

# **POOL BARRIER AMENDMENTS & GUIDELINES:**

## **APPENDIX G**

### **SWIMMING POOLS, SPAS AND HOT TUBS**

#### **SECTION AG101 - GENERAL**

**AG101.1 General.** The requirements of this appendix shall apply to the design and construction of swimming pools, spas, hot tubs and barriers installed in or on the lot of a one- or two-family dwellings.

The purpose of these requirements is to provide an integrated level of protection against potential swimming pool drowning through the use of physical barriers and warning devices. It is not intended as a substitute for adult supervision of children.

**AG101.2** A person, on entering into an agreement to build a swimming pool or contained body of water shall give the buyer, lessee or renter a notice explaining safety education and responsibilities of swimming pool ownership as approved by the State's department of health services.

**AG101.3** All swimming pool plans are required to identify the location of the required swimming pool barrier, the height of the fencing, and all details necessary to show compliance with the requirements within this appendix. When plans are submitted for a swimming pool permit, they must show at a minimum, the following:

1. An accurate outline of the swimming pool, hot tub or spa,
2. Location of the swimming pool (including accessory rock formations, slides and waterfalls) with dimensions to each lot line, dwelling and any accessory structure and equipment location.
3. Location of any exterior openings (including doors, windows, pet doors, etc.) into the area of the swimming pool
4. Location and height of the swimming pool barrier and barrier gate(s)
5. Details of the construction of the barrier to include materials, size of all openings within the barrier, etc.
6. All necessary information required to show compliance with this Appendix.

**AG101.4** If there are public utility easements, access easements or other easements affecting the subject lot, the swimming pool, decking and pool equipment shall not violate, disturb or encroach into such easements unless approved in writing by the Town and the other affected parties (persons and entities) to such easements.

**AG101.5** The general design, materials, and appearance of the required Swimming Pool Barrier shall meet the requirements of the adopted Zoning Ordinance, however, in all cases shall meet the minimum safety requirements of this appendix.

**AG101.6** The swimming pool water's edge shall be set back from all lot lines a distance of not less than three (3) feet.

**AG101.7** Since the requirements of this appendix are not retroactive, swimming pools constructed prior to the effective date of this appendix, need only comply with the required swimming pool barrier requirements in effect at the time of permit issuance unless the swimming pool or swimming pool barrier is subsequently altered. All residential swimming pools or swimming pool barriers installed, altered, modified or expanded after the effective date of this appendix shall meet or exceed the requirements within this appendix.

## SECTION AG102 - DEFINITIONS

**AG102.1 General.** For the purposes of this appendix, the terms herein used shall be defined as follows:

**ABOVE-GROUND/ON-GROUND POOL.** See "Swimming pool."

**BARRIER.** A permanent fence, wall, building wall or combination thereof which completely surrounds the swimming pool and obstructs access to the swimming pool. As used within this appendix, permanent shall mean "not being able to be removed, lifted or relocated without the use of tools".

**HOT TUB.** See "Swimming pool."

**IN-GROUND POOL.** See "Swimming pool."

**RESIDENTIAL.** That which is situated on the premises of a detached one- or two-family dwelling or a one-family townhouse not more than three stories in height.

**SPA, NONPORTABLE.** See "Swimming pool."

**SPA, PORTABLE.** A nonpermanent structure intended for recreational bathing, in which all controls, water-heating and water-circulating equipment are an integral part of the product.

**SWIMMING POOL.** Any structure intended for swimming or recreational bathing that is designed to contain water 18" inches or more in depth. This includes in-ground, above-ground and on-ground swimming pools, hot tubs and spas.

**SWIMMING POOL, INDOOR.** A swimming pool which is totally contained within a structure and surrounded on all four sides by walls of the enclosing structure.

**SWIMMING POOL, OUTDOOR.** Any swimming pool which is not an indoor swimming pool.

**SWIMMING POOL, PUBLIC OR SEMI-PUBLIC.** Any swimming pool which is not accessory to Residential as defined herein.

## SECTION AG103 - SWIMMING POOLS

**AG103.1 In-ground pools.** In-ground pools shall be designed and constructed in conformance with ANSI/NSPI-5 as listed in Section AG108.

