

RISK MANAGEMENT MANUAL	MODULE 6
Swimming Safety and Open Water Swimming	Revised: 12/31/12

MODULE 6

Swimming Safety and Open Water Swimming

LGIT's Scope of Coverage supersedes any information contained within any module, appendix, and or guideline in the Risk Management Manual. The purpose of the Risk Management Manual is simply to provide additional resources on particular topic areas. Please refer to the Scope of Coverage and/or your Underwriter regarding any coverage issues or questions that you may have.

This section is intended to assist in minimizing potential exposure to financial loss and is not intended to insure compliance with Federal, State or Local laws, regulations or rules, nor is it intended to be a substitute to seeking the advice of legal counsel, actuarial assistance or other professional services.

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6.1 INTRODUCTION

Each year between 7,000 and 12,000 people drown in the United States. The purpose of this module is to assist the members of the Local Government Insurance Trust's Primary and Excess Liability Pools in limiting liability by providing risk management recommendations designed to improve the level of safety at local government owned and operated swimming facilities.

6.2 RECOMMENDATIONS

The following recommendations are offered to assist the local government in the development of a swimming pool facility risk management/safety program.

Facility Recommendations

- Pool floors should be a light color to facilitate the identification of any objects or submerged victims in the pool.
- The depth of the water should be marked on the deck and pool walls.
- All markings should be made in a color contrasting the background color, in numbers and/or letters at least 4 inches in height.
- The slope of the floor in the pool's shallow area should be no greater than 1 foot of elevation change in 10 feet.
- The transition between a pool's shallow and deep areas should be clearly identified by the following:
 - Contrasting line on the bottom of the pool (minimum 4 inches wide)
 - "Life line" on the surface of the water secured to the pool walls
 - Depth markings on the deck and top of the pool walls.
- Lanes for lap swimming should be clearly identified by the following:
 - Contrasting line on the bottom of the pool (minimum 4 inches wide)
 - Floating lane dividers.
- The water depth of diving areas should be designed to accommodate the height and style of the pool's diving board/platform. It is recommended that diving be prohibited in pools with a maximum depth of less than 12 feet.

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- Diving areas and Non-diving areas should be conspicuously posted with signs and deck markings.
- The pool should be completely surrounded by a deck, at least 4 inches wide, surfaced with non-skid material.
- All electrical equipment/fixtures in and around the pool should be installed and maintained in accordance with the National Electrical Code (Published by the National Fire Protection Association, Quincy, MA).
- All outdoor pools should be provided with a fence to close off the facility during non-operating hours. The fence should be at least 6 feet high and have gates that can be locked when the pool is closed.
- Signs detailing the hours of operation and the rules of conduct should be conspicuously posted at all pool entrances and throughout the facility. These signs should include but not be limited to rules on diving, glass containers, alcoholic beverages, eating, unattended swimming, running, "horseplay", attire, pre-swim showers and the supervision of small children.
- The number and location of lifeguards will be determined by a pool's size and configuration as well as the number of patrons. A minimum of one lifeguard station/chair should be provided for every 1,800 square feet of water surface area. On days of high usage, additional lifeguards should be stationed on the deck and/or in the water.

Emergency Equipment

All pools should be provided with the following emergency equipment:

- A telephone with a list of emergency phone numbers
- A strong, light weight, pole designed to assist swimmers by extending the reach of rescuers
- Rescue tubes, or similar flotation devices
- A ring buoy, or similar flotation device, attached to a suitable throwing rope at least 50 feet long
- First aid equipment, including immobilizers and all equipment needed to extricate injured victims from the pools
- Portable oxygen and resuscitation equipment
- Sheets and blankets

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Training/Certification

- All lifeguards and/or pool operators should have training and/or certifications from an organization acceptable to the local government.
- All lifeguards should pass a competency test administered by the local government.

