DOH. DOH may grant variances from the provisions of the Florida Building Code specifically pertaining to public swimming pools and bathing places as authorized by Section 514.0115, Florida Statutes. Building officials shall recognize and enforce variance orders issued by the Department of Health pursuant to Section 514.0115(5), Florida Statutes including any conditions attached to the granting of the variance.

"Bathing load" means the maximum number of persons allowed in the pool or bathing place at one time.

...

"Interactive water features" means a structure designed to allow for recreational activities with recirculated, filtered, and treated water; but having minimal standing water. Water from the interactive fountain type features is collected by gravity below grade in a collector tank or sump. The water is filtered, disinfected and then pumped to the feature spray discharge heads. The collector tank and water filtration features required make this structure a type of public swimming pool.

...

A **"public swimming pool" or "public pool"** means a watertight structure of concrete, masonry, or other approved materials which is located either indoors or outdoors, used for bathing or swimming by humans, and filled with a filtered and disinfected water supply, together with buildings, appurtenances, and equipment used in connection therewith. A public swimming pool or public pool shall mean a conventional pool, spa-type pool, wading pool, special purpose pool, interactive water feature or water recreation attraction, to which admission may be gained with or without payment of a fee and includes, but is not limited to, pools operated by or serving camps, churches, cities, counties, day care centers, group home facilities for eight or more clients, health spas, institutions, parks, state agencies, schools, subdivisions, or the cooperative living-type projects of five or more living units, such as apartments, boardinghouses, hotels, mobile home parks, motels, recreational vehicle parks, and townhouses. The term does not include a swimming pool located on the grounds of a private residence.

...
"Spa pool" means a pool used in conjunction with high-velocity air or water.
...
"Wading pool" means a shallow pool designed to be used by children.
"Water recreation attraction" means a facility with design and operational features that provide patron recreational activity and purposefully involves immersion of the body partially or totally in the water. Water recreation attractions include water slides, river rides, water course rides, water activity pools, interactive water features, wave pools and any additional pool within the boundaries of the attraction.
"Water activity pool" means a water recreation attraction which has water-related activities such as rope ladders, rope swings, cargo nets and other similar activities.

(underscore provided).

9. Section 454.1.1.1, Florida Building Code, Building, 6th Edition (2017), states:

Sizing.
The bathing load for conventional swimming pools, wading pools, interactive water features, water activity pools less than 24 inches (610 mm) deep and special purpose pools shall be computed on the basis of one person per 5 gpm (0.32 L/s) of recirculation flow. The bathing load for spa type pools shall be based on one person per each 10 square feet (0.9 m^2) of surface area. The filtration system for swimming pools shall be capable of meeting all other requirements of these rules while providing a flow rate of at least 1 gpm (0.06 L/s) for each living unit at transient facilities and $^3/_4$ gpm (0.04 L/s) at nontransient facilities. Recreational vehicle sites, campsites and boat slips designated for live-aboards shall be considered a transient living unit. For properties with multiple pools, this requirement includes the cumulative total gpm of all swimming pools, excluding spas, wading pools and interactive water features. All other types of projects shall be sized according to the anticipated bathing load and proposed uses. For the purpose of determining minimum pool size only, the pool turnover period used cannot be less than 3 hours.

10. Section 454.1.6, Florida Building Code, Building, 6th Edition (2017), states:

Sanitary facilities.
Public swimming pools and bathing places shall comply with the

Swimming pools with a bathing load of 20 persons or less may utilize a unisex restroom. Pools with bathing loads of 40 persons or less may utilize two unisex restrooms or meet the requirements of Table 454.1.6.1. Unisex restrooms shall meet all the requirements for materials, drainage and signage as indicated in Sections 454.1.6.1.1 through 454.1.6.1.4. Each shall include a water closet, a diaper change table, a urinal and a lavatory. Pools with a bathing load larger than 40 persons shall provide separate sanitary facilities labeled for each sex. The entry doors of all restrooms shall be located within a 200-foot (60 960 mm) walking distance of the nearest water's edge of each pool served by the facilities.

Exception: Where a swimming pool serves only a designated group of residential dwelling units and not the general public, poolside sanitary facilities are not required if all living units are within a 200-foot (60 960 mm) horizontal radius of the nearest water's edge, are not over three stories in height unless serviced by an elevator, and are each equipped with private sanitary facilities.

TABLE 454.1.6.1
PUBLIC SWIMMING POOL—REQUIRED FIXTURE COUNT

SIZE OF POOL (square feet)	MEN'S RESTROOM			WOMEN'S RESTROOM	
	Urinals	WC	Lavatory	WC	Lavatory
0 – 2,500	1	1	1	1	1
2,501 – 5,000	2	1	1	5	1
5,001 – 7,500	2	2	2	6	2
7,501 – 10,000	3	2	3	8	3

For SI: 1 square foot = 0.0929 m².

11. Section 454.1.6.1.1, Florida Building Code, Building, 6th Edition (2017), states:

Required fixtures.
Fixtures shall be provided as indicated on Table 454.1.6.1. The fixture count on this chart is deemed to be adequate for the pool and pool deck area that is up to three times the area of the pool surface provided. When multiple fixture sets are required and separate facilities are provided for each sex, the fixtures used in ancillary family-style restrooms can be used to meet the requirements of this section.

One diaper changing table shall be provided at each restroom. Diaper changing tables are not required at restrooms where all pools served are restricted to adult use only. Swim diapers are recommended for use by children that are not toilet trained. Persons that are ill with diarrhea cannot enter the pool.

Exception: When a public swimming pool meets all of the following conditions the following shall apply:

1. The pool serves only a designated group of dwelling units,
2. The pool is not for the use of the general public, and
3. A building provides sanitary facilities;

The fixture requirement for the building shall be determined and if it exceeds the requirement in Table 454.1.6.1 then the building requirement shall regulate the fixture count, otherwise the fixture count shall be based on the requirement for the pool. Under no circumstances shall the fixture counts be cumulative.

An additional set of fixtures shall be provided in the men's restroom for every 7,500 square feet (697 m^2) or major fraction thereof for pools greater than 10,000 square feet (929 m^2).

Women's restrooms shall have a ratio of three to two water closets provided for women as the combined total of water closets and urinals provided for men.

Lavatory counts shall be equal.

12. Section 403.6, Florida Building Code, Plumbing, 6th Edition (2017), states:

Sanitary facilities for public swimming pools.
Swimming pools with a bathing load of 20 persons or less may utilize a unisex restroom. Pools with bathing loads of 40 persons or less may utilize two unisex restrooms or meet the requirement of Table 403.6. Unisex restrooms shall meet all the requirements for materials, drainage and signage as indicated in Sections 454.1.6.1.1 through 454.1.6.1.4 of the Florida Building Code, Building. Each shall include a water closet, a diaper change table, a urinal, and a lavatory. Pools with a bathing load larger than 40 persons shall provide separate sanitary facilities labeled for each sex. The entry doors of all restrooms shall be located within a 200-foot (60 960 mm) walking distance of the nearest water's edge of each pool served by the facilities.

Exception: Where a swimming pool serves only a designated group of residential dwelling units and not the general public, poolside sanitary facilities are not required if all living units are within a 200-foot horizontal radius of the nearest water's edge, are not over three stories in height unless serviced by an elevator, and are each equipped with private sanitary facilities.

13. Section 403.6.1, Florida Building Code, Plumbing, 6th Edition (2017), states:

> **Required fixtures.**
> Fixtures shall be provided as indicated on Table 403.6. The fixture count of Table 403.6 is deemed to be adequate for the pool and pool deck area that is up to three times the area of the pool surface provided. An additional set of fixtures shall be provided in the men's restroom for every 7,500 square feet or major fraction thereof for pools greater than 10,000 square feet. Women's restrooms shall have a ratio of three to two water closets provided for women as the combined total of water closets and urinals provided for men. Lavatory counts shall be equal.

14. Table 403.6, Florida Building Code, Plumbing, 6th Edition (2017), states:

TABLE 403.6
PUBLIC SWIMMING POOL - REQUIRED FIXTURES COUNT

SIZE (square feet)	MEN'S RESTROOMS			WOMEN'S RESTROOMS	
	Urinals	WC	Lavatory	WC	Lavatory
0 - 2500 sq ft	1	1	1	1	1
2501 - 5000 sq ft	2	1	1	5	1
5001 - 7500 sq ft	2	2	2	6	2
7501 - 10,000 sq ft	3	2	3	8	3

For SI: 1 square foot = 0.0929 m².

15. In response to Petitioner's question, the answer is yes. Pursuant to section 454.1.6.1.1 and table 454.1.6.1, Florida Building Code, Building, 6th Edition (2017), and section 403.6 and table 403.6 Florida Building Code, Plumbing, 6th Edition (2017), the size of the proposed interactive water features is required to be included when calculating the "size of pool" for the purpose of determining the type and number of fixtures for the sanitary facilities for the projects in question.

DONE AND ORDERED this 21st day of August, 2018, in Punta Gorda, Charlotte County, State of Florida.

E. JAY CARLSON
Chairman, Florida Building Commission

NOTICE OF RIGHT TO APPEAL

Petitioner and all other interested parties are hereby advised of their right to seek judicial review of this Order in accordance with Section 120.68(2)(a), Florida Statutes (2018), and Florida Rules of Appellate Procedure 9.110(a) and 9.030(b)(1)(C). To initiate an appeal, a Notice of Appeal must be filed with the Agency Clerk, Department of Business and Professional Regulation, 2601 Blair Stone Road, Tallahassee, Florida 32399-2203 and with the appropriate District Court of Appeal not later than thirty (30) days after this Order is filed with the Clerk of the Department of Business and Professional Regulation. A Notice of Appeal filed with the District Court of Appeal shall be accompanied by the filing fee specified by Section 35.22(3), Florida Statutes (2018).

CERTIFICATE OF FILING AND SERVICE

I HEREBY CERTIFY that a true and correct copy of the foregoing order has been filed with the undersigned and furnished by U. S. Mail to the persons listed below this 28th day of August, 2018.

Brandon M. Nichols

Agency Clerk's Office
Department of Business and Professional Regulation
& Florida Building Commission
2601 Blair Stone Road
Tallahassee, Florida 32399-2203

Via U.S. Mail

G.B. Collins Engineering, P.A.
Attn: Samuel A. Liberatore
300 Alternate 19 North, Suite A
Palm Harbor, FL 34683

Anthony Tilton
113 S. Monroe Street
Tallahassee, FL 32301

Via Inter-Office or Email Delivery

Mo Madani, Planning Manager
Codes and Standards Section
Department of Business and Professional Regulation
2601 Blair Stone Road
Tallahassee, Florida 32399
Mo.Madani@myfloridalicense.com

Marjorie Holladay
Joint Administrative Procedures Committee
Pepper Building, Room 680
Tallahassee, Florida 32399-1300

SW7801

Date Submitted	12/9/2018	**Section**	454.1.2.1	**Proponent**	Mo Madani
Chapter	4	**Affects HVHZ**	No	**Attachments**	Yes

TAC Recommendation Pending Review
Commission Action Pending Review

Comments

General Comments Yes

Alternate Language No

Related Modifications

None

Summary of Modification

Incorporating Commission's declaratory statements as required by 553.73(7)(d), Florida Statutes. DS2017-070

Rationale

To clarify that grout line is allowed to be included in the measurement of tile when such tile is sold and distributed as nominal or trade size.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

There is no fiscal impact on the local entity relative to enforcement.

Provides needed clarification to the code

Impact to building and property owners relative to cost of compliance with code

There is no fiscal impact to building and property owners relative to the cost of compliance.

Provides clarification to the code

Impact to industry relative to the cost of compliance with code

There is no fiscal impact to industry relative to the cost of compliance.

Provides clarification to the code

Impact to small business relative to the cost of compliance with code

There is no fiscal impact to small business relative to the cost of compliance.

Provides clarification to the code

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Has a reasonable and substantial connection with the health and safety and welfare of the general public.

Provides clarification to the code

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Strengthens or improves the code by making the code requirements clearer to the user.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate against materials, products, methods, or systems of construction.

Provides clarification to the code

Does not degrade the effectiveness of the code

Does not degrade the effectiveness of the code.

Improve the effectiveness of the code by providing needed clarification.

1st Comment Period History

SW7801-G1

Proponent Kari Hebrank **Submitted** 2/13/2019 **Attachments** No

Comment:

The Florida Swimming Pool Association SUPPORTS this code modification.

Revise section 454.1.2.1 to read as follows:

454.1.2.1 Pool structure.

Pools shall be constructed of concrete or other impervious and structurally rigid material. All pools shall be watertight, free from structural cracks and shall have a nontoxic smooth and slip resistant finish. All materials shall be installed in accordance with manufacturer's specifications unless such specifications violate Chapter 64E-9, Florida Administrative Code, rule requirements or the approval criteria of NSF/ANSI Standard 50 or NSF/ANSI Standard 60.

(a) Floors and walls shall be white or pastel in color and shall have the characteristics of reflecting rather than absorbing light. Tile used in less than 5 feet (1524 mm) of water must be slip resistant. A minimum 4-inch (102 mm) tile line, each tile a minimum size of 1 inch (25 mm) on all sides, shall be installed at the water line, but shall not exceed 12 inches (305 mm) in height if a dark color is used. Gutter-type pools may substitute 2-inch (51 mm) tile, each a minimum size of 1 inch (25 mm) on all sides, along the pool wall edge of the gutter lip.

(b) One-inch (25 mm) square tile may be used if the manufacturer has specified the adhesive for use underwater to adhere the type of tile used [vitreous (glass) or ceramic]. Tiles shall not have sharp edges exposed that could cause bather injury.

(c) Grout line is allowed to be included when meeting the 1 inch square tile requirements, if the tile is sold and distributed as nominal or trade size tile.

-

STATE OF FLORIDA
BUILDING COMMISSION

In the Matter of

AQUATIC DESIGN SERVICES, LLC

DS 2017-070

Petitioner.
_____/

DECLARATORY STATEMENT

The foregoing proceeding came before the Florida Building Commission (Commission) by a Petition from John Centera, for Aquatic Design Services, LLC (Petitioner) that was received October 31, 2017. Based on the statements in the petition, the material subsequently submitted and the subsequent request by the Petitioner, the Commission states the following:

Findings of Fact

1. The petition is filed pursuant to, and must conform to the requirements of Rule 28-105.002, Florida Administrative Code.

2. Petitioner's representative in this matter is John Centera, 2681 NE 23rd Court, Pompano Beach, FL 33062.

3. Petitioner provides commercial pool and spa design, construction, and remodeling services, and is in the process of designing a condominium commercial pool project that will include the application of 1" x 1" tiles.

4. Petitioner seeks clarification of Section 454.1.2.1, Florida Building Code, Building, 5th Edition (2014), and Section 454.1.2.1, Florida Building Code, Building, 6th Edition (2017), regarding what measurements are included when determining the dimensions of a 1" x 1" tile.

5. Specifically, the Petitioner requests an answer to the following question based upon the project described within the petition for declaratory statement:

Is the grout line allowed to be included in the measurement of a 1" x 1" tile installed on a commercial pool per section 454.1.2.1, when the tile is sold and distributed as 1" x 1"?

Conclusions of Law

6. The Commission has the specific statutory authority pursuant to Section 553.775(3)(a), Florida Statutes (2017) to interpret the provisions of the Florida Building Code by issuing a declaratory statement.

7. Section 454.1.2.1, Florida Building Code, Building, 5th Edition (2014), and Section 454.1.2.1, Florida Building Code, Building, 6th Edition (2017) both identically state:

> **454.1.2.1 Pool structure.**
> Pools shall be constructed of concrete or other impervious and structurally rigid material. All pools shall be watertight, free from structural cracks and shall have a nontoxic smooth and slip resistant finish. All materials shall be installed in accordance with manufacturer's specifications unless such specifications violate Chapter 64E-9, Florida Administrative Code, rule requirements or the approval criteria of NSF/ANSI Standard 50 or NSF/ANSI Standard 60.
>
> (a) Floors and walls shall be white or pastel in color and shall have the characteristics of reflecting rather than absorbing light. Tile used in less than 5 feet (1524 mm) of water must be slip resistant. A minimum 4-inch (102 mm) tile line, each tile a minimum size of 1 inch (25 mm) on all sides, shall be installed at the water line, but shall not exceed 12 inches (305 mm) in height if a dark color is used. Gutter type pools may substitute 2-inch (51 mm) tile, each a minimum size of 1 inch (25 mm) on all sides, along the pool wall edge of the gutter lip.
>
> (b) One-inch (25 mm) square tile may be used if the manufacturer has specified the adhesive for use underwater to adhere the type of tile used [vitreous (glass) or ceramic]. Tiles shall not have sharp edges exposed that could cause bather injury.

8. Section 202, Florida Building Code, Building, 5th Edition (2014), states:

DIMENSIONS
Nominal: The *specified* dimension plus an allowance for the *joints* with which the units are to be laid. Nominal dimensions are usually stated in whole numbers. Thickness is given first, followed by height and then length.

9. Section 202, Florida Building Code, Building, 6th Edition (2017), states:

DIMENSIONS (for Chapter 21)
Nominal: The *specified* dimension plus an allowance for the *joints* with which the units are to be laid. Nominal dimensions are usually stated in whole numbers. Thickness is given first, followed by height and then length.

10. In response to Petitioner's question, the answer is yes, pursuant to the definition of the term "Nominal" in Section 202, Florida Building Code, Building, 5th Edition (2014), and Section 202, Florida Building Code, Building, 6th Edition (2017), the grout line can be included when meeting the 1"x 1" tile requirements set forth in Section 454.1.2.1, Florida Building Code, Building, 5th Edition (2014) and Section 454.1.2.1, Florida Building Code, Building, 6th Edition (2017), if the tile is sold and distributed as 1"x 1" nominal or trade size tile.

DONE AND ORDERED this 14TH day of DECEMBER, 2017, in St. Augustine, St. Johns County, State of Florida.

JAMES R. SCHOCK
Acting Chairman, Florida Building Commission

NOTICE OF RIGHT TO APPEAL

Petitioner and all other interested parties are hereby advised of their right to seek judicial review of this Order in accordance with Section 120.68(2)(a), Florida Statutes (2017), and Florida Rules of Appellate Procedure 9.110(a) and 9.030(b)(1)(C). To initiate an appeal, a Notice of Appeal must be filed with the Agency Clerk, Department of Business and Professional Regulation, 2601 Blair Stone Road, Tallahassee, Florida 32399-2203 and with the appropriate District Court of Appeal not later than thirty (30) days after this Order is filed with the Clerk of the Department of Business and Professional Regulation. A Notice of Appeal filed with the District Court of Appeal shall be accompanied by the filing fee specified by Section 35.22(3), Florida Statutes (2017).

