



U.S. CONSUMER PRODUCT SAFETY COMMISSION
4330 EAST WEST HIGHWAY
BETHESDA, MD 20814

May 11, 2021

RE: Pool and Spa Drain Cover Safety

Dear Sir or Madam:

The U.S. Consumer Product Safety Commission (CPSC) is reminding all public pool owners and operators of the importance of complying with the Virginia Graeme Baker Pool and Spa Safety Act (P&SS Act or Act), by maintaining compliant pool drain covers to prevent entrapment and evisceration, which can cause serious injury or death.

By law, all public pools and spas (including hotels, motels and apartment complexes) must have ANSI/APSP 16-2017 compliant drain cover(s) installed, and a second anti-entrapment system installed when there is only a single blockable main drain or multiple drains less than 3 feet apart.

We strongly urge all pool operators to perform inspections to ensure that compliant drain covers and devices are installed and functioning properly. Pools and spas lacking protective drain covers and devices can subject swimmers to very strong sucking forces capable of trapping a person's clothing, hair, limbs or entire body underwater, leading to entrapment and drowning. Even if the drain is compliant, be sure to inspect the expiration date on the cover to ensure it does not need to be replaced.

Please find educational material attached to this letter with images and instructions to assist you with conducting safety inspections. Additional pool-related safety resources can be found for pool operators, parents, and families on our *Pool Safely* website: <https://www.poolsafely.gov/>. *Pool Safely* is a national public education campaign to reduce childhood drownings, submersion injuries, and entrapments.

If you have any additional questions, or if we can be of any assistance, please contact me at: (301) 504-7418, or by email at: JAlvarado@cpsc.gov.

Sincerely,

Julio Alvarado
Compliance Officer
Division of Regulatory Enforcement

Attachment A: Public Pool or Spa Drain Cover Check List

Please check the following when inspecting public pool or spa drain covers:

- ✓ **Compliance** Does the pool or spa have the appropriate ASME/ANSI A112.19.8 2007- (or successor standard) compliant drain covers installed, including on the skimmer equalizer lines? ¹ If, during your inspection, you find that the pool or spa does not have compliant anti-entrapment drain covers that meet the standard, ask the pool manager whether compliant drain covers have been ordered.
- ✓ **Certificate** The drain cover certificate should attest that the drain cover meets the ASME/ANSI A112.19.8 2007 or successor standard.
 - The pool manager should provide you with the professional engineer or registered design professional certification indicating that the field-fabricated cover complies with the ASME/ANSI A112.19.8 2007 or successor standard, including flow rate, UV exposure (if applicable), and durability.
- ✓ **Label** Do the drain covers have any of the following required labeling schemes stamped on them?
 - ASME/ANSI A112.19.8 2007 standard or successor standard²;
 - VGB 2008;
 - The swimmer logo; or a combination of any of these (Figure 1).