Operating Procedures

- All pools should be provided with a written operating plan which details the facility rules and operating procedures as well as emergency procedures which include but are not limited to the following:
 - Swimmer supervision and rescue practices
 - Response to non-swimmer medical emergencies
 - Chemical storage and handling, including actions to be taken in the event of a spill or release in the pool
 - Inclement weather conditions

Orientation

All employees should be provided with an orientation addressing the following:

- All local government general personnel rules
- Local government safety program
- Special emphasis on the general safety rules, Right to Know program and bloodborne pathogen program
- All pool operating and emergency procedures
- All emergency and first aid equipment
- At least two lifeguards should be on duty at all times
- All pools should have at least one staff member on duty at all times with additional training in first aid and cardiopulmonary resuscitation (CPR)
- All pools should have a certified pool operator on duty at all times

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IMPORTANT NEW FEDERAL SAFETY LAW - Title XIV – Pool and Spa Safety (15 USC 8001)

Each year, nearly 300 children under the age of five drown in residential and public pools and spas. Submersion incidents requiring emergency-room treatment or hospitalization number in the thousands and many victims experience permanent disability, including brain damage.

Few people know of the hidden dangers from drain or suction entrapments. Drains with broken, missing, or faulty covers can entrap hair, the body, limbs, jewelry and clothing, or cause disembowelment/evisceration.

6.3 DEFINITIONS:

- **ASME/ANSI.** - The term “ASME/ANSI” as applied to a safety standard means such a standard that is accredited by the American National Standards Institute and published by the American Society of Mechanical Engineers.
- **APSP** --The Association of Pool & Spa Professionals is the world's largest international trade association representing the swimming pool, spa and hot tub industry. APSP's mission is to promote consumer safety and enhance the business success of its members.
- **SWIMMING POOL; SPA.** - The term “swimming pool” or “spa” means any outdoor or indoor structure intended for swimming or recreational bathing, including in-ground and aboveground structures, and includes hot tubs, spas, portable spas, and non-portable wading pools.

Update on Definition and Standard

The interplay and time lines for compliance with the new Definition of Unblockable Drain and Standard change from ASME/ANSI A112.19.8 and its amendments, to a single standard, ANSI/APSP-16 2011 are explained as follows:

On October 11, 2011, the Consumer Product Safety Commission (“CPSC”) announced that it was revoking its previous interpretation of the term “unblockable drain,” as used in the Virginia Graeme Baker Pool and Spa Safety Act, 15 U.S.C. 8001 et seq. (“VGBA”). The CPSC had originally set a compliance date of May 28, 2012, for those who installed VGBA-compliant drain covers on or before October 11, 2011, in reliance on the CPSC's initial interpretation. The CPSC sought written comments regarding the ability of those who had installed VGBA-compliant unblockable drain covers on or before October 11, 2011, in reliance on its initial interpretation, to come into compliance with the revocation by May 28, 2012. The CPSC is extending the compliance date to May 23, 2013, for those who have installed VGBA-compliant unblockable drain covers on or before October 11, 2011, in reliance on the CPSC’s original interpretive rule.

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Update on definition of unblockable drain.

UNBLOCKABLE DRAIN.- *The term “unblockable drain” was changed from, “a drain of any size and shape that a human body cannot sufficiently block to create a suction entrapment hazard,” to “A suction outlet defined as all components, including the sump and/or body, cover/grate, and hardware such that its perforated (open) area cannot be shadowed by the area of the 18" x 23" Body Blocking Element and that the rated flow through the remaining open area (beyond the shadowed portion) cannot create a suction force in excess of the removal force values in Table 1 of ANSI/APSP-16 2011. All suction outlet covers, manufactured or field-fabricated, shall be certified as meeting the applicable requirements of the ANSI/APSP-16 2011 standard.*

6.4 * SUMMARY ANALYSIS OF THE VIRGINIA GRAEME BAKER POOL AND SPA SAFETY ACT

Note: *The new compliance dates are shown above.* The Virginia Graeme Baker Pool and Spa Safety Act (Act) promotes the safe use of pools, spas and hot tubs by imposing mandatory federal requirements for suction entrapment avoidance and by establishing a voluntary grant program for states with laws that meet certain minimum requirements as outlined in the Act. Effective December 19, 2008, the Act is being administered by the U.S. Consumer Product Safety Commission (CPSC).