CERTIFICATE OF FILING AND SERVICE

I HEREBY CERTIFY that a true and correct copy of the foregoing order has been filed with the undersigned and furnished by U. S. Mail to the persons listed below this 18th day of December, 2017.

Agency Clerk's Office
Department of Business and Professional Regulation
& Florida Building Commission
2601 Blair Stone Road
Tallahassee, Florida 32399-2203

Via U.S. Mail

Aquatic Design Services, LLC
Attn: John Centera
2681 NE 23rd Court
Pompano Beach, FL 33062

Via Inter-Office or Email Delivery

Mo Madani, Planning Manager
Codes and Standards Section
Department of Business and Professional Regulation
2601 Blair Stone Road
Tallahassee, Florida 32399
Mo.Madani@myfloridalicense.com

Marjorie Holladay
Joint Administrative Procedures Committee
Pepper Building, Room 680
Tallahassee, Florida 32399-1300

SW7819

Date Submitted	12/10/2018	**Section**	454.1.9.8.6.3	**Proponent**	Michael Weinbaum
Chapter	4	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Comments

General Comments No

Alternate Language No

Related Modifications

Summary of Modification

The last sentence here reads the same as the last sentence in 454.1.9.8.6.1, even though they are really talking about two different things.

Rationale

This would save a lot of confusion and long conversations.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

The proposed language is clearer, that in this scenario the filter pump and feature pump are separate.

Impact to building and property owners relative to cost of compliance with code

No change to the meaning of the code

Impact to industry relative to the cost of compliance with code

No change to the meaning of the code

Impact to small business relative to the cost of compliance with code

No change to the meaning of the code

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

It is important to prevent Crypto and Giardia from spreading via IWFs

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

For a code, clarity is strength.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

No change to the meaning of the code

Does not degrade the effectiveness of the code

No change to the meaning of the code

In lieu of Section 454.1.9.8.6.1, the recirculation system must be designed to continuously return 100 percent of the water to the collector tank after all (100 percent) of the water is first filtered, treated with disinfectant and pH adjustment chemicals, and the final treatment provided by a validated UV disinfectant unit described in Section 454.1.6.5.16.6 ~~before any of this treated water is piped to the water features~~. In this scenario, the feature pumps do not need their own filter or disinfection, but they must be interlocked such that they do not operate unless the filter pump, chemical, and UV systems are all working properly.

SW7851

Date Submitted	12/10/2018	**Section**	454.1.1	**Proponent**	James LePetrie
Chapter	4	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Comments

General Comments Yes

Alternate Language No

Related Modifications

Summary of Modification

Clarifies the definition of a collector tank for a commercial pool.

Rationale

FDOH inspectors have been interpreting this definition to mean the tank vent must be 2.25 sf in area, which is incorrect. This mod clarifies the definition and will help avoid the misinterpretation.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None.

Impact to building and property owners relative to cost of compliance with code

The misinterpretation makes the tanks more expensive, so this clarification will reduce the cost of the tanks slightly.

Impact to industry relative to the cost of compliance with code

The misinterpretation makes the tanks more expensive, so this clarification will reduce the cost of the tanks slightly.

Impact to small business relative to the cost of compliance with code

None.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Does not change the manner in which the tank operates, which is already the safest way to avoid entrapment in swimming pools.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Clarifies the definition and reduces confusion between FDOH, engineers, manufacturers, and builders.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

No.

Does not degrade the effectiveness of the code

No.

1st Comment Period History

SW7851-G1

Proponent robert vincent **Submitted** 2/18/2019 **Attachments** No

Comment:

Approving this modification could lead to collector tanks installed with sealed covers on vented with only small two-inch to four-inch vent pipes (or any size since the minimum vent pipe size is not proposed). Request the applicant specify in greater detail for the code other details for long-term functionality. Otherwise, this design is a step backwards, and undermines the overall design and intent of a collector tank. This modification would make it more difficult for building officials to understand the intent of the building code. Florida has a long history with main drain vent lines, first used on direct suction main drains for spas to avoid entrapment accidents. Inspections have revealed that overtime, those vent lines can be intentionally and unintentionally capped, abandoned, filled and plugged by animal nests. Without additional details and appropriate size and materials for collector tank vents, these issues could be repeated.

"Collector tank" means a reservoir, with a minimum of 2.25 square feet (0.2 m2) water surface area, that is vented and/or

open to the atmosphere, from which the recirculation or feature pump takes suction, which receives the gravity flow from the main drain line and surface overflow system or feature water source line, and that is cleanable.

SW7855

Date Submitted	12/10/2018	**Section**	454.1.9.8.6.3	**Proponent**	Michael Weinbaum
Chapter	4	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Comments

General Comments No

Alternate Language No

Related Modifications

Summary of Modification

Clear up another stumbling block in this section

Rationale

The UV treatment is not "final". It kills Crypto and Giardia equally well regardless of if it is before or after the addition of chemicals. It should come before the addition of chlorine because UV light degrades hypochlorite molecules, so really, it is better if it is not "final".

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

Increases flexibility, reduces questions

Impact to building and property owners relative to cost of compliance with code

If they have been forced to place UV treatment after the addition of chlorine, they will now be able to spend a lot less on chlorine

Impact to industry relative to the cost of compliance with code

None

Impact to small business relative to the cost of compliance with code

Perhaps less spending on chlorine.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Yes, UVs prevent disease from spreading

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Yes

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not.

Does not degrade the effectiveness of the code

Does not.

In lieu of Section 454.1.9.8.6.1, the recirculation system must be designed to continuously return 100 percent of the water to the collector tank after all (100 percent) of the water is first filtered, treated with disinfectant and pH adjustment chemicals, and ~~the final treatment provided by~~ a validated UV disinfectant unit described in Section 454.1.6.5.16.6 before any of this treated water is piped to the water features.

SW7875

Date Submitted	12/12/2018	**Section**	454	**Proponent**	CK Hamilton
Chapter	4	**Affects HVHZ**	No	**Attachments**	Yes

TAC Recommendation Pending Review
Commission Action Pending Review

Comments

General Comments Yes

Alternate Language No

Related Modifications

Summary of Modification

PMT proposes adding a Storm Front/Lightning Detector into the code for swimming pools since our state leads the nation in fatalities and injuries caused by lightning. A product that is a safety/situational awareness device that alert swimmers and life guards of approaching storms/lightning.

Rationale

Please see attached PDF above

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact, easy to install, can be battery or powered operated

Impact to building and property owners relative to cost of compliance with code

No impact, low cost, easy to install, can be battery or powered operated

Impact to industry relative to the cost of compliance with code

None

Impact to small business relative to the cost of compliance with code

None

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

The product will provide a safety situational awareness warning/alert to swimmers and life guards that storms/lightning is approaching the area. When the audible alert is heard or seen with LEDs flashing, the swimmers/life guards should seek shelter.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Yes

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

No

Does not degrade the effectiveness of the code

Correct

1st Comment Period History

SW7875-G1

Proponent Kari Hebrank **Submitted** 2/13/2019 **Attachments** No

Comment:

The Florida Swimming Pool Association is OPPOSED to this code modification.

Add section 454.1.11 and it shall read as follows:

Public Pool Storm Front and Lightning Detector. All new swimming pool construction/modifications for hotels, schools, public pools, commercial pools and municipalities shall include a situational awareness Storm Front/Lightning Detector as a safety device in the building code. The device shall be seen or heard for a minimum distance of 30 feet. The product will provide a visual and audible (for visually impaired) alert to swimmers and life guards that storms/lightning is approaching or departing the area. When the visual/audible alerts are heard or seen with LEDs flashing (indicating storm distance), the swimmers/life guards should seek shelter. A minimum of 3 different color LED's shall indicate approaching or departing storms indicating distance to storm front for the hearing impaired.

Add section 454.2.24 and it shall read as follows:

Private Pool Storm Front and Lightning Detector. All new swimming pool construction/modifications for private/residential pools shall include a situational awareness Storm Front/Lightning Detector as a safety device in the building code. The device shall be seen or heard for a minimum distance of 30 feet. The product will provide a visual and audible (for visually impaired) alert to swimmers and life guards that storms/lightning is approaching or departing the area. When the visual/audible alerts are heard or seen with LEDs flashing (indicating storm distance), the swimmers/life guards should seek shelter. A minimum of 3 different color LED's shall indicate approaching or departing storms indicating distance to storm front for the hearing impaired.

SW7894

Date Submitted	12/11/2018	**Section**	454.1.1	**Proponent**	James LePetrie
Chapter	4	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Comments

General Comments Yes **Alternate Language** No

Related Modifications

Summary of Modification

Clarifies the definition of a plunge pool.

Rationale

FDOH personnel have been requiring multipurpose commercial swimming pools to meet the plunge pool criteria of 454.1.9.2.1 when a water slide is included. This causes several requirements to be met that are not needed for swimming pools, for example a separate pump reservoir, requiring filter areas to be twice what is normally required, and enhanced turnover time at the area where the slide terminates. Since the swimming pool will typically contain a much larger water volume than will a dedicated plunge pool, concerns regarding water quality are not as great.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None

Impact to building and property owners relative to cost of compliance with code

Would save costs due to misinterpretation of code. A separate pump reservoir, additional filter area, and piping associated with additional turnover would not be required.

Impact to industry relative to the cost of compliance with code

None.

Impact to small business relative to the cost of compliance with code

None.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Would not have an effect.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Clarifies the code so that swimming pools are not categorized as plunge pools.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

No.

Does not degrade the effectiveness of the code

No.

1st Comment Period History

SW7894-G1

Proponent Kari Hebrank **Submitted** 2/13/2019 **Attachments** No

Comment:

The Florida Swimming Pool Association SUPPORTS this code modification.

1st Comment Period History

SW7894-G2

Proponent robert vincent **Submitted** 2/18/2019 **Attachments** No

Comment:

As swimming pools have become more complex, recreations water slides are no longer reserved for water park venues, but are appearing in large CDD or HOA complexes. Existing multipurpose swimming pools are also being upgraded and adding slides to existing swimming pools. The Department of Health applies all applicable sections of 454.1.9.2.1 - 454.1.9.2.1.6.2 FBC when conducting critical health and safety plan reviews or initial permitting inspections. Further vetting between regulatory and design professionals is needed on this topic, delay for this conversation needed.

1st Comment Period History

SW7894-G3

Proponent robert vincent **Submitted** 2/18/2019 **Attachments** No

Comment:

As swimming pools have become more complex, recreational water slides are no longer reserved for water park venues, but are appearing in large CDD or HOA complexes. Existing multipurpose swimming pools are also being upgraded and adding slides to existing swimming pools. The Department of Health applies all applicable sections of 454.1.9.2.1 - 454.1.9.2.1.6.2 FBC when conducting critical health and safety plan reviews or initial permitting inspections. Further vetting between regulatory and design professionals is needed on this topic, with delay for decision needed here.

"Plunge pool" means the receiving body of water located at the terminus of a recreational water slide~~.~~ and is dedicated solely for that purpose.

SW7896

Date Submitted	12/11/2018	**Section**	454.1.1	**Proponent**	James LePetrie
Chapter	4	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Comments

General Comments Yes **Alternate Language** No

Related Modifications

Summary of Modification

Clarifies the definition of a public pool, and eliminates confusion whether two separate pools can share the same treatment system.

Rationale

There has been confusion in the past whether multiple pools which are separate structural bodies can share a common recirculation system if they are classified in the same manner. The addition of the word “single” eliminates this confusion.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

The pools would need to be separately permitted with the local entity.

Impact to building and property owners relative to cost of compliance with code

The owners would need to design the pools to have separate treatment systems, which would increase cost.

Impact to industry relative to the cost of compliance with code

None

Impact to small business relative to the cost of compliance with code

None

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Would improve the health, safety and welfare of the general public by ensuring water quality in the pools can be separately monitored and controlled.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Improves clarity of the code.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

No

Does not degrade the effectiveness of the code

No

1st Comment Period History

SW7896-G1

Proponent Kari Hebrank **Submitted** 2/13/2019 **Attachments** No

Comment:

The Florida Swimming Pool Association SUPPORTS this code proposal.

1st Comment Period History

SW7896-G2

Proponent Kari Hebrank **Submitted** 2/13/2019 **Attachments** No

Comment:

The Florida Swimming Pool Association SUPPORTS this code modification.

A **"public swimming pool"** or **"public pool"** means a single watertight structure of concrete, masonry, or other approved materials which is located either indoors or outdoors, used for bathing or swimming by humans, and filled with a filtered and disinfected water supply, together with buildings, appurtenances, and equipment used in connection there-with.

REMAINING TEXT UNCHANGED

SW7900

Date Submitted	12/11/2018	**Section**	454.1.2.1	**Proponent**	James LePetrie
Chapter	4	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Comments

General Comments Yes **Alternate Language** No

Related Modifications

Summary of Modification

Requires the design of swimming pools to meet currently accepted standards for concrete construction.

Rationale

Building Code Requirements for Structural Concrete (ACI 318-05) and Commentary (ACI 318R-05) specifies a minimum steel-to-concrete ratio of 0.2%. Many swimming pools in Florida are being designed using #3 bars at 12” centers which does not meet this requirement. #3 bars can also deform when pneumatically applied concrete methods are employed.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None

Impact to building and property owners relative to cost of compliance with code

There would be a negligible increase in material cost for #4 bars versus #3 bars.

Impact to industry relative to the cost of compliance with code

None

Impact to small business relative to the cost of compliance with code

None

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Shells utilizing #3 bars at 12" centers do not meet ACI standards for steel-to-concrete ratio, making the pool shell weaker than if it were properly designed. #3
bars are more likely to deform and vibrate during shotcrete/gunite shooting.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Provides a construction requirement that would lead to a higher quality pool shell.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

No

Does not degrade the effectiveness of the code

No

1st Comment Period History

SW7900-G1

Proponent Kari Hebrank **Submitted** 2/13/2019 **Attachments** No

Comment:

The Florida Swimming Pool Association SUPPORTS this code proposal.

Pools shall be constructed of concrete or other impervious and structurally rigid material. Concrete pools shall be designed and constructed in accordance with American Concrete Institute 318, "Building Code Requirements for Structural Concrete and Commentary."

REMAINING TEXT UNCHANGED

SW7901

Date Submitted	12/11/2018	**Section**	454.1.2.2.2	**Proponent**	James LePetrie
Chapter	4	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Comments

General Comments Yes

Alternate Language No

Related Modifications

Summary of Modification

Corrects punctuation.

Rationale

The first sentence is missing a comma. The second sentence needs to be broken into separate sentences.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None

Impact to building and property owners relative to cost of compliance with code

None

Impact to industry relative to the cost of compliance with code

None

Impact to small business relative to the cost of compliance with code

None

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

No

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Yes, clarifies this section.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

No

Does not degrade the effectiveness of the code

No

1st Comment Period History

SW7901-G1

Proponent Kari Hebrank **Submitted** 2/13/2019 **Attachments** No

Comment:

The Florida Swimming Pool Association SUPPORTS this code proposal.

Offset steps, spa coves, spa pools and wading pools are exempt from this clearance requirement.

This radius shall be continued through the top of the gutter edge; chamfering is allowed. Pool coping shall not overhang into the pool more than 1 ½ inches (38 mm).

REMAINING TEXT UNCHANGED

SW7903

Date Submitted	12/11/2018	**Section**	454.1.2.8.1	**Proponent**	James LePetrie
Chapter	4	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Comments

General Comments Yes

Alternate Language No

Related Modifications

Summary of Modification

Clarifies how sun shelfs can be designed and constructed.

Rationale

This will prohibit sun shelf from being designed and constructed with drop-offs to deeper water on multiple edges. This code was written with the idea that a sun shelf originate from only one side of a pool.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None

Impact to building and property owners relative to cost of compliance with code

None

Impact to industry relative to the cost of compliance with code

None

Impact to small business relative to the cost of compliance with code

None

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Prohibits a sun shelf from having separate drop-offs to deeper water, which could be confusing and unsafe to bathers.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Makes potential design of sun shelfs safer.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

No

Does not degrade the effectiveness of the code

No

1st Comment Period History

SW7903-G1

Proponent Kari Hebrank **Submitted** 2/14/2019 **Attachments** No

Comment:

The Florida Swimming Pool Association SUPPORTS this code modification.

Sun shelf areas must be a minimum of 20 inches (508 mm) wide and provide a minimum of 10 square feet (0.93 m2) of horizontal surface adjoining on the edge of the pool over not less than 3 feet (914 mm). The sun shelf edge that adjoins the pool edge must be continuous. The sun shelf floor shall be horizontal or shall a have uniform slope from a zero-depth entry, and its maximum depth shall be between 8 inches (203 mm) to 12 inches (254 mm) below the water surface.

SW7905

Date Submitted	12/11/2018	**Section**	454.1.3.1.2	**Proponent**	James LePetrie
Chapter	4	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Comments

General Comments Yes **Alternate Language** No

Related Modifications

Summary of Modification

Allows for paver decks to be constructed at 1% minimum slope.

Rationale

ADA code requires a maximum of 2% cross-slope on accessible routes. FBC 454 requires a minimum of 2% slope, so the deck designer is hamstrung to design only at 2% slope, which is impossible for most pool decks. Paver decks are better able to accommodate runoff since water can percolate between pavers. In addition, as an engineer who has performed many pool inspections, I have yet to find a paver deck that has ever met the minimum 2% slope. FDOH is not enforcing this rule.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None

Impact to building and property owners relative to cost of compliance with code

None

Impact to industry relative to the cost of compliance with code

Would simplify the deck grading design process for architects.

Impact to small business relative to the cost of compliance with code

None

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Would ensure ADA cross-slope requirements are more easily met.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Yes

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

No

Does not degrade the effectiveness of the code

No

1st Comment Period History

SW7905-G1

Proponent Kari Hebrank **Submitted** 2/14/2019 **Attachments** No

Comment:

The Florida Swimming Pool Association SUPPORTS this code modification.

Pool wet decks shall be uniformly sloped at a minimum of 2 percent to a maximum of 4 percent away from the pool or to deck drains to prevent standing water. A minimum of 1 percent deck slope is allowable for paver-type decks.

REMAINING TEXT UNCHANGED

SW7906

Date Submitted	12/11/2018	**Section**	454.1.3.1.2	**Proponent**	James LePetrie
Chapter	4	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Comments

General Comments Yes **Alternate Language** No

Related Modifications

7905

Summary of Modification

Clarifies the how much of a pool deck can slope towards a deck-level perimeter overflow gutter or slot, and at what slope.