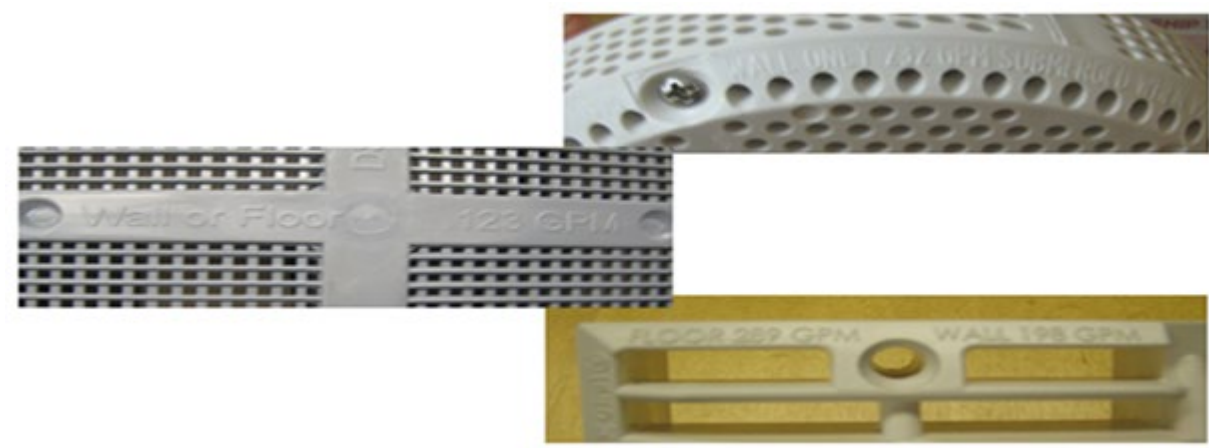
Drain Cover Labels

Figure 1

¹[ANSI/APSP 16-2011 Standard](#). [ANSI/APSP/ICC 16-2017 Standard](#) effective May 24, 2021.

² Successor standards include ANSI/APSP 16-2011 and ANSI/APSP/ICC 16-2017.

- ✓ **Integrity** Is the drain cover intact? Check all drain covers for any signs of damage, and make sure that they are properly secured with no loose or missing screws.
- ✓ **Lifespan** If the compliant drain covers have exceeded the manufacturer-recommended lifespan, ask the pool manager to contact the manufacturer or pool operator regarding replacement. Failure to replace a drain cover that is beyond its stated useful life is not, in itself, a violation of the VGB Act. The requirement pertaining to useful life is a marking or labeling requirement for the drain cover manufacturer. However, CPSC believes it is good practice for pool owners and operators to inspect the drain cover often, and have it professionally inspected at least annually.
- ✓ **Material** Field-Fabricated Drain Covers are designed by a professional engineer or a registered design professional pursuant to the requirements of the ASME/ANSI A112.19.8 2007 or successor standard.
- ✓ **GPM** Does the drain cover display a flow value in gallons per minute (GPM) that indicates the maximum flow rate for which the cover has been approved (Figure 2)? If it does not, order a new drain cover with this information or ask the pool owner for the drain cover's certificate that has this information.



GPM (gallons per minute) Labeling Example

Figure 2

- ✓ **Performance** The flow rate of the pool or spa must indicate that it is at or below the maximum allowable gallons per minute (GPM) marked on the drain cover(s). If the flow rate of the pool or spa is above the maximum GPM marked on the drain cover(s), the drain cover(s) may need replacement.
- ✓ **Secondary device?** If the pool or spa does have manufactured anti-entrapment drain covers that meet the ASME/ANSI A112.19.8 2007 or successor standard, determine if it is on a single main drain or multiple drains less than 3 feet apart, and if a secondary anti-entrapment system is installed in the pool or spa.
- ✓ **Skimmer Equalizer Lines** (Figure 3) are submerged drains and must (1) be covered with ASME/ANSI A112.19.8 2007 or successor standard, (2) plugged (using a tool), or (3) otherwise disabled (cemented over).
 - Skimmers are usually located along the perimeter of the pool.
 - If equalizers are present, verify which one of the three options was used to bring the skimmer equalizer drains into compliance.

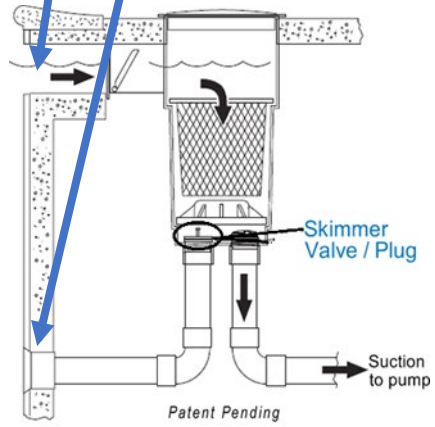


Figure 3 - Equalizer Line

Attachment B: Secondary Anti-Entrapment Device or System Inspection Checklist

If there is only a single main drain or multiple drains less than 3 feet apart, a second anti-entrapment system must also be installed. Suction from a pool or spa's drain can be so powerful it can trap an adult underwater. There is also the risk of hair, limb, and body entrapments in severe cases disembowelment. The installation of a secondary anti-entrapment system would cease operation of the pump, reverse the circulation flow, or provide a vacuum release at a suction outlet, allowing an individual enough time to remove themselves from the suction outlet. These secondary systems may comprise one or more of the following:

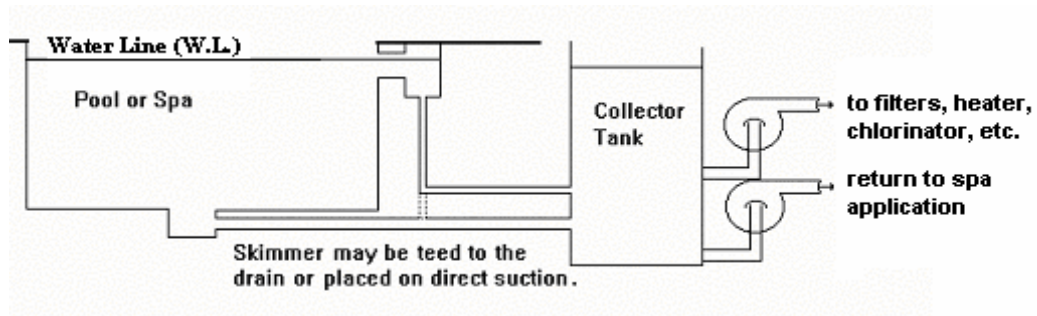
- ✓ **Safety Vacuum Release System (SVRS)** (Figure 4) - A safety vacuum release system ceases the operation of the pump, reverses the circulation flow, or otherwise provides a vacuum release at a suction outlet when a blockage is detected. A viable SVRS is one that has been tested by an independent third party and found to conform to the ASME/ANSI A112.19.17 or the ASTM F2387 standard.



Examples of Suction Vacuum Release Systems

Figure 4

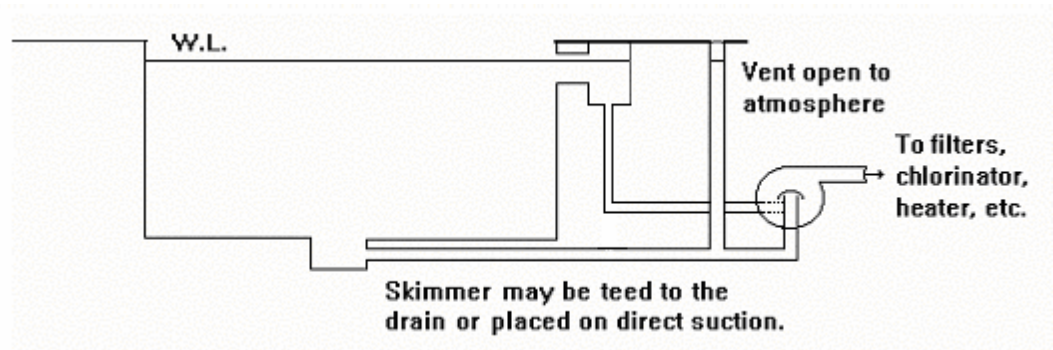
- ✓ **Gravity drainage system** (Figure 5) - A gravity system utilizes a collector or surge tank. The system does not have a mechanical pump that draws water directly from the swimming pool or spa, but relies on gravity to create water flow between the pool and the tank as the pump draws water from the tank.



Conceptual Gravity Drainage System – Direct Suction Removed from the Pool

Figure 5

- ✓ **Suction-limiting vent system** (Figure 6) - A suction-limiting vent system with a tamper-resistant atmospheric opening.



Conceptual Suction-Limiting Vent System to Relieve Main Drain Suction

Figure 6

- ✓ **Automatic pump shut-off system** (Figure 7)- A system similar to an SVRS that monitors the pump and automatically shuts off the pump if any abnormality in operation is detected.



Automatic pump shut-off system with an external manual emergency shut-off button

Figure 7

- ✓ **Drain disablement** - A device or system that disables the drain. Alternatives include physically disconnecting the main drain suction line from the pump in the equipment room, plugging the main drain suction line and/or filling the sump with concrete, or other means that remove the drain from the suction side of the circulation system.