**AG103.2 Above-ground and on-ground pools.** Above-ground and on-ground pools shall be designed and constructed in conformance with ANSI/NSPI-4 as listed in Section AG108.

**AG103.3. Public or Semi-public swimming pools.** Shall comply with State and County Requirements.

## SECTION AG104 - SPAS AND HOT TUBS

**AG104.1 Permanently installed spas and hot tubs.** Permanently installed spas and hot tubs shall be designed and constructed in conformance with ANSI/NSPI-3 as listed in Section AG108.

**AG104.2 Portable spas and hot tubs.** Portable spas and hot tubs shall be designed and constructed in conformance with ANSI/NSPI-6 as listed in Section AG108.

## **SECTION AG105 - BARRIER REQUIREMENTS**

**AG105.1 Application.** The requirements of this appendix shall apply to the design and construction of required barriers for swimming pools, spas and hot tubs. These design regulations are intended to provide public health and safety by providing protection against drowning and near-drowning by restricting access to swimming pools, spas and hot tubs. There are no exemptions for households without children.

**AG105.1.1** All swimming pools, spas and hot tubs installed in or on the lot of a one- or two-family dwelling on or after the effective date of the ordinance adopting this appendix shall be enclosed by a permanent barrier, as set forth in this appendix.

**AG105.1.2** It is the responsibility of the property owner and any other person in responsible charge of a swimming pool to insure that the required swimming pool barrier, including all gates, doors, locks, latches and any other portions of the barrier, are maintained in a safe and good working order at all times. No person shall alter or remove any portion of a swimming pool barrier except to maintain, repair, reconstruct or replace the barrier in compliance with the provisions of this appendix.

**AG105.1.3** No swimming pool, spa or hot tub shall be filled in whole or in part with water unless the swimming pool barrier has been installed in accordance with this appendix and approved by the building official or authorized designee.

**AG105.1.4** Plastic mesh or any other fence (proposed barrier) defined by the manufacturer as a temporary or removable fence, even if indicated as a swimming pool barrier, are deemed unsuitable for the purposes of this Appendix regardless of any modifications proposed to make said fence compliant.

**AG105.2 Outdoor swimming pool.** Any outdoor swimming pool, including an in-ground, above-ground or on-ground pool, hot tub or spa shall be completely surrounded by a barrier which shall comply with the following:

1. In the case where the rear yard of a detached one- or two-family dwelling or townhouses abuts the edge of a lake or body of water and where no public access is permitted or allowed along the shoreline, and where side yard fences extend to and beyond the water's edge a minimum of eighteen (18) inches, no rear yard barrier will be required between the shoreline or body of water and the swimming pool.
2. Where wood fences are permitted by the Town Code, wood fencing used as swimming pool required barriers, shall meet the requirements of this appendix.
3. Any fence/wall used for the required barrier shall not contain any openings or protrusions that might be used for foothold climbing purposes.
4. All fish ponds and other contained bodies of water, either above or below ground level, that are designed to contain water eighteen (18) inches or more in depth, shall conform to the location and barrier requirements for swimming pools.
5. Irrigation and storm water retention facilities and the water features in public parks and golf courses are exempt from the barrier requirements of this Appendix.