Rationale

Deck level perimeter overflow systems are becoming more common for swimming pools but are not well-addressed in the code. There is a necessity for the deck to be sloped towards the drain trench or slot to help contain wave action. Some designers are therefore designing for slopes that exceed the standard deck maximum since this issue is not specifically addressed in the code. This mod will clarify the maximum slope and slope distance.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

Clarifies deck slope requirements for deck-level perimeter overflow pools and makes this easier to enforce.

Impact to building and property owners relative to cost of compliance with code

None

Impact to industry relative to the cost of compliance with code

None

Impact to small business relative to the cost of compliance with code

None

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Ensures a safe slope on a pool deck where deck-level perimeter overflow systems are utilized.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Yes

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

No

Does not degrade the effectiveness of the code

No

1st Comment Period History

SW7906-G1

Proponent robert vincent **Submitted** 2/18/2019 **Attachments** No

Comment:

This proposed Mod needs additional requirements to assure that the deck level perimeter overflow systems are treated as all other deck obstructions are. By adding this term to the definition of 'wet deck area' and to Section 454.1.3.1.3 this deck level perimeter overflow system will be assured to achieve the 4-foot-wide wet deck installed around the entire perimeter.

Decks may be sloped at a maximum of 4% towards trench or slot drains for a maximum distance of 18 inches where deck-level perimeter overflow systems are utilized. Textured deck finishes that provide pitting and crevices of more than 3/16 Inch (4.8 mm) deep that accumulate soil are prohibited.

REMAINING TEXT UNCHANGED

SW7907

Date Submitted	12/11/2018	**Section**	454.1.6.1.3	**Proponent**	James LePetrie
Chapter	4	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Comments

General Comments No

Alternate Language No

Related Modifications

Summary of Modification

Clarifies the requirement that floor drains must be installed within a restroom facility.

Rationale

Some architects have designed restroom facilities which have floors sloped to doorways with the intent that drainage from cleaning be directed out the doorway into a walkway or similar where it can potentially travel to a floor drain, somewhere. This mod clarifies that the floor drain must be inside the restroom which will ensure appropriate capture of water used for cleaning.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None

Impact to building and property owners relative to cost of compliance with code

Would require floor drains and associated piping.

Impact to industry relative to the cost of compliance with code

None

Impact to small business relative to the cost of compliance with code

None

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Yes, ensures restrooms can be adequately cleaned.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Clarifies the code.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

No

Does not degrade the effectiveness of the code

No

Floors of sanitary facilities shall be constructed of concrete or other nonabsorbent materials, shall have a smooth, slip-resistant finish, and shall slope to floor drains~~.~~ which must be installed within the facility.

REMAINING TEXT UNCHANGED

SW7908

Date Submitted	12/11/2018	**Section**	454.1.6.5.3.2.3	**Proponent**	James LePetrie
Chapter	4	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Comments

General Comments Yes **Alternate Language** No

Related Modifications

Summary of Modification

Allows for skimmers to be installed with the equalizer port plugged.

Rationale

Skimmer equalizers have been required for decades to guard against loss of pump prime if the pool water level is allowed to fall. With the requirement for automatic water level control, this requirement is no longer necessary. In addition, with the passing of the Virginia Graeme Baker Act, skimmer equalizers are required to be outfitted with covers that guard against potential entrapment. These covers project into the pool from the wall and present their own hazard. FDOH has stated that the equalizer ports may be plugged, so this code is not being enforced.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None

Impact to building and property owners relative to cost of compliance with code

Would save on cost of equalizer valves, safety cover and associated piping.

Impact to industry relative to the cost of compliance with code

None

Impact to small business relative to the cost of compliance with code

None

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Yes, would eliminate the need for VGB-approved safety covers projecting from the pool wall.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Better system of construction.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

No

Does not degrade the effectiveness of the code

No

1st Comment Period History

SW7908-G1

Proponent Kari Hebrank **Submitted** 2/17/2019 **Attachments** No

Comment:

The Florida Swimming Pool Association SUPPORTS this code modification.

~~Recessed automatic surface skimmers shall be installed with an equalizer valve and an equalizer line when the skimmer piping system is connected directly to pump suction.~~ If installed, an ~~the~~ equalizer valve shall be a spring-loaded vertical check valve which will not allow direct suction on the equalizer line. Float valves are prohibited. The equalizer line inlet shall be installed at least 1 foot (305 mm) below the normal pool water level and the equalizer line inlet shall be protected by an ASME/ANSI A112.19.8 compliant cover/grate. The equalizer line shall be sized to handle the expected flow with a 2-inch (51 mm) minimum line size. Where an equalizer valve is not installed, the skimmer port may be plugged.

SW7910

Date Submitted	12/11/2018	**Section**	454.1.6.5.5.1	**Proponent**	James LePetrie
Chapter	4	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Comments

General Comments No

Alternate Language No

Related Modifications

Summary of Modification

Clarifies the filtration rate for regenerative media filters.

Rationale

Regenerative media filters are becoming more commonly used, so the code should be revised to include them. This is the filtration rate that FDOH has approved for these types of filters.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None. Clarifies code.

Impact to building and property owners relative to cost of compliance with code

None

Impact to industry relative to the cost of compliance with code

None

Impact to small business relative to the cost of compliance with code

None

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

No effect.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Clarifies the code.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

No

Does not degrade the effectiveness of the code

No

The maximum filtration rate in gallons per minute per square foot of filter area shall be: 15 [20 if so approved using the procedure stated in Section 454.1.6.5.1 for high rate sand filters, 3 for rapid sand filters, 0.375 for pleated cartridge filters and 2 for Diatomaceous Earth (D.E.) or regenerative media type filters].

SW7911

Date Submitted	12/11/2018	**Section**	454.1.6.5.9.6	**Proponent**	James LePetrie
Chapter	4	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Comments

General Comments No

Alternate Language No

Related Modifications

Summary of Modification

Allows for return inlets with flow rates greater than 20 gpm.

Rationale

There is a need for high turnover rates for some pools such as wave pools, water activity pools, etc. Use of return inlets with much higher flow rates than 20 gpm results in significantly fewer inlets required, which in turn means less penetration of the pool shell and less chance for leakage. These types of inlets are regularly allowed by the FDOH Public Swimming Pool Advisory Board by variance.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None

Impact to building and property owners relative to cost of compliance with code

Makes cost of construction of pools lower.

Impact to industry relative to the cost of compliance with code

None

Impact to small business relative to the cost of compliance with code

None

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

No effect

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Lessens the number of penetrations of the pool shell, resulting in lower risk of leakage.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

No

Does not degrade the effectiveness of the code

No

The flow rate through each inlet shall not exceed 20 gpm (1 L/s)~~.~~ except for inlets designed for higher flows as specified by the manufacturer.

REMAINING TEXT UNCHANGED

SW7912

Date Submitted	12/11/2018	**Section**	454.1.6.5.16.6	**Proponent**	James LePetrie
Chapter	4	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Comments

General Comments Yes

Alternate Language No

Related Modifications

Summary of Modification

Clarifies the proper point of chemical injection into return lines where UV systems are utilized.

Rationale

There has been some confusion lately between engineers and FDOH on the proper point of injection of chemicals into return lines where UV systems are utilized. It is good practice to locate the injection points downstream of any ancillary equipment such as heaters, flowmeters, ozonators, and UV systems. UV equipment manufacturers specify this, and this is also stated in the Model Aquatic Health Code.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None

Impact to building and property owners relative to cost of compliance with code

Ensures costly UV systems are not subjected to high concentrations of a corrosive chemical.

Impact to industry relative to the cost of compliance with code

Will help the code meet an industry standard.

Impact to small business relative to the cost of compliance with code

None

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Helps ensure UV systems remain functional.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Strengthens the code by bringing into line with best management practices and industry standard for UV systems.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

No

Does not degrade the effectiveness of the code

No

1st Comment Period History

SW7912-G1

Proponent Kari Hebrank **Submitted** 2/17/2019 **Attachments** No

Comment:

The Florida Swimming Pool Association SUPPORTS this code proposal.

1st Comment Period History

SW7912-G2

Proponent Alvaro Mendoza **Submitted** 2/18/2019 **Attachments** No

Comment:

Several major UV manufacturers and service centers support this clarification.

5. The UV equipment shall not be located in a side stream flow and shall be located to treat all water returning to the pool or water features. Any treatment chemicals shall be injected downstream of the UV equipment.

SW7914

Date Submitted	12/11/2018	**Section**	454.1.7.7	**Proponent**	James LePetrie
Chapter	4	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Comments

General Comments Yes **Alternate Language** No

Related Modifications

Summary of Modification

Exempts the fencing requirement for wading pools that are located within 50 feet of other pools if the walking distance is 50 feet or more.

Rationale

Aquatics areas can be designed so that walking distances between wading pools and other pools is at or greater than 50 feet using landscaping, walls, etc. This allows elimination of fences that are not aesthetically pleasing and are an additional unneeded cost if the intent of the rule is already being met.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None

Impact to building and property owners relative to cost of compliance with code

Would eliminate the need for a fence around a wading pool if certain conditions are met.

Impact to industry relative to the cost of compliance with code

None

Impact to small business relative to the cost of compliance with code

None

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

No effect.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

No effect.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

No

Does not degrade the effectiveness of the code

No

1st Comment Period History

SW7914-G1

Proponent Kari Hebrank **Submitted** 2/17/2019 **Attachments** No

Comment:

The Florida Swimming Pool Association SUPPORTS this code proposal.

1st Comment Period History

SW7914-G2

Proponent Kari Hebrank **Submitted** 2/17/2019 **Attachments** No

Comment:

The Florida Swimming Pool Association SUPPORTS this code proposal.

1st Comment Period History

SW7914-G3

Proponent robert vincent **Submitted** 2/18/2019 **Attachments** No

Comment:

Children at wading pools and IWFs are there for a reason, they typically cannot swim.
Note that an “effective barrier” defined in 454.1 and used in this section does not include a landscape ‘barrier’, it includes a 48” wall, building or fence. The Department inspectors have observed numerous problems with 'barrier' landscaping that result in placement of an effective barrier (sometimes nearly invisible in the landscaping): landscaping is often not impenetrable by small people, plants are often not maintained alive, dense plantings may conceal children en-route to the pool, and the plant organic debris falls into pool water using up a fraction of the treatment.
If this Mod is allowed, the effective barrier requirements for an IWF to a pool would be changed too, as they are controlled by this wade pool section.

When within 50 feet of ~~adjacent to~~ swimming pools, wading pools shall be separated from the swimming pool by a barrier or a fence of a minimum of 48 inches (1219 mm) in height with self-latching and self-closing gates. When adjacent to areas less than 1 foot (305 mm) deep of zero depth entry pools, the fence or effective barrier is required if the water edges are less than 40 feet (12 192 mm) apart. Where the walking distance is at least 50 feet (15240 mm) between the wading pool and all other pools, fencing requirements should be carefully considered by the applicant to control usage, but are not required by rule.

REMAINING TEXT UNCHANGED

SW7916

Date Submitted	12/11/2018	**Section**	454.1.9.2.1.6.2	**Proponent**	James LePetrie
Chapter	4	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Comments

General Comments No

Alternate Language No

Related Modifications

7905

Summary of Modification

Allows for 1% slope for paver decks at plunge pools.

Rationale

ADA code requires a maximum of 2% cross-slope on accessible routes. FBC 454 requires a minimum of 2% slope, so the deck designer is hamstrung to design only at 2% slope, which is impossible for most pool decks. Paver decks are better able to accommodate runoff since water can percolate between pavers. In addition, as an engineer who has performed many pool inspections, I have yet to find a paver deck that has ever met the minimum 2% slope. FDOH is not enforcing this rule.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None

Impact to building and property owners relative to cost of compliance with code

None

Impact to industry relative to the cost of compliance with code

None

Impact to small business relative to the cost of compliance with code

None

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Would help ensure ADA cross slope requirements are easier to maintain.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Yes

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

No

Does not degrade the effectiveness of the code

No

All plunge pool decks shall slope to the plunge pool or pump reservoir or to deck drains which discharge to waste, or other acceptable means. All slopes shall be between 2- and 4-percent grade~~.~~ except for paver-type decks where a minimum of 1 percent grade is allowed.

SW7917

Date Submitted	12/11/2018	**Section**	454.1.9.2.2.4	**Proponent**	James LePetrie
Chapter	4	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Comments

General Comments No

Alternate Language No

Related Modifications

Summary of Modification

Clarifies that slides with runout lanes shall be staffed by attendants or lifeguards but not necessarily “water park personnel.”

Rationale

These types of slides may be used at facilities that do not qualify as “water parks.” This mod makes the rule applicable to any facility that is not a water park.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None

Impact to building and property owners relative to cost of compliance with code

None

Impact to industry relative to the cost of compliance with code

None

Impact to small business relative to the cost of compliance with code

None

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

No effect

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Clarifies the code.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

No

Does not degrade the effectiveness of the code

No

Attendants or lifeguards ~~Water park personnel~~ shall be provided at the top of the slides and at the run out.

SW7918

Date Submitted	12/11/2018	**Section**	454.1.9.2.3.1	**Proponent**	James LePetrie
Chapter	4	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Comments

General Comments No

Alternate Language No

Related Modifications

Summary of Modification

Allows for flexibility in design of pump reservoirs.

Rationale

Lately FDOH personnel have been requiring the pump reservoirs, also known as collector tanks, to be sized on the guideline above even where used for pools that are not plunge pools. This rule exists to ensure the tanks are sized large enough to accommodate water-in-transit surge from water slides with dedicated plunge pools. For large multipurpose pools that include water slides as a feature, this additional sizing is not necessary as the tanks are already sized to accommodate the surge. This rule provides flexibility to the design engineer to size the tanks as he/she sees fit.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None

Impact to building and property owners relative to cost of compliance with code

Would allow for tanks to be smaller if justified by the engineer, resulting in lower costs.

Impact to industry relative to the cost of compliance with code

None

Impact to small business relative to the cost of compliance with code

None

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

No effect.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

No effect

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

No

Does not degrade the effectiveness of the code

No

The minimum reservoir volume shall be equal to 3 minutes of the combined flow rate in gallons per minute of all filter and slide pumps~~.~~ Unless justified by the design engineer.

SW7920

Date Submitted	12/11/2018	**Section**	454.1.9.2.3.5	**Proponent**	James LePetrie
Chapter	4	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Comments

General Comments No

Alternate Language No

Related Modifications

7918

Summary of Modification

Clarifies requirements for pump reservoirs that are also used as a collector tank.

Rationale

Lately FDOH personnel have been requiring separate pump reservoirs for swimming pools that are not dedicated plunge pools but which have water slides as a feature. This is a needless requirement and would incur additional costs to the owner. We have designed numerous commercial pools that have collector tanks from which the recirculation and slide pumps draw suction with no issues with respect to hydraulic operation or threats to public health.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None

Impact to building and property owners relative to cost of compliance with code

Would eliminate the need for a separate pump reservoir, resulting in lower costs.

Impact to industry relative to the cost of compliance with code

None

Impact to small business relative to the cost of compliance with code

None

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

No effect

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

No effect

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

No

Does not degrade the effectiveness of the code

No

The pump reservoir shall have a minimum of one main drain with separate piping and valve to the filtration system collector tank unless the reservoir is used as the collector tank.~~and the v~~Velocity through the openings of the main drain grates shall not exceed 1 ½ feet per second (457 mm/s) at the design flow rate of the filtration system pump.

REMAINING TEXT UNCHANGED

SW7921

Date Submitted	12/11/2018	**Section**	454.1.9.2.6.3	**Proponent**	James LePetrie
Chapter	4	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Comments

General Comments Yes **Alternate Language** No

Related Modifications

Summary of Modification

Deletes the requirement for a minimum strainer size for slide pumps.

Rationale

Strainer size for any pump should depend on hydraulics and flow rate. We don't understand why this mandated minimum is in the code.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None

Impact to building and property owners relative to cost of compliance with code

Would save cost of larger strainers where they are not necessary.

Impact to industry relative to the cost of compliance with code

None

Impact to small business relative to the cost of compliance with code

None

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

No effect

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

No effect

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

No

Does not degrade the effectiveness of the code

No

1st Comment Period History

SW7921-G1

Proponent Kari Hebrank **Submitted** 2/13/2019 **Attachments** No

Comment:

The Florida Swimming Pool Association is OPPOSED to this code modification.

Any filtration system pump which takes suction directly from the plunge pool and reservoir shall have a ~~minimum 8-inch (208 mm) diameter~~ hair and lint strainer on the suction side of the pump.

SW7922

Date Submitted	12/11/2018	**Section**	454.1.9.3.3	**Proponent**	James LePetrie
Chapter	4	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Comments

General Comments Yes **Alternate Language** No

Related Modifications

Summary of Modification

Clarifies that skimmer systems can be used for Water Activity Pools (WAP) at the discretion of the design engineer.

Rationale

Section 454.1.9.3.1 allows for WAPs to be designed "within the limits of sound engineering practice." Lately FDOH personnel have been holding design of WAPs to standard swimming pool design requirements, even though this section specifically allows for alternate means of design. Specifically, we were required to provide gutters for a WAP with a dimension (that was not the width) greater than 20 feet. We have designed many of these types of pools both in Florida and around the country that function as intended with skimmers and do not present a threat to public health. If the code already contains a provision that these types of pools can be designed "within the limits of sound engineering practice," and we have proven designs for these types of pools in operation that work well, we do not understand why our designs are still being questioned by FDOH.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None

Impact to building and property owners relative to cost of compliance with code

Would significantly lower costs of construction where skimmers can be used in lieu of gutter systems.

Impact to industry relative to the cost of compliance with code

None

Impact to small business relative to the cost of compliance with code

None

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

No effect

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

No effect

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

No

Does not degrade the effectiveness of the code

No

1st Comment Period History

SW7922-G1

Proponent Kari Hebrank **Submitted** 2/17/2019 **Attachments** No

Comment:

The Florida Swimming Pool Association SUPPORTS this code amendment.

1st Comment Period History

SW7922-G2

Proponent robert vincent **Submitted** 2/18/2019 **Attachments** No

Comment:

FBC Section 104.11 has criteria for alternative materials, design, construction and equipment with research reports and testing that apply to the public pools. This section should be referenced here for this Mod, and more information provided. Proof of adequacy provided by reports by manufacturers or other research provided with design submittal before permitting should be available. If not, then skimmer effectiveness tests after construction should be required by code, with alternatives upon test failure spelled out, such as reduced bather load, installation of additional recirculation capabilities with portable equipment or permanent, and/or installed supplemental UV light or Ozone disinfection, etc.

Section 454.1.9.1 Water recreation attractions references all the construction criteria in 454.1 through 454.1.6.5, and the 20' max. pool width and 1000 sq. ft max. area for recessed automatic surface skimmers is included at 454.1.6.5.3.2

Florida's pool rule and FBC has been updated 14 times in 90 years to enhance engineering design options that better protect public health and safety, normally after evidenced-based engineering has shown they result in better water quality and fewer bather injuries; such as pool safety demarcations, gravity drainage collector tanks, zero depth entry gutter systems, IWFs with UV disinfection systems.

