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Theodore R. Kulongoski, Governor

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DATE: August 25, 2008

TO: All Public Pool Operators

FROM: Stephen Keifer
Public Pool Specialist

SUBJECT: Compliance with the Virginia Graeme Baker Pool & Spa Safety Act.

In December of 2007, Congress passed and the President signed the Virginia Graeme Baker Pool and Spa Safety Act. This legislation requires that all main drain covers meet the ANSI/ASME A112.19.8 (2007) standard for main drain anti-entrapment safety. Unfortunately, very few covers to date have actually been certified.

The act also requires that all public pools and spas comply with main drain entrapment changes to be made before December 19, 2008. To some extent, the act was not clear in about what was involved in those changes. Additionally, we have found that some of the changes are not effective in preventing entrapment in pools with hydrostatic relief valves, which most of you with pools should have.

Attached is an interpretation of what we think you should do to comply with the Act. At this point, I am not certain, but emergency rules may be written to bring the Oregon Public Swimming Pool and Spa Rules into compliance with the federal legislation. There is no question that almost all public pool operators will have to make changes to their pool to comply with the federal law. Enforcement of the changes will be by the Consumer Product Safety Commission until changes are made to our rules.

There is no question that the federal legislation is a benefit to the pool industry, implementation has been the concern. Thank you for your patience with this matter.

VGB Pool & Spa
Safety Act - August 25, 2008
Review Date - July 1, 2009

State of Oregon
Department of Human Services
OREGON PUBLIC HEALTH DIVISION

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OREGON PUBLIC HEALTH DIVISION INFORMATION BULLETIN

INTERPRETATION MANUAL

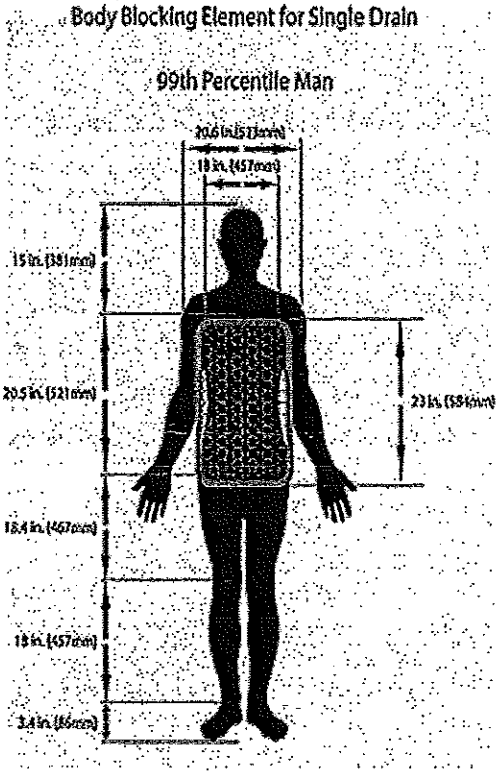
DHS Oregon Department of Human Services

POOLS & SPAS / MAIN DRAINS / ANTI-ENTRAPMENT / VIRGINIA GRAEME BAKER POOL & SPA SAFETY ACT

QUESTION:

What impact does the Virginia Graeme Baker Pool and Spa Safety act have on public swimming pools and spas in Oregon?

BACKGROUND:



President Bush signed the Virginia Graeme Baker Pool & Spa Safety Act into law on December 19, 2007. The law made some sweeping changes in how swimming pools will provide main drain entrapment safety in the future. The law mandates that all public pools provide entrapment protection for their main drains that meet federal guidelines. The law mandates these changes be made by December 20, 2008

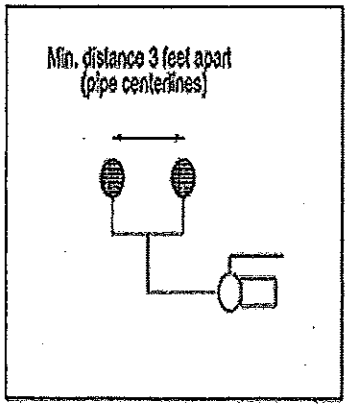
The law addresses standards for main drain cover manufacture, standards for single main drain pools, and standards for pools with more than one main drain or with unblockable main drains. This document is meant as guidance for public pool operators, service companies, and others to use to make changes in compliance with the new law while coordinating with existing Oregon rules.