6. The top of the barrier shall be at least 60 inches above grade measured on the side of the required barrier which faces away from the swimming pool at the highest point of elevation within three (3) feet measured horizontally from the required barrier. The maximum vertical clearance between grade (soil) and the bottom of the required barrier shall be a maximum of 2 inches measured on the side of the required barrier which faces away from the swimming pool. The maximum vertical clearance between a surface below the barrier to a solid surface, such as concrete, and the bottom of the required barrier shall be a maximum of 4 inches measured on the side of the required barrier which faces away from the swimming pool.
7. The poolside of the required barrier shall not be less than (20") twenty inches from the water's edge.
8. Openings in the required barrier shall not allow passage of a 4-inch-diameter sphere.
9. Solid barriers which do not have openings, such as but not limited to a masonry, stucco or stone wall, shall not contain indentations or protrusions except for normal construction tolerances and tooled masonry joints. Indentations of 1" deep x 1" high or protrusions of 1 inch or more shall be considered as exceeding the normal construction tolerances unless the bottom of the indentation or top of the protrusion is beveled at a 45 degree angle from the face of the indentation or protrusion back to the vertical face of the indentation or protrusion. Where solid barriers have openings such as drainage blocks or similar items, the maximum opening width or height of the opening shall be of such a configuration as not to allow a 4 inch diameter sphere to pass through. Where openings exceed the 4" diameter, a minimum of 3' measured horizontally from an adjacent opening in the barrier is permitted.
10. Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is less than 45 inches, the horizontal members shall be located on the swimming pool side of the fence. Spacing between vertical members shall not exceed 1.75 inches in width. Where there are decorative cut outs within vertical members, spacing within the cutouts shall not exceed 1.75 inches in width.
11. Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is 45 inches or more, spacing between vertical members shall not exceed 4 inches. Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 1.75 inches in width.
12. Where chain link fences are permitted by Town ordinance, the maximum mesh opening size for chain link fences shall be a 2.25-inch square unless the fence is provided with slats fastened at the top or the bottom which reduce the openings to not more than 1.75 inches.
13. Where the barrier is composed of diagonal members, such as a lattice fence, the maximum opening formed by the diagonal members shall not be more than 1 3/4 inches.
14. Every opening up to 4' in width in a required pool barrier shall be provided with a minimum five (5) foot high self-closing access gate, which is at least (5) feet high measure from the adjacent grade and all access gates shall open outwards away from the swimming pool and shall have a self-latching device or lock in good condition.
15. Pedestrian access gates shall comply with the requirements of AG105.2, and shall be equipped to accommodate a locking device. Pedestrian access gates shall open outward away from the swimming pool and shall be self-closing and have a self-latching device. Gates other than Pedestrian access gates shall have a self-latching device and shall be secured by a padlock or similar device which requires a key, electric opener or integral combination.

16. Where the release mechanism of the self-latching device is located less than 54 inches from grade, the release mechanism and openings shall comply with the following:

- a. The release mechanism shall be located on the pool side of the gate at least 5 inches below the top of the gate
- b. The gate and barrier shall have no opening greater than 0.5 inch within 24 inches of the release mechanism

17. Gates for openings of four (4) feet or greater leaf width must be secured with a self-latching device and be kept locked. Double gates or multiple gates shall have at least one leaf secured in place and the adjacent leaf shall be secured with the self-latching device.

18. Where a wall of a dwelling or accessory structures serves as part of the barrier one of the following conditions shall be met:

- a. From sleeping areas/rooms, emergency escape or rescue openings with access to the swimming pool or other contained body of water which meet the definition of a swimming pool shall be equipped with a latching device not less than fifty-four (54) inches above the floor. Emergency escape and rescue openings shall be operational from the inside as required by the building codes. All other openable dwelling unit or guest room windows with similar access shall be equipped with a screwed in place wire mesh screen, or a keyed lock that prevents opening the window more than four (4) inches, or latching device located not less than fifty-four (54) inches above the floor. All ground level doors or other doors and openings with direct access to the swimming pool or other contained body of water, meeting the definition of a swimming pool, shall be equipped with a self-latching device located not less than fifty-four (54) inches above the floor. Sliding doors shall not form part of a required barrier unless the self-closing and self-latching mechanism is specifically approved by the Building Official for this purpose.
- b. Other openings such as dog doors or similar openings shall meet the requirements of this appendix when the opening has access directly to the pool.
- c. The pool shall be protected by a motorized safety pool cover which requires the operation of a key switch which meets the American society of testing and materials emergency standards 13-89 and which does not require manual operation other than the use of the key switch.
- d. Other means of protection, such as self-closing doors with self-latching devices, which are approved by the Building Official, shall be acceptable so long as the degree of protection afforded is not less than the protection afforded by items a, b, or c above.
- e. Above-ground pool structure barriers shall meet the requirements of this appendix.