The recirculation-filtration system of water activity pools shall achieve a minimum of one turnover every 2 hours for water activity pools over 2 feet (610 mm) deep, and 1 hour for these pools that are 2 feet (610 mm) deep or less. Pools can utilize skimmers or gutters regardless of pool size at the discretion of the design engineer.

SW7923

Date Submitted	12/11/2018	**Section**	454.1.9.6.1	**Proponent**	James LePetrie
Chapter	4	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Comments

General Comments Yes **Alternate Language** No

Related Modifications

Summary of Modification

Allows for a slope transition where zero entry pools achieve 3'0" of water depth.

Rationale

The intent of this code is to ensure a continuous slope from the zero entry to the point where 3 feet of water is achieved (i.e. the 'deep end' of the zero entry area). Some FDOH plan reviewers have misconstrued it to mean a continuous slope from the zero entry all the way to the deep point of a pool, which in many cases is not possible. These types of pools are typically family-style where we design for flatter slopes once we are able to slope down as quickly as possible to 3 feet of depth. The slopes in zero entry pools are typically 1:10 or 1:12, so to continue these slopes across the entire pool would result in deep points of 7 or 8 feet, which is not feasible. Hundreds of these types of pools are in use in Florida with the slope transition at 3 feet water depth with no threat to public safety.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None

Impact to building and property owners relative to cost of compliance with code

Would lower construction costs if a deeper pool would be required.

Impact to industry relative to the cost of compliance with code

None

Impact to small business relative to the cost of compliance with code

None

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Provides the ability to design for zero entry pools with less slope and more shallow water than would normally be allowed, making pools safer for weaker swimmers.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Clarifies the code.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

No

Does not degrade the effectiveness of the code

No

1st Comment Period History

SW7923-G1

Proponent Kari Hebrank **Submitted** 2/17/2019 **Attachments** No

Comment:

The Florida Swimming Pool Association SUPPORTS this code proposal.

1st Comment Period History

SW7923-G2

Proponent robert vincent **Submitted** 2/18/2019 **Attachments** No

Comment:

The proposed Mod does not state if the transitioned slope is steeper or less steep at this 3' deep floor than the zero entry slope, so, it could be interpreted as either. The justification notes provided imply it is less steep, but the Mod language does not reflect this specifically. A steeper slope toward the pool's deep end without floor markers and a floating safety line would create drowning hazards for all small non-swimmers. Only if this proposal for the slope is amended to be 'shallower' could the department concur with the proposal (that is: a less steep floor plane past 3' deep than the zero depth entry slope to the 3' depth) .

Zero depth entry pools shall have a continuous floor slope from the water edge to ~~the deep end.~~ 3 feet of water depth at which point the slope can transition to another continuous slope. Floating safety ropes and slope transition markings are not required at this transition point.

SW7925

Date Submitted	12/11/2018	**Section**	454.1.9.6.4	**Proponent**	James LePetrie
Chapter	4	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Comments

General Comments Yes

Alternate Language No

Related Modifications

Summary of Modification

Allows for use of landscape beds along zero entry pools where the depth is less than 3 feet without counting towards cumulative perimeter obstruction.

Rationale

The code used to allow for landscape beds along the zero entry that did not count as obstructions but was inexplicably removed at one point. All code requires are “No Entry” signage along the pool edge, but these do little to limit bather entry. Landscape beds will help deter bathers from entering along these points. These beds are regularly allowed by the Board by variance as long as the beds contain landscaping that allows easy access to the pool for responders to bathers in distress.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None

Impact to building and property owners relative to cost of compliance with code

None. Use of landscape beds would be at owner's option.

Impact to industry relative to the cost of compliance with code

None

Impact to small business relative to the cost of compliance with code

None

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Aids in ensuring bathers do not enter the pool at areas that are not designated as access points.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Yes

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

No

Does not degrade the effectiveness of the code

No

1st Comment Period History

SW7925-G1

Proponent Kari Hebrank **Submitted** 2/13/2019 **Attachments** No

Comment:

The Florida Swimming Pool Association is OPPOSED to this code modification.

"No Entry, Shallow Water" signs shall be provided along the pool wall edge where the water depth isless than 3 feet (914 mm) deep. No entry signs shall be slip-resistant, shall have 4-inch-high (102 mm) letters, shall be located within 2 feet (610 mm) of the pool edge and shall be spaced no more than 15 feet (4572 mm) apart. Landscape beds that allow unobstructed access from the pool deck to bathers in distress in the pool are allowed along the pool edge from zero to 3 feet of water depth. These beds shall not be considered as obstructions where wet deck area is provided as per 454.1.3.1.6.

SW7926

Date Submitted	12/11/2018	**Section**	454.1.9.8.4	**Proponent**	James LePetrie
Chapter	4	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Comments

General Comments Yes

Alternate Language No

Related Modifications

Summary of Modification

Allows for 3 footcandles of overhead lighting for IWFs with attendants/lifeguards.

Rationale

In practice, 3 footcandles of light has been shown to be adequate for IWFs. The Board has regularly granted variances for this light level.

This mod also corrects the word “maybe” to the words “may be.”

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None

Impact to building and property owners relative to cost of compliance with code

Lowers the cost for enhanced lighting levels.

Impact to industry relative to the cost of compliance with code

None

Impact to small business relative to the cost of compliance with code

None

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

No effect

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

No effect

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

No

Does not degrade the effectiveness of the code

No

1st Comment Period History

SW7926-G1

Proponent Kari Hebrank **Submitted** 2/17/2019 **Attachments** No

Comment:

The Florida Swimming Pool Association SUPPORTS this code modificarion.

1st Comment Period History

SW7926-G2

Proponent Kari Hebrank **Submitted** 2/17/2019 **Attachments** No

Comment:

The Florida Swimming Pool Association SUPPORTS this code proposal.

If night operation is proposed, 6 footcandles (60 lux) of light shall be provided on the pool deck and the water feature area. For IWFs that are operated with attendants or lifeguards 3 footcandles (30 lux) of light is acceptable. Lighting that maybe exposed to the feature pool water shall not exceed 15 volts, shall be installed in accordance with manufacturer's specifications and be approved for such use by UL or NSF.

SW7927

Date Submitted	12/11/2018	**Section**	454.1.9.8.6.1	**Proponent**	James LePetrie
Chapter	4	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Comments

General Comments No

Alternate Language No

Related Modifications

7912

Summary of Modification

Clarifies that chemical injection points in return lines shall be located downstream of UV equipment. Also removes the requirement for addition of pH adjustment chemicals to the feature return line.

Rationale

There has been some confusion lately between engineers and FDOH on the proper point of injection of chemicals into return lines where UV systems are utilized. It is good practice to locate the injection points downstream of any ancillary equipment such as heaters, flowmeters, ozonators, and UV systems. UV equipment manufacturers specify this, and this is also stated in the Model Aquatic Health Code.

This mod also addresses the addition of pH chemicals to the feature return. In the vast majority of IWFs in Florida the pH adjustment chemical is acid. We see no need for pH adjustment in the return line when pH is already being controlled and adjusted at the collector tank. This requirement increases the risk of sending dangerous amounts of acid directly to contact with bathers should there be a malfunction with the acid feeder. In addition we have heard reports that relatively high concentrations of acid being sent to the IWF has affected the composition of certain resilient surfacing products. If this is the case, then not only can this be deleterious to the surfacing but also potentially to bathers.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None

Impact to building and property owners relative to cost of compliance with code

Protects against excessive corrosive chemicals damaging the UV unit.

Impact to industry relative to the cost of compliance with code

Positive in that it would not result in degradation of resilient surfacing.

Impact to small business relative to the cost of compliance with code

None

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Would limit the risk of discharge of high concentrations of acid to the IWF.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Brings the code into line with accepted industry practice.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

No

Does not degrade the effectiveness of the code

No

All (100 percent) of the water from the collector tank must be first filtered, treated ~~with~~ by an NSF Standard 50 certified UV disinfection unit with a minimum 40 mJ/cm2 dose, and then final treatment provided by disinfectant ~~and pH~~ adjustment chemicals~~, and then final treatment provided by an NSF Standard 50 certified UV disinfection unit with a minimum 40 mJ/cm2 dose~~ before any of this treated water is piped to the water features.

SW7929

Date Submitted	12/11/2018	**Section**	454.1.9.8.6.3	**Proponent**	James LePetrie
Chapter	4	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Comments

General Comments Yes

Alternate Language No

Related Modifications

7912
7927

Summary of Modification

Clarifies that chemical injection points in return lines shall be located downstream of UV equipment.

Rationale

There has been some confusion lately between engineers and FDOH on the proper point of injection of chemicals into return lines where UV systems are utilized. It is good practice to locate the injection points downstream of any ancillary equipment such as heaters, flowmeters, ozonators, and UV systems. UV equipment manufacturers specify this, and this is also stated in the Model Aquatic Health Code.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None

Impact to building and property owners relative to cost of compliance with code

Would help limit damage to UV equipment by high concentrations of corrosive chemicals.

Impact to industry relative to the cost of compliance with code

None

Impact to small business relative to the cost of compliance with code

None

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Ensures UV systems remain functional.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Clarifies code and brings it inline with accepted industry standards.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

No

Does not degrade the effectiveness of the code

No

1st Comment Period History

SW7929-G1

Proponent robert vincent **Submitted** 2/18/2019 **Attachments** No

Comment:

Both feature and recirculation system need the chemical treatment. The collector tanks are ignored in this process and using baffles in the tank would put the disinfectant in contact longer for a better pathogen kill time. This should be addressed rather that the straight flush through this treatment tank from IWF to features in a few seconds. Designs like this are mandated for the public drinking water systems when known pathogens exist in the source water.

In lieu of Section 454.1.9.8.6.1, the recirculation system must be designed to continuously return 100 percent of the water to the collector tank after all (100 percent) of the water is first filtered, treated with a validated UV disinfectant unit described in Section 454.1.6.5.16.6, with final treatment provided by disinfectant and pH adjustment chemicals~~, and the final treatment provided by a validated UV disinfectant unit described in Section 454.1.6.5.16.6~~ before any of this treated water is piped to the water features.

SW7931

Date Submitted	12/11/2018	**Section**	454.1.9.8.6.9	**Proponent**	James LePetrie
Chapter	4	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Comments

General Comments Yes **Alternate Language** No

Related Modifications

7914

Summary of Modification

Exempts the fencing requirement for IWFs that are located within 50 feet of other pools if the walking distance is 50 feet or more.

Rationale

Aquatics areas can be designed so that walking distances between IWFs and pools is at or greater than 50 feet using landscaping, walls, etc. This allows elimination of fences that are not aesthetically pleasing and are an additional unneeded cost if the intent of the rule is already being met.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None

Impact to building and property owners relative to cost of compliance with code

Would eliminate the need for costly fencing if certain criteria are met.

Impact to industry relative to the cost of compliance with code

None

Impact to small business relative to the cost of compliance with code

None

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

No effect

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

No effect

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

No

Does not degrade the effectiveness of the code

No

1st Comment Period History

SW7931-G1

Proponent Kari Hebrank **Submitted** 2/17/2019 **Attachments** No

Comment:

The Florida Swimming Pool Association SUPPORTS this code proposal.

IWFs shall be fenced in the same fashion as wading pools as noted in Section 454.1.7.7. Where the walking distance ~~IWF~~ is at least 50 feet (15240 mm) ~~from~~ between the IWF and all other pools and the IWF is not designed to have any standing water, fencing requirements should be carefully considered by the applicant to control usage, but are not required by rule.

SW7932

Date Submitted	12/11/2018	**Section**	454.1.9.8.6.12	**Proponent**	James LePetrie
Chapter	4	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Comments

General Comments No

Alternate Language No

Related Modifications

Summary of Modification

Allows for less slope on IWFs and matches the slope range up with code for swimming pools.

Rationale

This mod matches the minimum slope for pools with IWFs. 1 in 60 (1.67%) slope is more than adequate to allow for proper drainage for the IWF surface. It also allows for more flexibility for designers to accommodate the maximum ADA cross-slope for accessible routes of 2%; the routes are a requirement for designing ADA access for IWFs.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None

Impact to building and property owners relative to cost of compliance with code

Helps ensure ADA cross-slope requirements are more easily met.

Impact to industry relative to the cost of compliance with code

None

Impact to small business relative to the cost of compliance with code

None

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Helps ensure ADA cross-slope requirements are more easily met.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Brings slopes for IWFs inline with pool slopes.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

No

Does not degrade the effectiveness of the code

no

Floor slopes of an IWF shall be a maximum 1 foot (305 mm) vertical in 10 feet (3048 mm) horizontal and a minimum of 1 foot (305 mm) vertical in 60 ~~50~~ feet (18,288 ~~15 240~~ mm) horizontal.

SW7933

Date Submitted	12/11/2018	**Section**	454.1.9.8.7.3	**Proponent**	James LePetrie
Chapter	4	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Comments

General Comments Yes

Alternate Language No

Related Modifications

7914
7931

Summary of Modification

Exempts the fencing requirement for pools designed for small children at water theme parks that are located within 50 feet of other pools if the walking distance is 50 feet or more.

Rationale

Aquatics areas can be designed so that walking distances between pools designed for small children and other pools is at or greater than 50 feet using landscaping, walls, etc. This allows elimination of fences that are not aesthetically pleasing and are an additional unneeded cost if the intent of the rule is already being met.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None

Impact to building and property owners relative to cost of compliance with code

Eliminates the requirement for costly fencing if certain criteria are met.

Impact to industry relative to the cost of compliance with code

None

Impact to small business relative to the cost of compliance with code

None

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

No effect

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

No effect

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

No

Does not degrade the effectiveness of the code

No

1st Comment Period History

SW7933-G1

Proponent Kari Hebrank **Submitted** 2/17/2019 **Attachments** No

Comment:

The Florida Swimming Pool Association SUPPORTS this code proposal.

Water theme parks are exempt from the fencing requirements of Section 454.1.3.1.9, except that pools designed for small children shall be fenced when located within 50 feet (15240 mm) walking distance of a pool with water depths of 3 feet (914 mm) or more. Where the walking distance is at least 50 feet (15240 mm) between a pool designed for small children and all other pools, fencing requirements should be carefully considered by the applicant to control usage, but are not required by rule.

SW7935

Date Submitted	12/11/2018	**Section**	454.1.3.1.9	**Proponent**	James LePetrie
Chapter	4	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Comments

General Comments Yes **Alternate Language** No

Related Modifications

Summary of Modification

Addresses a safety concern for doors at certain facilities that open toward pool areas, which is in conflict with the pool code.

Rationale

Doored access points to adjacent pool areas at facilities such as these are required to open away from the room they serve per fire code; however, this is in direct violation of the pool code. Therefore, these doors could be opened by young children who can then access the pool area and potentially fall into the pool and drown. We understand the direction of door swing cannot be changed since fire code would supersede the pool code, but this mod is an attempt to make the risk of a young child entering the pool area an drowning somewhat less. The maximum of 48" height is in line with the ADA requirement for door operation.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None

Impact to building and property owners relative to cost of compliance with code

The only costs would be if the operable parts are not available for certain door models at this height range.

Impact to industry relative to the cost of compliance with code

None

Impact to small business relative to the cost of compliance with code

None

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Would attempt to ensure these doors are not opened by young children who could potentially access the pool area and drown.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Yes

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

No

Does not degrade the effectiveness of the code

No

1st Comment Period History

Proponent Kari Hebrank **Submitted** 2/14/2019 **Attachments** No

SW7935-G1

Comment:

The Florida Swimming Pool Association SUPPORTS this code proposal.

Doored access points from public rooms such as lobbies or club houses need not be through gates if the door(s) meet the same self-closing, self-latching requirements as a gate. Operable parts used for opening doors at these access points shall be 45 inches (114 mm) minimum to 48 inches (122 mm) maximum above the finish floor or ground. Gates shall open outward away from the pool area.

REMAINING TEXT UNCHANGED

SW8131

Date Submitted	12/14/2018	**Section**	454.1.1.1	**Proponent**	James LePetrie
Chapter	4	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Comments

General Comments Yes **Alternate Language** No

Related Modifications

Summary of Modification

Would provide relief for large residential developments from the minimum pool sizing requirement.

Rationale

Larger developments are required to provide very large water volumes for the pools at their amenity centers. In many cases the developers will size pools to keep the total water surface areas below a certain threshold for restroom fixture counts. In doing so, and in order to meet 454.1.1.1, the pools must be designed significantly deeper then normal to provide the required water volume. As designers we have therefore been asked to design pools at excessive depths, 7 or even 8 feet. We feel this results in pools that are dangerous and do not provide adequate swim opportunities for residents. The rule does not take into account that many homes in these developments will include private pools, and those residents will rarely use the amenity center pools. We do not see this code requirement in the Model Aquatic Health Code, the ISPSC, the ANSI standards nor in any state in which we have designed aquatics facilities.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None

Impact to building and property owners relative to cost of compliance with code

Would provide a significant cost savings for large developments.

Impact to industry relative to the cost of compliance with code

None

Impact to small business relative to the cost of compliance with code

None

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Would not result in excessively deep pools with maximum slopes, which can be dangerous to weak swimmers.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Yes

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

No

Does not degrade the effectiveness of the code

No

1st Comment Period History

SW8131-G1

Proponent Kari Hebrank **Submitted** 2/13/2019 **Attachments** No

Comment:

The Florida Swimming Pool Association SUPPORTS this code modification.

1st Comment Period History

SW8131-G2

Proponent Kari Hebrank **Submitted** 2/17/2019 **Attachments** No

Comment:

The Florida Swimming Pool Association SUPPORTS this code proposal.

All other types of projects shall be sized according to the anticipated bathing load and proposed uses. For the purpose of determining minimum pool size only, the pool turnover period used cannot be less than 3 hours except pools serving non-transient residential developments of 1,000 units or more can be sized based on 2.5 hours.

REMAINING TEXT UNCHANGED

SW8168

Date Submitted	12/14/2018	**Section**	454.1.6.1	**Proponent**	Mo Madani
Chapter	4	**Affects HVHZ**	No	**Attachments**	Yes

TAC Recommendation Pending Review
Commission Action Pending Review

Comments

General Comments Yes

Alternate Language No

Related Modifications

None

Summary of Modification

To clarify that Section 454.1.6.1 (Exception) does apply to hotels.

Rationale

Incorporating Commission's declaratory statements as required by 553.73(7)(d), Florida Statutes.

DS 2018 - 025

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

There is no fiscal impact on the local entity relative to enforcement. The proposed code change provides for needed clarification.