DEFINITIONS:

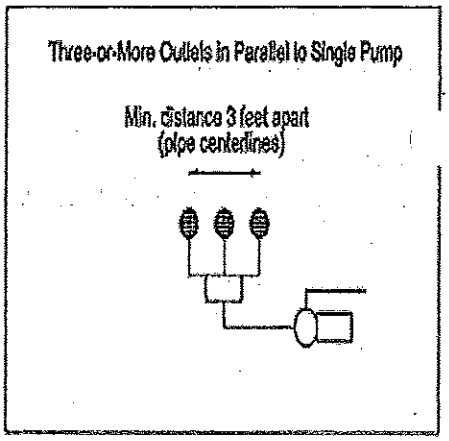
Drain Covers – Main drain covers that have a listing for compliance with ANSI/AMSE A112.19.8 (2007) from a third party listing agency. This listing is marked on the cover. To date, to my knowledge only a very few covers are listed in compliance with this standard.

Main Drains – Suction fittings on the bottom or side of the pool that direct water back to a pump. They are normally located in the deepest part of the pool or spa.

Multiple Main Drains – Consist of at least two fully submerged suction outlets per pump. The drain covers must be centered at least 3 feet apart. Multiple pumps may share the drains as long as the velocity through the fitting or return piping is not exceeded. Each drain must handle at least 100 % of the total recirculation flow through the pump(s). When more than two fittings are provided, each fitting's flow will be the: [("total recirculation flow" x 2) / "the number of main drain fittings"]. (diagram above)



Dual Outlets
In parallel to one pump



Three-or-More Outlets in Parallel
Symmetric piping

Single Main Drain – Means that only a single main drain suction fitting is provided for a pump, regardless of whether a skimmer is provided. Multiple fittings less than 3 feet apart are considered a single main drain.

Suction Fittings – Fittings completely submerged in the water on either the bottom or side of the pool that collect the water so it can be returned to the pump. For purposes of this document, skimmers and gutters are not considered suction fittings.

ANTI-ENTRAPMENT SYSTEMS:

Unblockable Drain – Means a drain that is of a size or shape that a body cannot sufficiently bloc' to create a suction entrapment hazard. The CPSC goes further to state it must exceed the dimensions of the ANSI/ASME A112.19.8 (2007) test procedures and would have a minimum dimension larger than 15" x 23", the size of the shoulder to waist measurement of a 99th percentile adult male. (diagram – above)

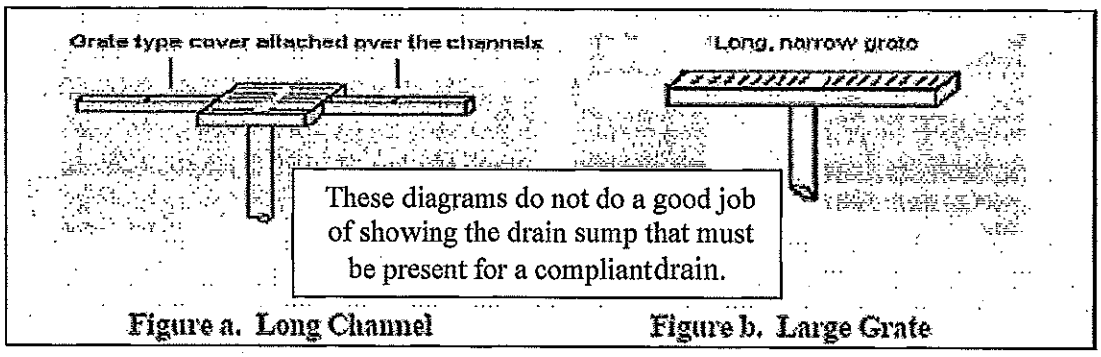


Figure a. Long Channel Figure b. Large Grate

SVRS – "Safety Vacuum Release System" – means a system that ceases the operation of the pump, reverses the recirculation flow, or otherwise provides a vacuum release at the suction outlet when there is a blockage. Systems must be designed and tested to ANSI/ASME standard A122.19.17 or the ANSI ASTM standard F2387 and be listed as such by a third party certifier.