- **Mandatory Federal Requirements for Entrapment Avoidance.** By December 19, 2008, the Act requires:
 - Safety Drain Covers

Each Swimming pool or spa drain cover manufactured, distributed, or entered into commerce in the United States shall conform to the American National Standard ASME A112.19.8-2007 Suction Fittings for Use in the Swimming Pools, Wading Pools, Spas, and Hot Tubs published by the American Society of Mechanical Engineers (ASME). Compliance with this Standard will be enforced by the CPSC as a Consumer product safety rule.

- **Public Pool Drain System**

Each Public pool and spa (as defined) both new and existing shall be equipped with drain covers conforming to the ASME/ANSI A112.19.8-2007 Standard.

- **Public Pool Drain Systems**

Each public pool and spa (pump) with a single main drain, other than an unblockable drain, shall be equipped with one or more additional devices or systems designed to prevent suction entrapment that meet the requirements of any applicable ASME/ANSI Standard or applicable consumer product safety rule. In addition to a compliant drain cover, such additional devices or systems include a safety vacuum release system

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(SVRS), or suction limiting vent system, or gravity drainage system, or automatic pump shut off system, or drain disablement, or other system determined by the CPSC to be equally effective in preventing suction entrapment.

- **ANSI/APSP-7 Standard Exceeds Federal Requirements**

All pools and spas configured to comply with ANSI/APSP–7 American National Standard for Suction Entrapment Avoidance in Swimming Pools, Wading Pools, Spas, Hot Tubs, and Catch Basins will comply with each of these mandatory requirements.

- **Voluntary Grant Program for States.**

The CPSC will also establish and administer a grant program for eligible states. A state must impose certain requirements by Statute, including to qualify for the grant program:

- **Barriers**

The enclosure of all outdoor residential pools and spas by barriers to entry that will effectively prevent small children from gaining unsupervised and unfettered access.

- **Suction Entrapment Avoidance**

New - Each pool and spa built more than one year after enactment of the state statute shall employ one of the following:

- The installation of more than one safety drain per suction system, or
- the installation of one or more unblockable drains, or no drains.

- **Existing**

In addition to a compliant drain cover, each pool or spa with a single main drain, other than an unblockable drain, shall be equipped with one or more of the following safety options — a safety vacuum release system (SVRS), or suction limiting vent system, or gravity drainage system, or automatic pump shut-off system, or drain disablement, or other system determined by the CPSC to be equally effective in preventing suction entrapment.

- **Funding**

The grant program directs state recipients to use grant funding to:

- Hire and train enforcement personnel and

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- Educate pool companies, pool owners and operators, and other members of the public about the standards contained in the Act and about the prevention of drowning or entrapment of children.

6.5 ANSI/APSP-7 STANDARD EXCEEDS FEDERAL REQUIREMENTS

All pools and spas configured to comply with the ANSI/APSP-7 Standard will conform to these provisions and any state that adopts the Standard will meet the Act's minimum state requirements. This ANSI/APSP-7 Standard is the only comprehensive approach to engineering swimming pools and spas to avoid all five suction entrapment hazards: hair entrapment, limb entrapment, body suction entrapment, evisceration/disembowelment, and mechanical entrapment. The design requirements and construction practices in this Standard are based upon sound engineering principles, research, and field experience that, when applied properly, provide for a safe installation that exceeds the requirements of the Act.

▪ Public Safety Education

The Act requires the CPSC to establish and carry out a public education program on methods to prevent drowning and entrapment in pools and spas. \$5 million is authorized to be appropriated for each of the fiscal years 2008-2012 to carry out the education program.

* Parts of this Summary Analysis of the Virginia Graeme Baker Pool and Spa Safety Act were used as a resource with the permission of The Association of Pool and Spa Professionals. For more resources visit their home page: www.apsp.org. For additional information go to the Code of Maryland Regulations Title 10, Subtitle 17, Chapter 01, Regulations .00 to.9999 (10.17.01. 00 thru.9999). Also more information at the Pool Safely Campaign www.PoolSafely.gov and the Consumer Product Safety Commission at www.cpsc.gov

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6.6 OPEN WATER (NON-SURF) SWIMMING

Each year between 7,000 and 12,000 people drown in the United States. The purpose of this module is to assist members of the Local Government Insurance Trust's Primary and Excess Liability Pools in limiting liability by providing risk management recommendations designed to improve the level of safety at local government owned and/or operated open water swimming facilities. **This section of Module 6 is not intended to address ocean beaches or inlet areas subject to surf conditions.**