Impact to building and property owners relative to cost of compliance with code

There is no fiscal impact to building and property owners relative to the cost of compliance.

Impact to industry relative to the cost of compliance with code

There is no fiscal impact to small business relative to the cost of compliance.

Impact to small business relative to the cost of compliance with code

There is no fiscal impact to small business relative to the cost of compliance.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Has a reasonable and substantial connection with the health and safety and welfare of the general public.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Strengthens or improves the code by making the code requirements clearer to the user.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate against materials, products, methods, or systems of construction.

Does not degrade the effectiveness of the code

Does not degrade the effectiveness of the code.

1st Comment Period History

SW8168-G1

Proponent Kari Hebrank **Submitted** 2/14/2019 **Attachments** No

Comment:

The Florida Swimming Pool Association SUPPORTS this code change.

1st Comment Period History

SW8168-G2

Proponent Kari Hebrank **Submitted** 2/17/2019 **Attachments** No

Comment:

The Florida Swimming Pool Association SUPPORTS this code proposal.

454.1.6.1 Sanitary facilities. Swimming pools with a bathing load of 20 persons or less may utilize a unisex restroom. Pools with bathing loads of 40 persons or less may utilize two unisex restrooms or meet the requirements of Table 454.1.6.1. Unisex restrooms shall meet all the requirements for materials, drainage and signage as indicated in Sections 454.1.6.1.1 through 454.1.6.1.4. Each shall include a water closet, a diaper change table, a urinal and a lavatory. Pools with a bathing load larger than 40 persons shall provide separate sanitary facilities labeled for each sex. The entry doors of all restrooms shall be located within a 200-foot (60 960 mm) walking distance of the nearest water's edge of each pool served by the facilities.

Exception: Where a swimming pool serves only a designated group of residential dwelling units <u>including hotel rooms</u> and not the general public, poolside sanitary facilities are not required if all living units are within a 200-foot (60 960 mm) horizontal radius of the nearest water's edge, are not over three stories in height unless serviced by an elevator, and are each equipped with private sanitary facilities.

STATE OF FLORIDA
BUILDING COMMISSION

In the Matter of

G.B. COLLINS ENGINEERING, P.A.

DS 2018-025

Petitioner.
_____/

DECLARATORY STATEMENT

The foregoing proceeding came before the Florida Building Commission (Commission) by a Petition from Samuel A. Liberatore, for G.B. Collins Engineering, P.A. (Petitioner) that was received April 3, 2018. Based on the statements in the petition, the material subsequently submitted and the subsequent request by the Petitioner, the Commission states the following:

Findings of Fact

1. The petition is filed pursuant to, and must conform to the requirements of Rule 28-105.002, Florida Administrative Code.

2. Petitioner's representative in this matter is Samuel A. Liberatore, 300 Alternate 19 North, Suite A., Palm Harbor, FL 34683.

3. Petitioner is a professional design engineering company which is considering a project that would involve the construction of a public pool at a hotel. Petitioner states that all living units within the hotel would be located within a 200-foot horizontal radius from the nearest water's edge of the pool. Some living units would be located more than three stories in height, but all would be accessible by elevator, and the pool would be only for those individuals who are currently residing at the hotel or who are guests of those residing at the hotel.

4. Petitioner seeks clarification of section 454.1.6.1, Florida Building Code, Building, 6th Edition (2017), as it pertains to requirements for poolside sanitary facilities.

5. Specifically, the Petitioner requests an answer to the following question based upon the project described within the petition for declaratory statement:

> Would the exception to the requirement for poolside sanitary facilities in section 454.1.6.1 of the Florida Building Code apply to the hotel described above?

Conclusions of Law

6. The Commission has the specific statutory authority pursuant to Section 553.775(3)(a), Florida Statutes (2018) to interpret the provisions of the Florida Building Code by issuing a declaratory statement.

7. Section 202, Florida Building Code, Building, 6th Edition (2017), provides the following definitions:

> **HABITABLE SPACE.** A space in a building for living, sleeping, eating or cooking. Bathrooms, toilet rooms, closets, halls, screen enclosures, sunroom Categories I, II, III and IV as defined in Section 2002.6, storage or utility spaces and similar areas are not considered habitable spaces.
> ...
> **MULTISTORY UNIT.** A *dwelling unit* or *sleeping unit* with *habitable space* located on more than one *story*.
> ...
> **SLEEPING UNIT.** A room or space in which people sleep, which can also include permanent provisions for living, eating, and either sanitation or kitchen facilities but not both. Such rooms and spaces that are also part of a *dwelling unit* are not sleeping units.

8. Section R202, Florida Building Code, Residential, 6th Edition (2017), provides the following definition:

> **[RB] DWELLING UNIT.** A single unit providing complete independent living facilities for one or more persons, including permanent provisions for living, sleeping, eating, cooking and sanitation.

9. Section 310, Florida Building Code, Building, 6th Edition (2017), provides for the following use and occupancy classifications:

310.1 Residential Group R.
Residential Group R includes, among others, the use of a building or structure, or a portion thereof, for sleeping purposes when not classified as an Institutional Group I or when not regulated by the Florida Building Code, Residential.

310.2 Definitions.
The following terms are defined in Chapter 2:

BOARDING HOUSE.
CONGREGATE LIVING FACILITIES.
DORMITORY.
GROUP HOME.
GUEST ROOM.
LODGING HOUSE.
PERSONAL CARE SERVICE.
TRANSIENT.

310.3 Residential Group R-1.
Residential Group R-1 occupancies containing *sleeping units* where the occupants are primarily *transient* in nature, including:

Boarding houses (*transient*) with more than 10 occupants
Congregate living facilities (*transient)* with more than 10 occupants
Hotels (*transient*)
Motels (*transient*)

310.4 Residential Group R-2.
Residential Group R-2 occupancies containing *sleeping units* or more than two *dwelling units* where the occupants are primarily permanent in nature, including:

Apartment houses
Boarding houses (nontransient) with more than 16 occupants
Congregate living facilities (nontransient) with more than 16 occupants
Convents
Dormitories
Fraternities and sororities
Hotels (nontransient)
Live/work units
Monasteries
Motels (nontransient)
Vacation timeshare properties

310.5 Residential Group R-3.
Residential Group R-3 occupancies where the occupants are primarily permanent in nature and not classified as Group R-1, R-2, R-4 or I, including:

Buildings that do not contain more than two *dwelling units*
Boarding houses (nontransient) with 16 or fewer occupants
Boarding houses (*transient*) with 10 or fewer occupants
Care facilities that provide accommodations for five or fewer persons receiving care
Congregate living facilities (nontransient) with 16 or fewer occupants
Congregate living facilities (*transient*) with 10 or fewer occupants
Lodging houses with five or fewer *guest rooms*

10. Section 454.1, Florida Building Code, Building, 6th Edition (2017), provides the following:

454.1 Public swimming pools and bathing places.
Public swimming pools and bathing places shall comply with the design and construction standards of this section.

Exceptions:
1. A portable pool used exclusively for providing swimming lessons or related instruction in support of an established educational program sponsored or provided by a school district may not be regulated as a public pool. Such pool shall be regulated as a private swimming pool under Section 454.2.
2. A temporary pool may not be regulated as a public pool. Such pool shall be regulated as a private swimming pool under Section 454.2.

454.1.1 Flood hazard areas.
Public swimming pools installed in flood hazard areas established in Section 1612.3 shall comply with Section 1612.

Note: Other administrative and programmatic provisions apply. See Department of Health (DOH) Rule 64E-9, Florida Administrative Code and Chapter 514, Florida Statutes. The regulation and enforcement of the initial and annual operation permit for public pools are preempted to the DOH. The construction permit holder is responsible for obtaining an operation

permit issued by DOH, as a public swimming pool shall not be put into operation without an inspection and operation permit issued from the DOH. DOH may grant variances from the provisions of the Florida Building Code specifically pertaining to public swimming pools and bathing places as authorized by Section 514.0115, Florida Statutes. Building officials shall recognize and enforce variance orders issued by the Department of Health pursuant to Section 514.0115(5), Florida Statutes including any conditions attached to the granting of the variance.

...

A **"public swimming pool" or "public pool"** means a watertight structure of concrete, masonry, or other approved materials which is located either indoors or outdoors, used for bathing or swimming by humans, and filled with a filtered and disinfected water supply, together with buildings, appurtenances, and equipment used in connection therewith. A public swimming pool or public pool shall mean a conventional pool, spa-type pool, wading pool, special purpose pool, interactive water feature or water recreation attraction, to which admission may be gained with or without payment of a fee and includes, but is not limited to, pools operated by or serving camps, churches, cities, counties, day care centers, group home facilities for eight or more clients, health spas, institutions, parks, state agencies, schools, subdivisions, or the cooperative living-type projects of five or more living units, such as apartments, boardinghouses, hotels, mobile home parks, motels, recreational vehicle parks, and townhouses. The term does not include a swimming pool located on the grounds of a private residence.

(emphasis added).

11. Section 454.1.6.1, Florida Building Code, Building, 6th Edition (2017), states:

454.1.6.1 Sanitary facilities.
Swimming pools with a bathing load of 20 persons or less may utilize a unisex restroom. Pools with bathing loads of 40 persons or less may utilize two unisex restrooms or meet the requirements of Table 454.1.6.1. Unisex restrooms shall meet all the requirements for materials, drainage and signage as indicated in Sections 454.1.6.1.1 through 454.1.6.1.4. Each shall include a water closet, a diaper change table, a urinal and a lavatory. Pools with a bathing load larger than 40 persons shall provide separate sanitary facilities labeled for each sex. The entry doors of all restrooms shall be located within a 200-foot (60 960 mm) walking distance of the nearest water's edge of each pool served by the facilities.

Exception: Where a swimming pool serves only a designated group of residential dwelling units and not the general public, poolside sanitary facilities are not required if all living units are within a 200-foot (60 960 mm) horizontal radius of the nearest water's edge, are not over three stories in height unless serviced by an elevator, and are each equipped with private sanitary facilities.

12. Table 454.1.6.1, Florida Building Code, Building, 6th Edition (2017), provides:

TABLE 454.1.6.1
PUBLIC SWIMMING POOL—REQUIRED FIXTURE COUNT

SIZE OF POOL (square feet)	MEN'S RESTROOM			WOMEN'S RESTROOM	
	Urinals	WC	Lavatory	WC	Lavatory
0 – 2,500	1	1	1	1	1
2,501 – 5,000	2	1	1	5	1
5,001 – 7,500	2	2	2	6	2
7,501 – 10,000	3	2	3	8	3

For SI: 1 square foot = 0.0929 m².

13. Section 454.1.3.1.9, Florida Building Code, Building, 6th Edition (2017), states:

All public pools shall be surrounded by a minimum 48 inch (1219 mm) high fence or other approved substantial barrier. The fence shall be continuous around the perimeter of the pool area that is not otherwise blocked or obstructed by adjacent buildings or structures and shall adjoin with itself or abut to the adjacent members. Access through the barrier or fence from dwelling units, such as homes, apartments, motel rooms and hotel rooms, shall be through self-closing, self-latching lockable gates of 48 inch (1219 mm) minimal height from the floor or ground with the latch located a minimum of 54 inches (1372 mm) from the bottom of the gate or at least 3 inches (76 mm) below the top of the gate on the pool side. If the self-closing, self-latching gate is also self-locking and is operated by a key lock, electronic opener or integral combination lock, then the operable parts of such locks or openers shall be 34 inches minimum (864 mm) and 48 inches maximum (1219 mm) above the finished floor or ground. Doored access points from public rooms such as lobbies or club houses need not be through gates if the door(s) meet the same self-closing, self-latching requirements as a gate. Gates shall open outward away from the pool area. A latched, lockable gate shall be placed in the fence within 10 feet (3048 mm) of the closest point between the pool and the equipment area for service access.

(emphasis added)

14. In response to Petitioner's question, the answer is yes. Pursuant to section 454.1, Florida Building Code, Building, 6th Edition (2017), the definition of "Public swimming pools" (which clarifies that the term "living units" includes projects such as hotels), and section 454.1.3.1.9, Florida Building Code, Building, 6th Edition (2017) (which clarifies that the term "dwelling units" includes units such as motel rooms and hotel rooms), the exception to the requirement of poolside sanitary facilities of section 454.1.6.1 would apply to the project in question.

DONE AND ORDERED this 3RD day of JULY, 2018, in Punta Gorda, Charlotte County, State of Florida.

E. JAY CARLSON
Chairman, Florida Building Commission

NOTICE OF RIGHT TO APPEAL

Petitioner and all other interested parties are hereby advised of their right to seek judicial review of this Order in accordance with Section 120.68(2)(a), Florida Statutes (2018), and Florida Rules of Appellate Procedure 9.110(a) and 9.030(b)(1)(C). To initiate an appeal, a Notice of Appeal must be filed with the Agency Clerk, Department of Business and Professional Regulation, 2601 Blair Stone Road, Tallahassee, Florida 32399-2203 and with the appropriate District Court of Appeal not later than thirty (30) days after this Order is filed with the Clerk of the Department of Business and Professional Regulation. A Notice of Appeal filed with the District Court of Appeal shall be accompanied by the filing fee specified by Section 35.22(3), Florida Statutes (2018).

CERTIFICATE OF FILING AND SERVICE

I HEREBY CERTIFY that a true and correct copy of the foregoing order has been filed with the undersigned and furnished by U. S. Mail to the persons listed below this 27th day of July, 2018.

Brandon M. Nichols

Agency Clerk's Office
Department of Business and Professional Regulation
& Florida Building Commission
2601 Blair Stone Road
Tallahassee, Florida 32399-2203

Via U.S. Mail

G.B. Collins Engineering, P.A.
Attn: Samuel A. Liberatore
300 Alternate 19 North, Suite A.
Palm Harbor, FL 34683

Benjamin Lute
Cotney Construction Law, LLP
8621 E. Dr. Martin Luther King Jr. Blvd.
Tampa, FL 33610-7305

Via Inter-Office or Email Delivery

Mo Madani, Planning Manager
Codes and Standards Section
Department of Business and Professional Regulation
2601 Blair Stone Road
Tallahassee, Florida 32399
Mo.Madani@myfloridalicense.com

Marjorie Holladay
Joint Administrative Procedures Committee
Pepper Building, Room 680
Tallahassee, Florida 32399-1300

SW8240

Date Submitted	12/14/2018	**Section**	454.1.6.5.10.1	**Proponent**	James LePetrie
Chapter	4	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Comments

General Comments Yes

Alternate Language No

Related Modifications

Summary of Modification

Allows for the depth at a main drain to be greater than 3" in difference from the sidewall depth.

Rationale

Many pools being designed currently include circular areas at the deep points that are "dished" to the centers, usually at depth differences that are more than 3". Other irregularly-shaped pools will include this same type of depth difference. This mod will allow for these types of pools to be designed without violating code.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None

Impact to building and property owners relative to cost of compliance with code

None

Impact to industry relative to the cost of compliance with code

None

Impact to small business relative to the cost of compliance with code

None

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

No effect

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Allows for diverse types of pool designs.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

No

Does not degrade the effectiveness of the code

No

1st Comment Period History

SW8240-G1

Proponent Kari Hebrank **Submitted** 2/17/2019 **Attachments** No

Comment:

The Florida Swimming Pool Association SUPPORTS this code revision.

1st Comment Period History

SW8240-G2

Proponent Kari Hebrank **Submitted** 2/17/2019 **Attachments** No

Comment:

The Florida Swimming Pool Association SUPPORTS this code proposal.

If ~~T~~the depth at the outlet ~~shall not~~ deviate<u>s</u> more than 3 inches (76 mm) from the side wall~~.~~<u>, that depth shall be identified on depth markers in addition to the markers normally required for the sidewall depth. Markers for the depth at the drains shall be in accordance with 454.1.2.3 with the following words added: “AT CENTER” for circular areas and “AT DEEP POINT” for other pool shapes.</u>

SW8327

Date Submitted	12/15/2018	**Section**	454	**Proponent**	robert vincent
Chapter	4	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Comments

General Comments Yes

Alternate Language Yes

Related Modifications

Summary of Modification

Adds code language for permitting constructed impounded public bathing places, so that when public swimming pool-like structures are constructed, the referenced public swimming pool code section may be applied.

Rationale

The FBC has jurisdiction for public bathing places, but has no current code language to assure the safety and sanitation of artificially impounded bathing places, and the play features associated with the bathing place.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

Slight impact, as very few of these facilities are built in FL. They account for less than 0.5% of the public swimming pools built. These code edits would take less time, or the same time, for the local enforcement authority to review, approve and inspect for a single public pool.

Impact to building and property owners relative to cost of compliance with code

Injuries and illnesses should be reduced at these aquatic facilities when the current pool code's sound engineering and public health practices are applied to these pool-like facilities constructed; thus the owners' liability for injuries/illnesses would be reduced.

Impact to industry relative to the cost of compliance with code

Nominal, would require permitting and engineering submittals.

Impact to small business relative to the cost of compliance with code

Nominal, would require permitting and engineering submittals.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Yes, nearly identical to the public swimming pool construction requirements that prevent injuries, fatalities, and illnesses.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Yes, improves code and provides better construction assurances for safety and sanitation.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

None

Does not degrade the effectiveness of the code

None

Alternate Language

1st Comment Period History

8327-A1

Proponent Jeff Littlejohn **Submitted** 2/18/2019 **Attachments** Yes

Rationale

This language is submitted to add more specificity to the new section of code proposed by FDOH.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

Agree that code edits should reduce the time needed for local building official to review and approve applications for artificial impoundments (artificially constructed public bathing places).

Impact to building and property owners relative to cost of compliance with code

No impact.

Impact to industry relative to the cost of compliance with code

No impact.

Impact to Small Business relative to the cost of compliance with code

Nominal, would require permitting and engineering submittals.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Specific code requirements for public bathing places would benefit the health, safety and welfare of the public by ensuring that these facilities meet minimum standards.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Improves the code to cover a new type of facility that is being developed in Florida.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

None

Does not degrade the effectiveness of the code

None

1st Comment Period History

SW8327-G1

Proponent John Hall **Submitted** 1/3/2019 **Attachments** Yes

Comment:

This is a much needed code modification. These large impoundments are being installed in Florida. The entity installing these structures is arguing that the provisions of FBC Building Section 454.1 do not apply because the structures are not swimming pools, but are public bathing places. This contention is based on the misapplication of a final order declaratory statement (2018-0137) from the Department of Health. As a consequence much time and effort is necessary on the part of the authority having jurisdiction to make the case that the provisions of 454.1 are applicable to public bathing places. The original design of these structures does not include the many safety features that are required for swimming pools. This modification makes clear that FBC Building 454.1 is applicable to these structures. This code modification will result in a significant cost savings to the enforcing authority through time saved in debating the applicability of the Florida Building code to these pool-like structures.

