

# Virginia Graeme Baker Pool and Spa Safety Act

## August 29, 2008 CPSC Staff Draft Technical Guidance on Section 1406: Minimum State Law Requirements<sup>1</sup>

Section 1405 of the Virginia Graeme Baker Pool and Spa Safety Act specifies that the Commission shall establish a grant program for each of fiscal years 2009 and 2010. However, Congress has not yet appropriated funds for this program. When Congress funds this grant program, we will notify the States. To provide assistance to States that may be considering enacting statutes (or amending existing statutes), U.S. Consumer Product Safety Commission (CPSC) staff has prepared this draft guidance document that describes the technical requirements of Section 1406 of the Act.

To be eligible for a grant, as provided for in Section 1405 of the Virginia Graeme Baker Pool and Spa Safety Act, a State, at a minimum, must have the following requirements in place.

### 1. **Barriers**<sup>2</sup>

These provisions apply to barriers for use around outdoor residential swimming pools and spas. The provisions are intended to provide protection against potential drowning or near-drowning of young children by restricting access to swimming pools and spas.

1.1 **Fences and/or Walls.** Outdoor swimming pools, such as in-ground, above-ground, or on-ground pools, and spas shall have a barrier (e.g., fence and/or wall) which complies with the following:

1.1.1 The top of a fence or wall used as a barrier shall be a minimum of 48 inches (1219 mm) above grade. The bottom of a fence shall be no more than 4 inches (102 mm) above grade when that grade is a hard surface such as cement/asphalt. The bottom of a fence shall be no more than 2 inches (51 mm) above grade when that grade is a soft surface such as grass or ground/natural surface. All measurements shall be taken on the barrier side farthest from the pool.

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<sup>1</sup> These comments are those of CPSC staff, have not been reviewed or approved by, and may not necessarily reflect the views of, the Commission.

<sup>2</sup> Based on *CPSC Safety Barrier Guidelines for Home Pools*, CPSC Publication No. 362, U.S. Consumer Product Safety Commission, Washington, DC

- 1.1.1.1 Solid barriers such as brick or rock walls shall have no indentations or protrusions that can provide hand and/or foot holds, other than normal construction tolerances and masonry joints.
- 1.1.2 For above-ground or on-ground pools, the pool structure itself may serve as a ground level barrier. If the top of the pool structure is less than 48 inches above grade and a barrier is mounted on top of the pool structure, the maximum vertical clearance between the top of the pool structure and the bottom of the barrier shall be 4 inches (102 mm).
  - 1.1.2.1 Where access to an above-ground pool is provided by a ladder or steps, then:
    - 1.1.2.1.1 The steps or ladder shall be designed to be secured, locked, or removed to prevent access, or
    - 1.1.2.1.2 A barrier such as one described in Section 1.1.1 above shall surround the steps or ladder.
- 1.1.3 Where a barrier (fence) is constructed of horizontal and vertical members, then:
  - 1.1.3.1 If the distance between the top of a horizontal member and ground level is less than 45 inches (1143 mm), the horizontal members shall be located on the swimming pool side of the fence. The spacing between the vertical members shall not exceed 1-3/4 inches (44 mm) in width. Any decorative cutout spacing within vertical members of the fence shall not exceed 1-3/4 inches (44 mm) in width.
  - 1.1.3.2 If the distance between the top of a horizontal member and ground level is 45 inches (1143 mm) or more, the spacing between the vertical members shall not exceed 4 inches (102 mm) in width. Any decorative cutout spacing within vertical members of the fence shall not exceed 1-3/4 inches (44 mm) in width.
- 1.1.4 The maximum mesh size for a chain link fence shall not exceed 1-1/4 inches (32 mm) square [1-3/4 inches (44 mm) diagonal]. A larger mesh size may be used if slats fastened at the top or bottom of the fence are used to reduce mesh openings to no more than 1-3/4 inches (44 mm). See Figure A below.

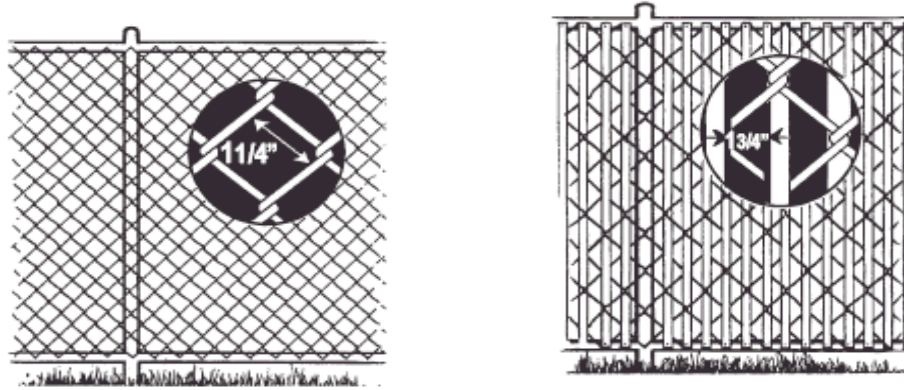


Figure A. Maximum chain link fence opening.