**AG105.3 Indoor swimming pool.** All walls surrounding an indoor swimming pool shall comply with the pool barrier requirements of AG105.2.

**AG105.4 Prohibited locations.** Barriers shall be located so as to prohibit permanent structures, equipment or similar objects from being used to climb the barriers. For the purposes of structures, equipment or similar objects, the nearest edge being a minimum of 3' or more horizontal distance away from the required barrier shall be considered adequate for the determination of not being used to climb the barrier.

**AG105.5 Barrier exceptions.** Spas or hot tubs with a safety cover which complies with ASTM F 1346, shall be exempt from the provisions of this appendix.

**SECTION AG106  
ENTRAPMENT PROTECTION FOR SWIMMING  
POOL AND SPA SUCTION OUTLETS**

**AG106.1 General.** Suction outlets shall be designed to produce circulation throughout the pool or spa. Single outlet systems, such as automatic vacuum cleaner systems, or other such multiple suction outlets whether isolated by valves or other-wise shall be protected against user entrapment.

**AG106.2 Suction fittings.** All Pool and Spa suction outlets shall be provided with a cover that conforms with ANSI/ASME A112.19.8M, or a 12" x 12" drain grate or larger, or an approved channel drain system.

Exception: Surface skimmers

<p><u>Mid-cycle amendment to the 2009 IRC changing the suction outlets to comply with ANSI/APSP-7-06 for Standard for Suction Entrapment Avoidance</u></p>
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**AG106.3 Atmospheric vacuum relief system required.** All pool and spa single or multiple outlet circulation systems shall be equipped with atmospheric vacuum relief should grate covers located therein become missing or broken. Such vacuum relief systems shall include at least one approved or engineered method of the type specified herein, as follows:

1. Safety vacuum release system conforming to ASME A112.19.17, or
2. An approved gravity drainage system

**AG106.4 Dual drain separation.** Single or multiple pump circulation systems shall be provided with a minimum of two (2) suction outlets of the approved type. A minimum horizontal or vertical distance of three (3) feet shall separate such outlets. These suction outlets shall be piped so that water is drawn through them simultaneously through a vacuum relief-protected line to the pump or pumps.

**AG106.5 Pool cleaner fittings.** Where provided, vacuum or pressure cleaner fitting(s) shall be located in an accessible position(s) at least (6) inches and not greater than twelve (12) inches below the minimum operational water level or as an attachment to the skimmer(s).

**SECTION AG107  
ABBREVIATIONS**

**AG 107.1 General.**

ANSI. American National Standards Institute

11 West 42<sup>nd</sup> Street, New York, NY 10036

ASTM. American Society for Testing and Materials

1916 Race Street, Philadelphia, PA 19103

NSPI. National Spa and Pool Institute

2111 Eisenhower Avenue, Alexandria, VA 22314

## **SECTION AG108 - STANDARDS**

### **AG108.1 General.**

#### ANSI/NSPI

ANSI/NSPI-3-99 Standard for Permanently Installed Residential Spas

ANSI/NSPI-4-99 Standard for Above-ground/On-ground Residential Swimming Pools

ANSI/NSPI-5-99 Standard for Residential In-ground Swimming Pools

ANSI/NSPI-6-99 Standard for Residential Portable Spas

ANSI/ASME A112.19.8M-1987 Suction Fittings for Use in Swimming Pools, Wading Pools, Spas, Hot Tubs and Whirlpool Bathing Appliances

#### ASTM

ASTM F 1346-91 (1996) Performance Specification for Safety Covers and Labeling Requirements for All Covers for Swimming Pools, Spas and Hot Tubs

#### ASME

ASME A112.19.17 Manufacturers Safety Vacuum Release Systems (SVRS) for Residential and Commercial Swimming Pool, Spa, Hot Tub and Wading Pool