1st Comment Period History

SW8327-G2

Proponent Kari Hebrank **Submitted** 2/13/2019 **Attachments** No

Comment:

The Florida Swimming Pool Association SUPPORTS this change.

454.1.11 Public Bathing Places- Artificial Impoundments-

454.1.11.1 If continuous or intermittent chemical disinfection and/or non-chemical disinfection is provided to the bathing place water, the equipment that feeds or generates the chemical shall be NSF/ANSI Standard 50 certified. 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.

454.1.11.2 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. Any water quality treatment methods employed shall be reviewed and approved by the jurisdictional building official as part of the construction building permit process.

454.1.11.3 The water encompassing the swimming area plus the recreational area of bathing places shall be at least 2 acres in size. The bathing load shall be limited by square footage with 50 square feet assigned per bather.

454.1.11.4 If a liner or artificial bottom is used to contain the water, the material used as a liner shall be certified under NSF/ANSI Standard 61-2017, Drinking Water System Components-Health Effects, dated March 13, 2017, is hereby incorporated by reference, 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. This certification requirement does not apply to cementitious materials. The liner or artificial bottom, floor, and the walls, if any, shall be white or light in color such that it meets the color criteria for public pool walls and floors.

454.1.11.5 If boating is allowed in the impoundment, provisions for bather safety and injury prevention must be specified and provided to the health department.

454.1.11.6 Vacuum systems shall not be used while the area is open for swimming, and all suction outlets shall comply with the requirements of section 514.0315, Florida Statutes.

454.1.11.7 Where public pool-like construction is planned using walls, stairs, ladders, slides, or floating, tethered or other play features are planned, they shall be reviewed and approved by the local enforcement authority in accordance with the FBC criteria for these issues for public pools.

454.1.11.8 Where public pool-like walls, stairs, benches, swimouts, sun shelfs, vertical drop-offs, floor slope transitions, and other similar structures or conditions are planned, the installation of depth, 'no-diving', floor and edge markers, injury prevention caution statements for safe egress, and other appropriate safety precautions for patrons shall conform with the criteria for these issues for public pools and shall be reviewed and approved by the local enforcement authority.

454.1.11.9 Where slides or water activity features are used in or adjacent to the bathing place, 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 enforcement authority to conform with the same criteria for public swimming pools.

454.1.11 Public Bathing Places- Artificial Impoundments-

454.1.11.1 General

An artificial impoundment is a type of public bathing place that is modified or man-made and has a total water surface area of at least 1 acre (43,560 square feet) in size. Such artificial impoundments shall be designed and constructed within the limits of sound engineering practice.

454.1.11.2 Sizing

The bathing load shall be limited by total square footage of the entire impoundment with 50 square feet assigned per bather.

454.1.11.3 Construction Standards

If a liner or artificial bottom is used to contain the water, the material used as a liner shall be certified under NSF/ANSI Standard 61-2017, Drinking Water System Components-Health Effects, dated March 13, 2017, is hereby incorporated by reference, 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, or the material used as a liner shall be tested under a Toxicity Characterization Leaching Procedure (TCLP) to comply with the TCLP standards, which were adopted by the US EPA in 1990 and can be found in https://www.epa.gov/hw-sw846/sw-846-test-method-1311-toxicity-characteristic-leaching-procedure. This certification requirement does not apply to cementitious materials. The liner or artificial bottom, floor, and the walls, if any, shall be white or light in color. The design of such liner system is the responsibility of a professional engineer licensed in Florida.

454.1.11.4 Access

Points of access shall be provided as needed to provide adequate entrance to and exit from the Artificial Impoundment. 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. 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

Decks and walkways shall be designed in compliance with Sections 451.1.3.1.1 to 451.1.3.1.5, except for zero depth entry areas (in designated swimming areas) and docks (for aquatic activities such as sailing or kayaking), which are exempt from these requirements. Artificial impoundments are exempt from the fencing requirements of Section 454.1.3.1.9, except that swimming pools designed for small children shall be fenced when located within 50 feet (15 240 mm) of an Artificial Impoundment.

454.1.11.6 Safety

The portion(s) of artificial impoundments designated for swimming shall meet the safety requirements in Section 454.1.3.3.1. Where slides or water activity features are used in or adjacent to the bathing place, 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 enforcement authority to conform with the same criteria for public swimming pools. If boating is allowed in the impoundment, provisions for bather safety and injury prevention must be specified and provided to the health department.

454.1.11.7 Electrical Systems

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 Artificial Impoundments designated for swimming at night shall comply with underwater lighting requirements from Sections 454.1.4.2.1. and 454.1.4.2.3.

454.1.11.8 Equipment Rooms

Equipment rooms for Artificial Impoundments shall comply with Section 454.1.5

454.1.11.9 Treatment Systems

The treatment system shall be designed to meet the water quality criteria specified in 64E-9.013 F.A.C. Compliance with this section is provided through mandatory monitoring as required in 64E-9.013, F.A.C. If continuous or intermittent chemical disinfection and/or non-chemical disinfection is provided to the bathing place water, the equipment that feeds or generates the chemical shall be NSF/ANSI Standard 50 certified. 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. Vacuum systems shall not be used in designated swimming area(s) while such area(s) is open for swimming, and all suction outlets shall comply with the requirements of section 514.0315, Florida Statutes.

STATE OF FLORIDA
DEPARTMENT OF HEALTH

IN RE:

CRYSTAL LAGOONS U.S. CORP.,

DOH Case No..: 2018-0137
Rendition No.: DOH-18-0357-FOI-HO

Petition for Declaratory Statement.
_____/

FINAL ORDER

THIS CAUSE is before the Department of Health (Department) on the Petition for Declaratory Statement (Petition) filed on June 15, 2018, by Crystal Lagoons U.S. Corp. (Crystal Lagoons). The Department noticed receipt of the Petition on June 29, 2018. See Notice 20603981, 44 Fla. Admin. Reg. 127 (Jun. 29, 2018). No timely-filed motion to intervene has been filed.

The assertions of fact set forth in the Petition are treated as true and materially complete for purposes of issuing this Final Order on the Petition filed by Crystal Lagoons. If material facts were misrepresented or omitted from the Petition, this Final Order will be of no force and effect. This Final Order is inapplicable to, and cannot be relied up by, any person other than Crystal Lagoons.

This Final Order applies only to Chapter 514, Florida Statutes (2017), and the Department's authority to administer and enforce the provisions of that chapter. This Final Order does not represent the opinion of the Department as to the applicability of any other Federal, state, or local statute, rule, regulation, ordinance, or other law applicable to Crystal Lagoons' activities. This Final Order does not bind any agency or entity other than the Department. Legal representations and arguments in the Petition, if any, are not adopted by the Department.

FINDINGS OF FACT

1. Crystal Lagoons seeks a declaratory statement that the bodies of water created and operated by Crystal Lagoons' licensees using the process patented by Crystal Lagoons are "public bathing places" as defined by section 514.011(4), Florida Statutes (2017). Pet. for Decl. Stmt., ¶¶ 17, 18.

2. Crystal Lagoons licenses its patented process to licensees in Florida to create and operate bodies of water that are used for swimming, diving, and recreational bathing and are held out by the owner to the public for this purpose. Pet. for Decl. Stmt., ¶¶ 3, 4.

3. Crystal Lagoons' patented process involves the creation and operation of an artificial impoundment of water. Pet. for Decl. Stmt., ¶ 3.

4. Crystal Lagoons' process does not use filtration of the total volume of the body of water as the primary means to meet established health standards. Pet. for Decl. Stmt., ¶ 16.

CONCLUSIONS OF LAW

1. The Department has jurisdiction of the subject matter of this cause, being authorized to administer and enforce Chapter 514, Florida Statutes, and the rules adopted thereunder. See § 514.021, Fla. Stat. (2017).

2. Crystal Lagoons requests this Final Order pursuant to section 120.565, Florida Statutes, and Chapter 28-105, of the *Florida Administrative Code*. These sections authorize a substantially affected person to petition an agency that has authority to administer a statute or rule to issue a declaratory statement of the applicability of the statute or rule to that person's particular circumstances. See § 120.565, Fla. Stat. (2017); Fla. Admin. Code R. 28-105.

3. Crystal Lagoons has standing to seek a final order on the Petition because Crystal Lagoons has a substantial interest in correctly representing to its licensees that the Crystal Lagoons process creates a public bathing place as opposed to a public swimming pool, as those terms are defined under existing Florida law. See First Nat. Bank & Trust Co. of Muskogee v. Heilman, 62 F.2d 157, 159 (C.C.A. 10th Cir. 1932) (a company licensed in the state is presumed to know the law governing its transactions).

4. A "public swimming pool" is a "structure" that is "filled with a filtered and disinfected water supply." See § 514.011(2), Fla. Stat. (2017). To meet established health standards, filtration systems must maintain the total volume recirculation rate described at rule 64E-9.008(10)(b), *of the Florida Administrative Code*. Crystal Lagoons' process does not employ a total volume recirculation system to meet established health standards. Pet. for Decl. Stmt., ¶ 16. Consequently, bodies of water created using the Crystal Lagoons process are not public swimming pools.

5. A "public bathing place" is "a body of water, natural or modified by humans," held out to the public for swimming, diving, and recreational bathing, the bathing waters of which include, but are not limited to "artificial impoundments." See § 514.011(4), Fla. Stat. (2017).

6. The Crystal Lagoons patented process creates or modifies bodies of water to form artificial impoundments of water having a discernible shoreline. Pet. for Decl. Stmt., ¶ 12. Crystal Lagoons' licensees create, operate, and hold out these bodies of water to the public for swimming, diving, and recreational bathing. Pet. for Decl. Stmt., ¶ 22. Consequently, bodies of water created and operated using Crystal Lagoons' patented process are public bathing places.

7. This Final Order applies solely to persons licensed by Crystal Lagoons to use a process that was patented by Crystal Lagoons and recorded by the United States Patent and Trademark Office as of the date of the filing of the Petition. This Final Order does not apply to non-patented processes developed or in development by Crystal Lagoons, whether or not those processes are currently licensed by Crystal Lagoons for the creation and operation of bodies of water in Florida.

ORDER

Based on the foregoing Findings of Fact and Conclusions of Law, bodies of water created and operated by Crystal Lagoons' licensees using a process that was patented in the name of Crystal Lagoons, as owner, and recorded by the United States Patent and Trademark Office as of the date of the filing of the Petition are "public bathing places" as that term is defined by section 514.011(4), Florida Statutes (2017).

DONE and ORDERED this 22 day of AUGUST, 2018, in Tallahassee, Leon County, Florida.

Celeste Philip, MD, MPH
Surgeon General and Secretary

By: [signature]
Marsha Lindeman, ARNP, MSN
Interim Assistant Deputy Secretary for Health

FILED ON THIS DATE PURSUANT TO § 120.52, FLORIDA STATUTES, WITH THE DESIGNATED DEPARTMENT CLERK, RECEIPT OF WHICH IS HEREBY ACKNOWLEDGED.

[signature]
CLERK

8/21/18
DATE

NOTICE OF RIGHT TO JUDICIAL REVIEW

A party adversely affected by this Final Order is entitled to judicial review pursuant to section 120.68, Florida Statutes. Review proceedings are governed by the Florida Rules of Appellate Procedure. Such proceedings must be initiated by filing a notice of appeal with the Department of Health, Agency Clerk, and a copy of the notice of appeal, with the appropriate filing fee, with the District Court of Appeal having jurisdiction. The notice of appeal must be filed within thirty (30) days of the filing of this Final Order.

Copies to:

Jason L Unger
Ty Jackson
Attorneys for Petitioner
GrayRobinson PA
301 S Bronough St Ste 600
Tallahassee FL 32301

Lori L Jobe
Senior Attorney
Attorney for the Department
Office of the General Counsel
4052 Bald Cypress Wy Bin A-02
Tallahassee FL 32399-1703

Kendra Goff, PhD, DABT, CPM
State Toxicologist & Chief
Bureau of Environmental Health
Florida Department of Health
4052 Bald Cypress Way, Bin A-08
Tallahassee, Florida 32399

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing Final Order has been sent by U.S. Mail, interoffice mail, or hand delivery to each of the above-named persons this 21st day of August, 2018.

Shannon Revels

Shannon Revels, Agency Clerk
Department of Health
4052 Bald Cypress Way, Bin # A02
Tallahassee, FL 32399-1703

CHAPTER 514

PUBLIC SWIMMING AND BATHING FACILITIES

514.011 Definitions.—As used in this chapter:

(1) "Department" means the Department of Health.

(2) "Public swimming pool" or "public pool" means a watertight structure of concrete, masonry, or other approved materials which is located either indoors or outdoors, used for bathing or swimming by humans, and filled with a filtered and disinfected water supply, together with buildings, appurtenances, and equipment used in connection therewith. A public swimming pool or public pool shall mean a conventional pool, spa-type pool, wading pool, special purpose pool, or water recreation attraction, to which admission may be gained with or without payment of a fee and includes, but is not limited to, pools operated by or serving camps, churches, cities, counties, day care centers, group home facilities for eight or more clients, health spas, institutions, parks, state agencies, schools, subdivisions, or the cooperative living-type projects of five or more living units, such as apartments, boardinghouses, hotels, mobile home parks, motels, recreational vehicle parks, and townhouses.

(3) "Private pool" means a facility used only by an individual, family, or living unit members and their guests which does not serve any type of cooperative housing or joint tenancy of five or more living units.

(4) "Public bathing place" means a body of water, natural or modified by humans, for swimming, diving, and recreational bathing used by consent of the owner or owners and held out to the public by any person or public body, irrespective of whether a fee is charged for the use thereof. The bathing water areas of public bathing places include, but are not limited to, lakes, ponds, rivers, streams, artificial impoundments, and waters along the coastal and intracoastal beaches and shores of the state.

(5) "Portable pool" means a pool or spa, and related equipment systems of any kind, which is designed or intended to be movable from location to location.

(6) "Temporary pool" means a pool intended to be used in conjunction with a sanctioned national or international swimming or diving competition event that does not exceed 30 consecutive days of use.

History.—ss. 1, 14, ch. 85-173; s. 4, ch. 91-429; s. 676, ch. 97-103; s. 77, ch. 97-237; s. 45, ch. 98-151; s. 1, ch. 2000-309; s. 103, ch. 2012-184; s. 10, ch. 2016-129.

514.0115 Exemptions from supervision or regulation; variances.—

(1) Private pools and water therapy facilities connected with facilities connected with hospitals, medical doctors' offices, and licensed physical therapy establishments shall be exempt from supervision under this chapter.

(2)(a) Pools serving no more than 32 condominium or cooperative units which are not operated as a public lodging establishment shall be exempt from supervision under this chapter, except for water quality.

(b) Pools serving condominium or cooperative associations of more than 32 units and whose recorded documents prohibit the rental or sublease of the units for periods of less than 60 days are exempt from supervision under this chapter, except that the condominium or cooperative owner or association must file applications with the department and obtain construction plans approval and receive an initial operating permit. The department shall inspect the swimming pools at such places annually, at the fee set forth in s. 514.033(3), or upon request by a unit owner, to determine compliance with department rules relating to water quality and lifesaving equipment. The department may not require compliance with rules relating to swimming pool lifeguard standards.

(3) A private pool used for instructional purposes in swimming shall not be regulated as a public pool.

(4) Any pool serving a residential child care agency registered and exempt from licensure pursuant to s. 409.176 shall be exempt from supervision or regulation under this chapter related to construction standards if the pool is used exclusively by the facility's residents and if admission may not be gained by the public.

(5) A portable pool used exclusively for providing swimming lessons or related instruction in support of an established educational program sponsored or provided by a school district may not be regulated as a public pool.

(6) A temporary pool may not be regulated as a public pool.

(7) The department may grant variances from any rule adopted under this chapter pursuant to procedures adopted by department rule. The department may also grant, pursuant to procedures adopted by department rule, variances from the provisions of the Florida Building Code specifically pertaining to public swimming pools and bathing places when requested by the pool owner or the pool owner's representative to relieve hardship in cases involving deviations from the Florida Building Code provisions, when it is shown that the hardship was not caused intentionally by the action of the applicant, where no reasonable alternative exists, and the health and safety of the pool patrons is not at risk.

History.—ss. 1, 14, ch. 85-173; s. 2, ch. 87-117; s. 46, ch. 98-151; s. 1, ch. 99-182; s. 13, ch. 2014-154; s. 67, ch. 2015-2; s. 11, ch. 2016-129.

514.021 Department authorization.—

(1) The department may adopt and enforce rules to protect the health, safety, or welfare of persons by setting sanitation and safety standards for public swimming pools and public bathing places. The department shall review and revise such rules as necessary, but not less than biennially. Sanitation and safety standards shall be limited to matters relating to source of water supply; microbiological, chemical, and physical quality of water in the pool or bathing area; method of water purification, treatment, and disinfection; lifesaving apparatus; and measures to ensure safety of bathers.

(2) The department may not establish by rule any regulation governing the design, alteration, modification, or repair of public swimming pools and bathing places which has no impact on sanitation and safety of persons using public swimming pools and bathing places. Further, the department may not adopt by rule any regulation governing the construction, erection, or demolition of public swimming pools and bathing places. It is the intent of the Legislature to preempt those functions to the Florida Building Commission through adoption and maintenance of the Florida Building Code. The department shall provide technical assistance to the commission in updating the construction standards of the Florida Building Code which govern public swimming pools. This subsection does not abrogate the authority of the department to adopt and enforce appropriate sanitary regulations and requirements as authorized in subsection (1).

History.—ss. 2, 14, ch. 85-173; s. 65, ch. 87-225; s. 4, ch. 91-429; s. 49, ch. 2000-141; s. 48, ch. 2000-242; s. 27, ch. 2000-367; s. 34, ch. 2001-186; s. 3, ch. 2001-372; s. 104, ch. 2012-184.

514.023 Sampling of beach waters; and public bathing places; health advisories.—

(1) As used in this section, the term "beach waters" means the waters along the coastal and intracoastal beaches and shores of the state, and includes salt water and brackish water.

(2) The department may adopt and enforce rules to protect the health, safety, and welfare of persons using the beach waters and public bathing places of the state. The rules must establish health

standards and prescribe procedures and timeframes for bacteriological sampling of beach waters and public bathing places.

(3) The department may issue health advisories if the quality of beach waters or a public bathing place fails to meet standards established by the department. The issuance of health advisories related to the results of bacteriological sampling of beach waters is preempted to the state.