- 1.1.5 For a barrier made up of diagonal members (latticework), the maximum opening between the diagonal members shall not exceed 1-3/4 inches (44 mm).
- 1.2 **Access Gates.** Access gates shall meet the requirements of Section 1.1 (Fences and/or Walls) above and shall be equipped to accommodate a locking device.
  - 1.2.1 Pedestrian access gates shall open outward away from the pool and shall be self-closing and self-latching. A locking device shall be included in the gate design. Where the release mechanism of the self-latching device is less than 54 inches (1372 mm) from the bottom of the gate, the release mechanism and openings must comply with the following:
    - 1.2.1.1 The release mechanism shall be on the pool side of the gate at least 3 inches (76 mm) below the top of the gate, and
    - 1.2.1.2 The gate and barrier shall have no opening greater than 1/2 inch (13 mm) within 18 inches (457 mm) of the release mechanism.
  - 1.2.2 Gates other than for pedestrian access shall be equipped with a self-latching device.
- 1.3 **Dwelling Walls.** For swimming pools or spas where dwelling walls serve as a part of a barrier, one of the following shall be in place:
  - 1.3.1 A door in the wall that provides direct access to the pool shall be equipped with an audible alarm system meeting Underwriters Laboratories Inc. (UL) standard UL 2107 *General-Purpose Signaling*

*Devices and Systems, Section 77, Residential Water Hazard Entrance Alarm Equipment.*

- 1.3.1.1 The alarm system shall be equipped with a manual means to temporarily deactivate the alarm for not more than 15 seconds.
- 1.3.1.2 The deactivation means shall be located not less than 54 inches (1372 mm) from the floor or threshold of the door.
- 1.3.2 A power safety cover that meets the requirements of ASTM F1346 *Performance Specification for Safety Covers and Labeling Requirements for All Covers for Swimming Pools, Spas, and Hot Tubs.*
  - 1.3.2.1 Manual covers for spas shall be used whenever the spa is not in use. Manual safety covers shall meet all the requirements of ASTM F1346.

## **2. Entrapment Protection/Prevention Devices**

The provisions of this section apply to the use of entrapment protection/prevention devices on residential swimming pools and spas. Single suction outlet systems, such as vacuum cleaner systems or multiple suction outlet systems that can be isolated by valves or otherwise, shall be protected against user entrapment. The devices/systems described are intended to provide protection against potential drowning or near-drowning due to suction entrapment.

2.1 Pools or spas constructed on or after December 20, 2008, shall use:

- (A) No submerged suction outlets, a gravity drainage system with ASME/ANSI cover(s), or one or more unblockable outlets; or
- (B) A multiple main drain system without isolation capability with suction outlet covers that meet ASME/ANSI A112.19.8 *Suction Fittings for Use in Swimming Pools, Wading Pools, Spas, and Hot Tubs* and either:
  - (i) A safety vacuum release system (SVRS) meeting ASME/ANSI A112.19.17 *Manufactured Safety Vacuum Release Systems (SVRS) for Residential and Commercial Swimming Pool, Spa, Hot Tub, and Wading Pool Suction Systems* and/or ASTM F2387 *Standard Specification for Manufactured Safety Vacuum Release Systems (SVRS) for Swimming Pools, Spas and Hot Tubs* or
  - (ii) A properly designed and tested suction-limiting vent system or

- (iii) An automatic pump shut-off system.
- 2.2 Pools and spas constructed prior to December 20, 2008, with a single submerged suction outlet shall use a suction outlet cover that meets ASME/ANSI A112.19.8 and either:
- (A) A multiple main drain system without isolation capability, or
  - (B) A safety vacuum release system (SVRS) meeting ASME/ANSI A112.19.17 and/or ASTM F2387, or
  - (C) A properly designed and tested suction-limiting vent system, or
  - (D) An automatic pump shut-off system, or
  - (E) Submerged outlets shall be disabled, or
  - (F) Suction outlets shall be reconfigured into return inlets.
- 2.3 **Pool Cleaner Fittings.** Where provided, vacuum or pressure cleaner fitting(s) shall be located in an accessible position(s) at least 6 inches (152 mm) and not greater than 12 inches (305 mm) below the minimum operational water level or as an attachment to the skimmer(s). Side wall-mounted vacuum fittings shall meet the requirements of the International Association of Plumbing and Mechanical Officials pool standard, IAPMO SPS-4 *Special Use Suction Fittings for Swimming Pools, Spas and Hot Tubs* (for suction side automatic swimming pool cleaners).

### 3. **Additional Layers of Protection** (not required)

Although not required, states may consider requirements for additional layers of protection to supplement requirements described in Section 1 (Barriers) and Section 2 (Entrapment Protection/Prevention Devices) above.

- 3.1 **Window Guards.** A window in a wall that allows access to the pool may be equipped with window guards that limit access or be affixed with a childproof device to limit the window opening to less than 4 inches. The window guard shall meet ASTM F2006 *Safety Specification for Window Fall Prevention Devices for Non-Emergency Escape (Egress) and Rescue (Ingress) Windows.*
- 3.2 **Swimming Pool Alarms.** A pool alarm may be used to provide warning that a pool has been entered. There are pool-based alarms, surface and subsurface, as well as perimeter alarms that monitor the pool area. All alarms shall meet the requirements of ASTM F2208 *Standard Specification for Pool Alarms.*

- 3.2.1 Surface alarms float on the pool's surface and are activated by waves in the pool. The device shall provide an alarm at the pool and within the residence and shall meet the requirements of ASTM F2208.
- 3.2.2 Subsurface alarms respond to pressure waves under the water surface, generated by the displacement of water when an object enters the pool. The device shall provide an alarm at the pool and within the residence and shall meet the requirements of ASTM F2208.
- 3.2.3 Perimeter alarms, used in conjunction with barriers meeting the requirements of Sections 1.1.2 – 1.1.4, shall meet the performance requirements of ASTM F2208.

*Note:* The Act requires that any state receiving grant funds shall use at least 50 percent of the grant amount to hire and train enforcement personnel for implementation and enforcement of the State's swimming pool and spa safety law. The remaining money shall be used to educate pool construction, installation, and service companies about the standards and to educate pool owners, operators, and the public about pool safety and drowning and entrapment prevention, as well as to defray any administrative costs associated with training and education programs.