The following recommendations are offered to assist the local government in the development of an open water swimming area risk management/safety program:

Facility Recommendations

- The depth and bottom condition of the designated swimming area should be monitored on a regular basis. Changes resulting from ground shifts, storm damage, vegetation or algae growth should trigger a safety evaluation of the area.
- The water quality should be monitored on a regular basis. Health department guidelines should be used as a basis for determining the acceptability of the water quality.
- The designated swimming area should be clearly identified by buoys, ropes or other marking devices.
- The swimming area (water and beach front) should be cleared on a regular basis. Special attention should be given to debris washed up during/after storms.
- Trash cans should be provided along the beach front. The trash should be emptied on a daily basis.
- All electrical equipment/fixtures on the beach front (or water) should be installed in accordance with the National Electric Code (Published by the National Fire Protection Association, Quincy, MA).

Emergency Equipment

All open water swimming areas should have the following equipment:

- Access to a telephone with a list of emergency numbers or radio communications with the local 911 center
- Rescue tubes (At least one per lifeguard)

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- A ring buoy, or similar flotation device, attached to a suitable throwing rope at least 50' long
- Reaching pole
- Bull horn
- First aid equipment, including immobilizers and all equipment needed to extricate injured victims from the water
- Portable oxygen and resuscitation equipment
- First aid kit
- Sheets and blankets
- Fins, masks and snorkel
- Rescue boat (Note: A rescue boat should be chosen for its stability, ease of operation and utility)

Lifeguards

- The number and location of lifeguards will be determined by the size, configuration and usage of an open water swimming area.
- A minimum of three trained/certified lifeguards should be on duty during the hours designated in the facility operations manual.
- On days of high usage, additional lifeguards should be stationed along the edge of the water and/or in a boat just beyond the normal swimming area.
- All open water swimming areas should have at least one staff member on duty at all times with additional training in first aid Training and Certifications.
- All lifeguards should have training and/or certifications from an organization acceptable to the local government.
- All lifeguards should pass a competency test administered by the local government.
- All lifeguards and other employees should be provided with an orientation addressing the following:
 - Personnel rules
 - Safety program

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- Operations and emergency procedures for the open water swimming facility
- Use of all emergency, rescue and first aid equipment

Operating Recommendations

All open water swimming areas should be provided with a written plan which details both the operating and emergency procedures. This plan should include, but not be limited to the following:

- Operating hours should be established (Example: sunrise to sunset)
- Hours should be identified when the public can expect a lifeguard to be on duty. Note: Indicate that the lifeguard "on-duty" hours are subject to change due to inclement weather, lifeguard illness, etc.
- Floating or permanent docks, swimming platforms, rafts diving boards, slides, personal watercraft or other recreation equipment should not be permitted
- Swimming should be restricted to a designated area(s), and as directed by the lifeguard, if one is present
- Swimming beyond the boundary of the designated swimming area should not be permitted
- Dogs and/or other pets should not be permitted in designated swimming area
- Glass containers should not be permitted in a designated swimming area
- Fishing should not be permitted in a designated swimming area
- Alcohol use should not be permitted in a designated swimming area
- Entering the water with any boat, canoe or raft should not be permitted in a designated swimming area
- All personal flotation devices should be of a type approved by U.S. Coast Guard
- Changing of clothes should not be permitted unless an appropriate structure has been provided
- The use of soap, detergent or shampoo should not be permitted in a designated swimming area

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- Any activity which could cause injury to others is not permitted in a designated swimming area
- Cooking is not permitted in a designated swimming area

Signs

- Swimming area rules should be conspicuously posted.
- Consideration should be given to informational rather than prohibitory signs (Example "No Lifeguard on Duty"). International symbols should be considered in areas with a significant non-English speaking population or to warn patrons who cannot read.
- Too many rules on a sign may result in signs being ignored. Consider posting the primary safety rules with a notation that a complete set of swimming area rules are available from the lifeguard, park office, concession stand, or local government office.
- All sign markings should be made in a color contrasting with the background in numbers/letters/symbols that are easily readable.