(4) When the department issues a health advisory against swimming in beach waters or a public bathing place on the basis of finding elevated levels of fecal coliform, *Escherichia coli*, or enterococci bacteria in a water sample, the department shall concurrently notify the municipality or county in which the affected beach waters are located, whichever has jurisdiction, and the local office of the Department of Environmental Protection, of the advisory. The local office of the Department of Environmental Protection shall promptly investigate wastewater treatment facilities within 1 mile of the affected beach waters or public bathing place to determine if a facility experienced an incident that may have contributed to the contamination and provide the results of the investigation in writing or by electronic means to the municipality or county, as applicable.

History.—s. 2, ch. 2000-309; s. 1, ch. 2009-231; s. 105, ch. 2012-184.

514.0231 Advisory committee to oversee sampling of beach waters.—The Department of Health shall form an interagency technical advisory committee to oversee the performance of the study required in s. 514.023 and to advise it in rulemaking pertaining to standards for public bathing places along the coastal and intracoastal beaches and shores of the state. Membership on the committee shall consist of equal numbers of staff of the Department of Health and the Department of Environmental Protection with expertise in the subject matter of the study. Members shall be appointed by the State Surgeon General and the Secretary of Environmental Protection. The committee shall be chaired by a representative from the Department of Health.

History.—s. 5, ch. 2000-309; s. 22, ch. 2001-63; s. 109, ch. 2008-6.

514.025 Assignment of authority to county health departments.—

(1) The department shall assign to county health departments that are staffed with qualified engineering personnel the functions of reviewing applications and plans for the construction, development, or modification of public swimming pools or bathing places; of conducting inspections; and of issuing all permits. If the county health department determines that qualified staff are not available, the department shall be responsible for such functions.

(2) County health departments are responsible for routine surveillance of water quality in all public swimming pools and bathing places, including routine inspections, complaint investigations, enforcement procedures, and operating permits.

(3) The department may assign the responsibilities and functions specified in this section to any multicounty independent special district created by the Legislature to perform multiple functions, to

include municipal services and improvements, to the same extent and under the same conditions as provided in subsections (1) and (2), upon request of the special district.

History.—s. 7, ch. 78-356; s. 2, ch. 81-318; ss. 3, 13, 14, ch. 85-173; s. 66, ch. 87-225; s. 4, ch. 91-429; s. 151, ch. 97-101; s. 2, ch. 2009-231; s. 106, ch. 2012-184.

Note.—Former s. 514.032.

514.028 Advisory review board.—

(1) The Governor shall appoint an advisory review board which shall meet as necessary or at least quarterly, to recommend agency action on variance request, rule and policy development, and other technical review problems. The board shall be comprised of:

(a) A representative from the office of licensure and certification of the department.

(b) A representative from the county health departments.

(c) Three representatives from the swimming pool construction industry.

(d) A representative from the public lodging industry.

(e) A representative from a county or local building department.

(2) The purpose of the advisory review board is to promote better relations, understanding, and cooperation between such industries and the department; to review and make recommendations regarding department product approval standards; to suggest means of better protecting the health, welfare, or safety of persons using the services offered by such industries; and to give the department the benefit of the knowledge and experience of the board concerning the industries and individual businesses affected by the laws and rules administered by the department.

(3) Members shall be reimbursed for travel expenses incurred in connection with service on the advisory review board pursuant to s. 112.061.

History.—ss. 8, 14, 15, ch. 85-173; ss. 4, 5, ch. 91-429; s. 152, ch. 97-101; s. 78, ch. 97-237; s. 17, ch. 2011-222.

514.03 Approval necessary to construct, develop, or modify public swimming pools or public bathing places.—

(1) A person or public body desiring to construct, develop, or modify a public swimming pool must submit an application, containing the information required under s. 514.031(1)(a)1.-6. to the department for an operating permit before filing an application for a building permit under s. 553.79. A copy of the final inspection required under s. 514.031(1)(a)5. shall be submitted to the department upon receipt by the applicant. The application shall be deemed incomplete pursuant to s. 120.60 until such copy is submitted to the department.

(2) Local governments or local enforcement districts may determine compliance with the general construction standards of the Florida Building Code, pursuant to s. 553.80. Local governments or local enforcement districts may conduct plan reviews and inspections of public swimming pools and public bathing places for this purpose.

History.—s. 2, ch. 7825, 1919; CGL 3769; ss. 19, 35, ch. 69-106; s. 3, ch. 76-168; s. 447, ch. 77-147; s. 1, ch. 77-457; ss. 2, 9, ch. 78-356; s. 2, ch. 81-318; ss. 4, 13, 14, ch. 85-173; s. 4, ch. 91-429; s. 47, ch. 98-151; s. 50, ch. 2000-141; s. 3, ch. 2000-309; s. 107, ch. 2012-184; s. 14, ch. 2014-154.

514.031 Permit necessary to operate public swimming pool.—

(1) It is unlawful for any person or public body to operate or continue to operate any public swimming pool without a valid permit from the department, such permit to be obtained in the following manner:

(a) Any person or public body desiring to operate any public swimming pool shall file an application for an operating permit with the department, on application forms provided by the department, and shall accompany such application with:

1. A description of the structure, its appurtenances, and its operation.

2. A description of the source or sources of water supply, and the amount and quality of water available and intended to be used.

3. The method and manner of water purification, treatment, disinfection, and heating.

4. The safety equipment and standards to be used.

5. A copy of the final inspection from the local enforcement agency as defined in s. 553.71.

6. Any other pertinent information deemed necessary by the department.

(b) The applicant shall respond to a request for additional information due to an incomplete application for an operating permit pursuant to s. 120.60. Upon receipt of an application, whether complete or incomplete, as required in s. 514.03 and as set forth under this section, the department shall review and provide to the local enforcement agency and the applicant any comment or proposed modifications on the information received pursuant to subparagraphs (a)1.-6.

(c) If the department determines that the public swimming pool is or may reasonably be expected to be operated in compliance with this chapter and the rules adopted hereunder, the department shall grant the application for permit.

(d) If the department determines that the public swimming pool does not meet the provisions outlined in this chapter or the rules adopted hereunder, the department shall deny the application for a permit pursuant to the provisions of chapter 120. Such denial shall be in writing and shall list the circumstances for the denial. Upon correction of such circumstances, an applicant previously denied permission to operate a public swimming pool or bathing place may reapply for a permit.

(2) Operating permits shall not be required for coastal or intracoastal beaches.

(3) Operating permits may be transferred from one name or owner to another. When the ownership or name of an existing public swimming pool is changed and such establishment is operating at the time of the change with a valid permit from the department, the new owner of the establishment shall apply to the department, upon forms provided by the department, within 30 days after such a change.

(4) Each such operating permit shall be renewed annually and the permit must be posted in a conspicuous place.

(5) An owner or operator of a public swimming pool, including, but not limited to, a spa, wading, or special purpose pool, to which admittance is obtained by membership for a fee shall post in a prominent location within the facility the most recent pool inspection report issued by the department pertaining to the health and safety conditions of such facility. The report shall be legible and readily accessible to members or potential members. The department shall adopt rules to enforce this subsection. A portable pool may not be used as a public pool unless it is exempt under s. 514.0115.

History.—s. 7, ch. 78-356; s. 2, ch. 81-318; ss. 5, 13, 14, ch. 85-173; s. 4, ch. 91-429; s. 48, ch. 98-151; s. 49, ch. 2000-154; s. 4, ch. 2000-309; s. 108, ch. 2012-184; s. 15, ch. 2014-154; s. 13, ch. 2016-129.

514.0315 Required safety features for public swimming pools and spas.—

(1) A public swimming pool or spa must be equipped with an anti-entrapment system or device that complies with American Society of Mechanical Engineers/American National Standards Institute standard A112.19.8, or any successor standard.

(2) A public swimming pool or spa built before January 1, 1993, with a single main drain other than an unblockable drain must be equipped with at least one of the following features that complies with any American Society of Mechanical Engineers, American National Standards Institute, American Society for Testing and Materials, or other applicable consumer product safety standard for such system or device and protects against evisceration and body-and-limb suction entrapment:

(a) A safety vacuum release system that ceases operation of the pump, reverses the circulation flow, or otherwise provides a vacuum release at a suction outlet when a blockage is detected and that has been tested by an independent third party and found to conform to American Society of Mechanical Engineers/American National Standards Institute standard A112.19.17, American Society for Testing and Materials standard F2387, or any successor standard.

(b) A suction-limiting vent system with a tamper-resistant atmospheric opening.

(c) A gravity drainage system that uses a collector tank.

(d) An automatic pump shut-off system.

(e) A device or system that disables the drain.

(3) The determination and selection of a feature under subsection (2) for a public swimming pool or spa constructed before January 1, 1993, is at the sole discretion of the owner or operator of the public swimming pool or spa. A licensed contractor described in s. 489.105(3)(j), (k), or (l) must install the feature.

History.—s. 18, ch. 2011-222; s. 68, ch. 2012-5.

514.033 Creation of fee schedules authorized.—

(1) The department is authorized to establish a schedule of fees to be charged by the department or by any authorized county health department as detailed in s. 514.025. Fees assessed under this chapter shall be in an amount sufficient to meet the cost of carrying out the provisions of this chapter.

(2) The fee schedule shall be: for original construction or development plan approval, not less than $275 and not more than $500; for modification of original construction, not less than $100 and not more than $150; for an initial operating permit, not less than $125 and not more than $250; and for review of variance applications, not less than $240 and not more than $400. The department shall assess the minimum fees provided in this subsection until a fee schedule is promulgated by rule of the department.

(3) Fees shall be based on pool aggregate gallonage, which shall be: up to and including 25,000 gallons, not less than $75 and not more than $125; and in excess of 25,000 gallons, not less than $160 and not more than $265, except for a pool inspected pursuant to s. 514.0115(2)(b) for which the annual fee shall be $50.

(4) Fees collected by the department in accordance with this chapter shall be deposited into the Grants and Donations Trust Fund or the County Health Department Trust Fund. Any fee collected under this chapter is nonrefundable.

(5) The department may not charge any fees for services provided under this chapter other than those fees authorized in this section. However, the department shall prorate the initial annual fee for an operating permit on a half-year basis.

History.—s. 7, ch. 78-356; s. 2, ch. 81-318; s. 9, ch. 83-230; ss. 6, 13, 14, ch. 85-173; s. 1, ch. 87-117; s. 4, ch. 91-429; s. 9, ch. 96-407; s. 225, ch. 97-101; s. 49, ch. 98-151; s. 109, ch. 2012-184.

514.04 Right of entry.—For the purpose of this chapter, department personnel at any reasonable time may enter upon any and all parts of the premises of such public swimming pools and bathing places to make an examination and investigation to determine the sanitary and safety conditions of such places.

History.—s. 3, ch. 7825, 1919; CGL 3770; ss. 19, 35, ch. 69-106; s. 3, ch. 76-168; s. 448, ch. 77-147; s. 1, ch. 77-457; ss. 3, 9, ch. 78-356; s. 2, ch. 81-318; ss. 7, 13, 14, ch. 85-173; s. 4, ch. 91-429.

514.05 Denial, suspension, or revocation of permit; administrative fines.—

(1) The department may deny an application for a permit, suspend or revoke a permit issued to any person or public body, or impose an administrative fine upon the failure of such person or public body to comply with the provisions of this chapter or the rules adopted hereunder.

(2) The department may impose an administrative fine, which shall not exceed $500 for each violation, for the violation of this chapter or the rules adopted hereunder and for the violation of any of the provisions of chapter 386. Notice of intent to impose such fine shall be given by the department to the alleged violator. Each day that a violation continues may constitute a separate violation.

(3) In determining the amount of fine to be imposed, if any, for a violation, the following factors shall be considered:

(a) The gravity of the violation and the extent to which the provisions of the applicable statutes or rules were violated.

(b) Actions taken by the operator to correct violations.

(c) Any previous violations.

(4) All amounts collected pursuant to this section shall be deposited into the Grants and Donations Trust Fund or into the County Health Department Trust Fund, whichever is applicable.

(5) Under conditions specified by rule, the department may close a public pool that is not in compliance with this chapter or the rules adopted under this chapter.

History.—s. 4, ch. 7825, 1919; CGL 3771; ss. 19, 35, ch. 69-106; s. 3, ch. 76-168; s. 449, ch. 77-147; s. 1, ch. 77-457; ss. 4, 9, ch. 78-356; s. 2, ch. 81-318; ss. 9, 13, 14, ch. 85-173; s. 4, ch. 91-429; s. 153, ch. 97-101; s. 50, ch. 98-151; s. 110, ch. 2012-184.

514.06 Injunction to restrain violations.—Any public swimming pool or public bathing place presenting a significant risk to public health by failing to meet sanitation and safety standards established pursuant to this chapter is declared to be a public nuisance, dangerous to health or safety. Such nuisances may be abated or enjoined in an action brought by the county health department or the department.

History.—s. 5, ch. 7825, 1919; CGL 3772; ss. 19, 35, ch. 69-106; s. 139, ch. 71-355; s. 3, ch. 76-168; s. 450, ch. 77-147; s. 1, ch. 77-457; ss. 5, 9, ch. 78-356; s. 2, ch. 81-318; ss. 10, 13, 14, ch. 85-173; s. 4, ch. 91-429; s. 154, ch. 97-101; s. 111, ch. 2012-184.

514.071 Certification of swimming instructors and lifeguards required.—

(1) Any person working as a swimming instructor or lifeguard at a public swimming pool must be certified by the American Red Cross, the Y.M.C.A., or other nationally recognized aquatic training programs. Swimming instructors must be currently certified in swimming instruction, first aid, and cardiopulmonary resuscitation. Lifeguards must be currently certified in lifeguarding, first aid, and cardiopulmonary resuscitation.

(2) In addition to any other remedies available to the department, the department may sue to enjoin the operation of any public swimming pool that uses any swimming instructor or lifeguard in violation of subsection (1).

(3) The department shall adopt rules necessary to implement this section which shall include, but not be limited to, defining the terms “swimming instructor,” “lifeguard,” and “nationally recognized aquatic training program.”

History.—ss. 1, 3, ch. 90-47; s. 4, ch. 91-429.

514.072 Certification of swimming instructors for people who have developmental disabilities.— Any person working at a swimming pool who holds himself or herself out as a swimming instructor

specializing in training people who have developmental disabilities, as defined in s. 393.063, may be certified by the Dan Marino Foundation, Inc., in addition to being certified under s. 514.071. The Dan Marino Foundation, Inc., must develop certification requirements and a training curriculum for swimming instructors for people who have developmental disabilities. A person certified under s. 514.071 must meet the additional certification requirements of this section within 6 months after receiving certification under s. 514.071.

History.—s. 1, ch. 2006-153; s. 69, ch. 2012-5; s. 18, ch. 2013-162.

514.075 Public pool service technician; certification.—The department may require that a public pool, as defined in s. 514.011, be serviced by a person certified as a pool service technician. To be certified, an individual must demonstrate knowledge of public pools which includes, but is not limited to: pool cleaning; general pool maintenance; source of the water supply; bacteriological, chemical, and physical quality of water; and water purification, testing, treatment, and disinfection procedures. The department may, by rule, establish the requirement for the certification course and course approval. The department shall deem certified any individual who is certified by a course of national recognition or any person licensed under s. 489.105(3)(j), (k), or (l). This requirement does not apply to a person, or the direct employee of a person, permitted as a public pool operator under s. 514.031.

History.—s. 19, ch. 96-298; s. 73, ch. 96-388.

SW8341

Date Submitted	12/15/2018	**Section**	454.1	**Proponent**	robert vincent
Chapter	4	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Comments

General Comments No

Alternate Language Yes

Related Modifications

Summary of Modification

Several improvements and clarifications to public swimming pool code with one added definition for clarification.

Rationale

These revisions clarify code language for pool design that are frequently misinterpreted.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

Nominal to none.

Impact to building and property owners relative to cost of compliance with code

Nominal.

Impact to industry relative to the cost of compliance with code

Nominal.

Impact to small business relative to the cost of compliance with code

Nominal.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Each code revision item suggested provides a better pool construction for safety and sanitation.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Improves clarity for ease of interpretation.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not.

Does not degrade the effectiveness of the code

Does not

Alternate Language

1st Comment Period History

8341-A1

Proponent Michael Weinbaum **Submitted** 2/7/2019 **Attachments** Yes

Rationale

Skimmer pools may only be 1000 square feet. Very large sunshelves are unlikely in a skimmer pool are not possible. It is legitimate to want to focus the skimming action to the sun shelf, but hard to imagine that more than one skimmer per shelf would be needed.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

none

Impact to building and property owners relative to cost of compliance with code

none

Impact to industry relative to the cost of compliance with code

none

Impact to Small Business relative to the cost of compliance with code

Nominal.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Yes, a shallow sun shelf area is more vulnerable to fouling than deeper areas.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Yes

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not.

Does not degrade the effectiveness of the code

Does not.

454.1 "Collector tank" means a reservoir, with a minimum of 2.25 square feet (0.2 m2) water surface area open to the atmosphere, from which the recirculation or feature pump takes suction, which receives the gravity flow from the main drain line and surface overflow system or feature water source line, and that is cleanable. Tanks shall be shall be constructed of concrete or other impervious and structurally rigid material, shall be watertight, free from structural cracks and shall have a nontoxic smooth and slip-resistant finish.

454.1 "Offset" means set back into the deck from the normal pool wall perimeter (three sides must be surrounded by pool deck).

454.1.2.8.1 Sun shelf dimensional requirements. Sun shelf areas must be a minimum of 20 inches (508 mm) wide and provide a minimum of 10 square feet (0.93 m2) of horizontal surface adjoining on the edge of the pool (three sides of shelf must be surrounded by pool deck) over a distance of not less than 3 feet (914 mm). The sun shelf floor shall be horizontal or shall a have uniform slope from a zero depth entry, and its maximum depth shall be between 8 inches (203 mm) to 12 inches (254 mm) below the water surface. Sun shelves shall not be incorporated in pools utilizing automatic recessed surface skimmers.

454.1.5.5 Access. The opening to an equipment room or area shall be a minimum 3 feet by 6 feet (914 mm by 1829 mm) and shall provide easy access to the equipment. Below grade collector tank(s) must have adequate access for cleaning, maintenance, and inspection.

454.1.9.6.2 The deck level perimeter overflow system with grate shall be provided at the water's edge across the entire zero depth portion of the pool. Zero entry grate must be 8 to 12 inches wide, slip resistant, and constructed for intended purpose of submersion in water and exposure to UV sunlight.

Text of Modification **454.1 "Collector tank"** means a reservoir, with a minimum of 2.25 square feet (0.2 m2) water surface area open to the atmosphere, from which the recirculation or feature pump takes suction, which receives the gravity flow from the main drain line and surface overflow system or feature water source line, and that is cleanable. Tanks shall be shall be constructed of concrete or other impervious and structurally rigid material, shall be watertight, free from structural cracks and shall have a nontoxic smooth and slip-resistant finish.

454.1 "Offset" means set back into the deck from the normal pool wall perimeter (three sides must be surrounded by pool deck).

454.1.2.8.1 Sun shelf dimensional requirements. Sun shelf areas must be a minimum of 20 inches (508 mm) wide and provide a minimum of 10 square feet (0.93 m2) of horizontal surface adjoining on the edge of the pool (three sides of shelf must be surrounded by pool deck) over a distance of not less than 3 feet (914 mm). The sun shelf floor shall be horizontal or shall a have uniform slope from a zero depth entry, and its maximum depth shall be between 8 inches (203 mm) to 12 inches (254 mm) below the water surface. In pools utilizing automatic recessed surface skimmers, there shall be at least one skimmer in each sun shelf area.

454.1.5.5 Access. The opening to an equipment room or area shall be a minimum 3 feet by 6 feet (914 mm by 1829 mm) and shall provide easy access to the equipment. Below grade collector tank(s) must have adequate access for cleaning, maintenance, and inspection.

454.1.9.6.2 The deck level perimeter overflow system with grate shall be provided at the water's edge across the entire zero depth portion of the pool. Zero entry grate must be 8 to 12 inches wide, slip resistant, and constructed for intended purpose of submersion in water and exposure to UV sunlight.

SW8365

Date Submitted	12/15/2018	**Section**	454.1	**Proponent**	robert vincent
Chapter	4	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Comments

General Comments Yes

Alternate Language Yes

Related Modifications

Summary of Modification

Glitches to correct. No change to the existing code language that is left off here.

Rationale

The make the FBC code consistent with the Department of Health rule Chapter 64E-9, FAC

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None

Impact to building and property owners relative to cost of compliance with code

None

Impact to industry relative to the cost of compliance with code

None

Impact to small business relative to the cost of compliance with code

None

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Consistency with health rule

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Consistency with other rule

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

None

Does not degrade the effectiveness of the code

None

Alternate Language

1st Comment Period History

8365-A1

Proponent robert vincent **Submitted** 2/18/2019 **Attachments** Yes

Rationale

To keep chlorine consuming spill-able beverages away from the pool water while allowing the pool patrons that use the pool for exercise the ability to hydrate with plain water without leaving the pool.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact; Operational for DOH to manage after the statements on pool rules sign posted.

Impact to building and property owners relative to cost of compliance with code

Positive consumer relations impact expected. This will be for new pool rules signs and eventually for those signs replaced after fading to illegible.

Impact to industry relative to the cost of compliance with code

Nominal impact expected for added words on new signs and replaced signs.

Impact to Small Business relative to the cost of compliance with code

None

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Should be very good for the patrons health and for the pool water quality. Positive welfare (mental health) benefits as well.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

YES, this is a highly requested modification from community owned pools.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

No discrimination expected

Does not degrade the effectiveness of the code

Does not degrade FBC code, and DOH will implement this mod operationally after the pool rule sign code language is revised.

Is the proposed code modification part of a prior code version? No

1st Comment Period History

SW8365-G1

Proponent Kari Hebrank **Submitted** 2/13/2019 **Attachments** No

Comment:

The Florida Swimming Pool Association SUPPORTS this code modification.

No change to the existing code language that is left off here.

454.1.2.3.5 Rules and regulations signage.Rules and regulations for bathers shall be installed in minimum 1-inch (25.4 mm) letters which must be legible from the pool deck, and shall contain the following:
1. No food or beverages in the pool ~~or on pool wet deck~~.

454.1.9.8.7.1 Rules and regulations for water theme parks shall be posted in minimum 1-inch(305 mm) letters at each entrance to the park and shall contain the following:
1. No food, drink, glass or animals in pool or on the pool decks.

454.1.9.8.1 Waters discharged from all fountain or spray features shall not pond on the feature floor but shall flow by gravity through a main drain fitting to a ~~below or~~ collection system which discharges to a collector tank.

No change to the existing code language that is left off here.

No change to the existing code language that is left off here.

454.1.2.3.5 Rules and regulations signage.Rules and regulations for bathers shall be installed in minimum 1-inch (25.4 mm) letters which must be legible from the pool deck, and shall contain the following:
1. No food or beverages in the pool or on pool wet deck.

Commercially bottled water in plastic bottle allowed on the pool wet deck for hydration while bather exercises .

454.1.9.8.7.1 Rules and regulations for water theme parks shall be posted in minimum 1-inch (305 mm) letters at each entrance to the park and shall contain the following:
1. No food, drink, glass or animals in pool or on the pool decks.

SW8370

Date Submitted	12/15/2018	**Section**	454.1	**Proponent**	Mark Bowers
Chapter	4	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Comments

General Comments Yes

Alternate Language No

Related Modifications

Summary of Modification

I am proposing to exempt Floatation pods from FBC regulatory requirements. Unlike pools and spas, floatation pods are portable, are super saturated with magnesium sulfate, have a bathing load of 1, and create an extremely low risk of transmission of disease or safety risk to the public.

Rationale

Epsom salt floatation tanks are not pools or spas and have unique design and operational requirements that require a float spa owner to apply for a variance for dozens of code requirements in order to open for business.

Some of these requirements actually create safety hazards to the public, such as requiring a halogen sanitizer in and enclosed environment.

These devices are therapeutic appliances, are portable and not hard plumbed, have a bathing load of '1' and are super saturated with magnesium sulfate creating an extremely inhospitable environment for pathogens.

These are not pools and as such, should be regulated differently.

These devices were developed by the National Institute of Health in the US in the 1950's and since that time, there has been no documented case of disease outbreak from using a floatation pod.

Many other states choose not to regulate Floatation pods as they do not meet the definition of a pool and have such a low safety risk to the public.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

none

Impact to building and property owners relative to cost of compliance with code

none

Impact to industry relative to the cost of compliance with code

Implementing this code change would save the floatation industry in Florida many tens of thousands of dollars and many hours of bureaucratic paperwork that each new float center must contend with.

Impact to small business relative to the cost of compliance with code

Implementing this proposed Mod would not have any impact other than encouraging more floatation centers to open up in Florida.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

This proposed modification improves the safety and welfare of the general public by considering these appliances for what they are and not attempting to define them under a different category (that would impose a safety risk to the public.)

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

This strengthens the code by not forcing floatation spa owners to apply for variances to dozens of code requirements that just do not apply to these devices.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

These devices are appliances and should be viewed and regulated as such.

Does not degrade the effectiveness of the code

This Mod improves upon the effectiveness of the code by not attempting to define floatation pods as pools when they do not meet basic definitions of 'pool'. This improves the effectiveness of the code.

1st Comment Period History

SW8370-G1

Proponent robert vincent **Submitted** 2/18/2019 **Attachments** Yes

Comment:

Exempting Epsom salt float tanks from all code criteria can lead to unhealthy bodies of water that could lead to disease outbreaks. The typical float tank only changes the water about every 6 months due to the cost of the salt, with the potential for over a dozen people to use the pods daily (1,800 patrons in 6 months). Maintaining statewide Variances to the select code sections not necessary and minimum design standards for float tanks along with routine inspections will ensure that the critical components outlined in the variances will be maintained. See attached code citation list for variances. Alternatively, and more efficient; FBC code language for these special purpose public 'swimming' pools could be proposed and promulgated.

454.1Public swimming pools and bathing places.
Public swimming pools and bathing places shall comply with the design and construction standards of this section.

Exceptions:

1. 1.A portable pool used exclusively for providing swimming lessons or related instruction in support of an established educational program sponsored or provided by a school district may not be regulated as a public pool. Such pool shall be regulated as a private swimming pool under Section 454.2.
2. 2.A temporary pool may not be regulated as a public pool. Such pool shall be regulated as a private swimming pool under Section 454.2.
3. 3.A pre-manufactured Commercial Epsom Salt Floatation Tank, (aka floatation pod, room or cabin), used in a commercial setting according to the manufacturers specified intended purpose.

FL Dept. of Health Advisory Board, Summary of Epsom salt float tank code citations; 4/20/2018

Epsom salt float tanks, which are deemed special purpose public pools under Chapter 514 Florida Statutes, are commonly non-compliant with the operation and design construction criteria cited in the following sections of the Florida Administrative Code (F.A.C.) and Florida Building Code section 454.1 (FBC).

SECTIONS OF 64E-9, F.A.C., TOPIC
64E-9.004(5) Recirculation system must operate any time pool is open (proviso # 1 and 2)
64E-9.008(3)(b&c) Safety equipment: Shepard's hook & life ring with rope
64E-9.008(10)(a) NSF/ANSI standard 50 certified recessed skimmer, O3 generators, and UV systems
64E-9.008(10)(e) pH feeders required, and must be certified to NSF 50
SECTIONS OF 454.1, FBC, TOPIC
454.1.2.1 Impervious, slip resistant (a) Water line tile requirement, color of floor /wall
454.1.2.2.2 Minimum width 15 feet
454.1.2.2.3.1 Minimum floor slope 1:60
454.1.2.2.4 Minimum water depth shall be 3 feet
454.1.2.3.1 Markers for depth and no-diving
454.1.2.3.5 Pool rules sign (proviso # 7)
454.1.2.5 Access shall consist of ladders, stairs, recessed treads or swimouts (proviso # 5)
454.1.3.1.2 Clear 4 feet wet deck width, deck slope (proviso # 6)
454.1.3.2 Overhead obstruction clearance of 4 feet from water surface (in pools with lids)
454.1.3.3.1 Safety equipment: Shepard's hook & life ring with rope
454.1.4.2.2 Lighting requirements for indoor pools
454.1.5.5 Equipment enclosure must have minimum 3 x 6-foot opening and easy access
454.1.5.7 Equipment area lighting must provide 30 foot-candles
454.1.6.1 Unisex restrooms must include a urinal, floor drain, and diaper change table
454.1.6.5.1 NSF/ANSI standard 50 certified: recessed skimmer, O3 generators, and UV systems
454.1.6.5.3.2.5 Six-inch water line tile required for skimmer pools
454.1.6.5.10 Pools require an outlet at the deepest point
454.1.6.5.10.5 Main drain must be connected to a collector tank (proviso #4)
454.1.6.5.11 Automatic makeup water control
454.1.6.5.14 Heater must be plumbed with a bypass and influent & effluent valves
454.1.6.5.16 & 454.1.6.5.16.3 Automatic feeders for pH control required (proviso # 3)
454.1.6.5.16.4.2 Ozone generating equipment shall meet NSF/ANSI Standard 50 (proviso # 8)
454.1.6.5.16.4.4 Air flow meter required for ozone system (proviso # 8)
454.1.6.5.16.6 3. UV validation requirements by USEPA method (proviso # 8)

Facts:
The following five pool codes' requirements are specifically addressed by the variance provisos:

1) Halogen residual of 1-6 mg/L indoors is required at 64E-9.004(1)(d)2.
2) NSF/ANSI Standard 50-certified disinfectant feeder & requirements at 64E-9.008(10)(e) & 454.1.6.5.16 & 454.1.6.5.16.2
3) NSF/ANSI Standard 50-certified recirculation filter & requirements at 64E-9.008(10)(a) & 64E-9.008(10)(d) & 454.1.6.5 & 454.1.6.5.4

4) NSF/ANSI Standard 50-certified ozone generator & requirements at 64E-9.008(10)(a) & 64E-9.008(10)(e)4. and 6. & 454.1.6.5.16.4.2
5) NSF/ANSI Standard 50-certified UV light systems & requirements at 64E-9.008(10)(a) & 64E-9.008(10)(e)5. & 454.1.6.5.16.6

There are twenty-five (25) unique public pool code violations listed in the table above for this special purpose swimming pool with three duplications between the two state codes.

Conclusions:

The twenty-five (25) unique requirements of Chapter 64E-9, F.A.C., and the FBC, Chapter 4, section 454.1, as listed in the table above will not be met. The above five (5) Facts and the table of twenty-five (25) unique requirements have been addressed by the Advisory Board. The special condition mitigations for eight (8) code requirements and other specific requirements for safety and health are addressed in the following eleven (11) provisos.

Provisos:

1. 64E-9.004(5) F.A.C. The variance Applicant and Permittee (the pool owner) will ensure that the recirculation treatment manual (or automated) controls provides complete water treatment for at least five (5) full water volume turnovers between each patron's float session. The public pool Permittee must comply with this water treatment regimen. Each float tank shall be provided with a timer to ensure the turnover requirement is met. **Per the specifications provided in the variance application, the (*name brand & model*) float tank manufactured by (*name brand*) requires (*xx*) minutes at (*xx*) gallons per minute to achieve five (5) turnovers.**

2. 64E-9.004(5) F.A.C. Within two (2) days of starting float sessions, the Permittee shall: use a Department-certified water laboratory to **test for and enumerate E. coli bacteria** from one 100mL water sample collected from each float tank, to be collected once per week for two (2) consecutive weeks, and collected after several client's float sessions on that day, and shall provide laboratory copies of the microbiology test results and the Permittee's water chemistry field test kit results for halogen residual and pH to the Department's Bureau of Environmental Health Water Programs Administrator at xxx within two (2) days of receipt of lab test results.

3. 454.1.6.5.18 FBC: The use of hydrogen peroxide shall be discontinued. **Halogen feeder and filtration system must be certified by an ANSI Nationally Recognized Testing Laboratory** under NSF/ANSI Standard 50 by the variance Applicant and **shall be maintained in good operating order** and in accordance with the sizing requirements of both state codes by the Permittee.

4. The applicable **standards for suction outlet drain covers and equipment area safety features required in section 514.0315, Florida Statutes, must be met** by installation of anti-entrapment devices for daily use of this special purpose public pool by the Applicant, and then **maintained over the life of the float tank by the Permittee (pool owner) to remain in compliance with the law**. Paired suction outlets as defined in the referenced national standard must be at least 36 inches apart and hydraulically balanced.

5. 454.1.2.5 FBC: The Permittee (pool owner) **must provide entrance/exit access on the floor adjacent to the float tank wall with a support handrail.**

6. 454.1.3.1.3 FBC: At least 4 **feet of slip resistant wet deck area must be maintained as available for patron egress at the float tank entrance/exit opening** by the Permittee (pool owner) and the operator.

7. 454.1.2.3.5 FBC: The Applicant or Permittee must create and **provide a code compliant pool rules sign with patron rules posted on the wall of the float tank room** that complies with statements from FBC 454.1.2.3.5 1., 5., and 7., and the statements from 454.1.8.13 1. and 3.

8. 454.1.6.5.16.4. and 454.1.6.5.16.6 FBC: The halogen dosing feeder installed per swimming pool code requirements for this float tank **precludes the need for either an UltraViolet light system or an ozone generating system due to each device acts only as an optional supplemental system** that can improve water quality. **If used, the device(s) must comply with the state code sections listed above**, except that NSF/ANSI Standard 50 certification and UV validation by USEPA methods are not required.

9. A list documenting any operational and equipment corrections made to the float tank after the initial operating permit inspection shall be provided to the County Health Department within 7 days of completion. This document shall provide the make and model numbers of any original or replacement equipment installed on the float tank. The department reserves the right to assure these changes meet state codes.

10. 454.1.10.4 and 64E-9.001{3}{b}, F.A.C. Before opening to the public, the Operating Permit Applicant, **the Permittee (pool owner), must provide the DOH County Health Department a copy of an approved electrical inspection** that is conducted by the local building department, or by a Florida licensed electrician in accordance with the Florida Building Code. Equipment grounding, equipotential bonding, and Ground-fault Circuit Interrupters (GFCIs) required by the FBC shall be addressed, as shall any electrical appurtenances {float tank lighting, audio systems, system controls, call buttons, etc.}.

11. The variance Applicant and Permittee (pool owner) **must provide a slip resistant floor in the float tank** in accordance with the FBC definition of that term at section 454.1 of the code. An ASTM or ANSI test for slip resistance for residential bathtubs can be substituted for ANSI tile slip resistance tests. Additionally, the **floor of the float tank room shall be slip resistant between the float tank for at least 15 feet on the path to both the shower and the restroom** that serve the float tank.

Date Submitted	12/4/2018	**Section**	454.1.6.5.12	**Proponent**	Kari Hebrank
Chapter	35	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Comments

General Comments Yes

Alternate Language Yes

Related Modifications

Summary of Modification

Adds the year to the reference standard for ANSI/APSP 16—11 American National Standard for Suction Fittings for Use in Swimming Pools, Wading Pools, Spas, and Hot Tubs

Rationale

To include the year--2011-- of the referenced standard for ANSI/APSP 16—11
American National Standard for Suction Fittings for Use in Swimming Pools, Wading Pools, Spas, and Hot Tubs

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

Assist with finding referenced standard by including in Chapter 35

Impact to building and property owners relative to cost of compliance with code

Provides referenced standard

Impact to industry relative to the cost of compliance with code

Provides ease of finding referenced standard

Impact to small business relative to the cost of compliance with code

Provides ease of finding referenced standard

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

None

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Provides ease of finding referenced standard

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate against materials, products, methods or systems of construction of demonstrated capabilities

Does not degrade the effectiveness of the code

No, does not degrade the effectiveness of the code

Alternate Language

1st Comment Period History

7681-A1

Proponent Kari Hebrank **Submitted** 2/17/2019 **Attachments** Yes

Rationale

To provide the latest referenced standard for ANSI/APSP 16 by including the latest reference date 2017.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

Provides the latest reference standard for ease of code enforcement.

Impact to building and property owners relative to cost of compliance with code

Allows cost-effective compliance with the building code by including the most current reference standard.

Impact to industry relative to the cost of compliance with code

Allows cost-effective compliance with the building code by providing the latest referenced standard.

Impact to Small Business relative to the cost of compliance with code

Provides ease of finding referenced standard

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Protects the health, safety and welfare of the general public by including the latest referenced standard.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Improves the code by providing the latest referenced standard for ANSI/APSP 16.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate against materials, products, methods or systems of construction of demonstrated capabilities.

Does not degrade the effectiveness of the code

Does not degrade the effectiveness of the code.

1st Comment Period History

SW7681-G1

Proponent Kari Hebrank **Submitted** 2/13/2019 **Attachments** No

Comment:

The Florida Swimming Pool Association (FSPA) SUPPORTS this code modification which adds the reference standard American National Standard for Suction Fittings for Use in Swimming Pools, Wading pools, Spas and Hot tubs ANSI/APSP 16-11 to the code.

- ANSI/APSP 16—11

American National Standard for Suction Fittings for Use in Swimming Pools, Wading Pools, Spas, and Hot Tubs

454.1.6.5.12

To include the year--2017-- of the referenced standard for ANSI/APSP 16—11
American National Standard for Suction Fittings for Use in Swimming Pools, Wading Pools, Spas, and Hot Tubs