Suction – Limiting Vent System – Means a suction limiting vent system with a tamper-resistant atmospheric opening, also called an "atmospheric vent." These require certification by a design professional to make sure they will function.

Gravity Drain System – Means a system that utilizes a collector or surge tank to collect the wate from the pool via gravity flow piping before it is drawn into the recirculation pump. The suction of the water moving to the surge tank should not be sufficient to entrap a body to the main drain

fitting. Special or unusual designs where the drop into the surge tank produces significant suction head may require further protection.

Automatic Pump Shut-off System – Would be a device that detects a drain blockage and can shut-off the pump system. Some SVRS systems may meet this definition. This is not a manually operated emergency shut-off switch as required by the National Electrical Code. Currently these systems would have to meet the SVRS standards for performance criteria.

Drain Disablement – Means permanently disabling the main drain as a suction outlet. This can be accomplished in a variety of ways, but the disablement must be permanent in nature.

Other System – Means any other system that is determined by the CPSC commission to be equally effective as those above at preventing entrapment, risk of injury or death

INTERPRETATION:

This interpretation is an attempt by this agency to interpret some of the provisions of the Virginia Graeme Baker Pool and Spa Safety Act. It is not to be considered a definitive interpretation as this responsibility rests with the Federal Consumer Product Safety Commission (CPSC). These guidelines should allow pool operators to proceed with the federally mandated corrections for entrapment while still being in compliamce with Oregon Public Pool & Spa Rules.

Issues:

1. The CPSC has not issued final requirements for compliance with the legislation.

2. As of this writing, we only know of only a few main drain grates that comply with ANSI / ASME A112.19.8 (2007). Two of the fittings are for 8" round drain sumps. Many drain renovations will have to wait until additional covers, made to fit the fittings in a particular pool, become certified.

Single Main Drain Pools:

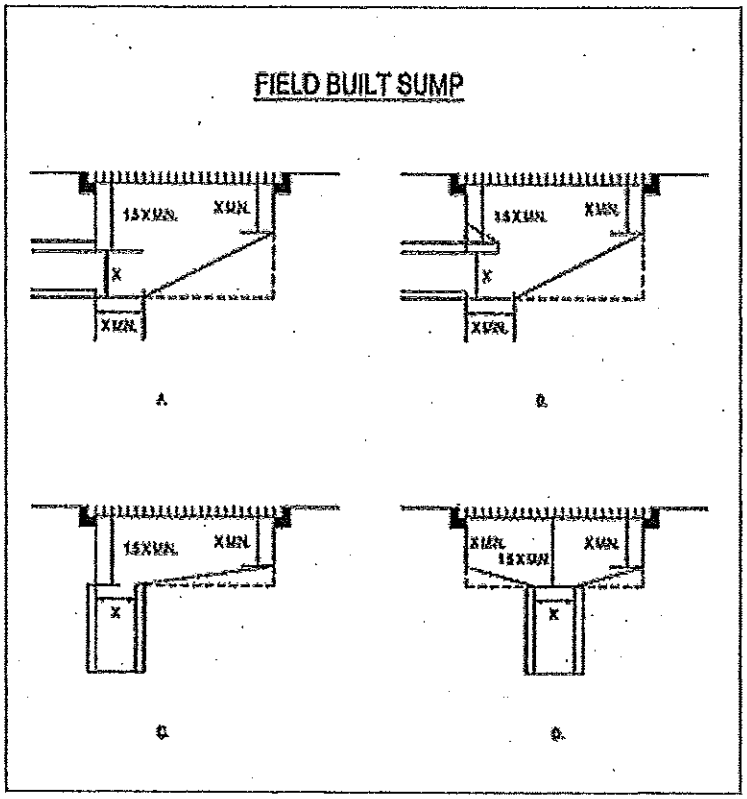
A single main drain or suction fitting is one where a pump is attached directly to only that one submerged suction fitting. Skimmers are not considered an additional attachment

A single main drain pool can be brought into compliance with the federal law by:

1.) Adding a second main drain with a connecting pipe so the return line to the pump is at the hydraulic center between the fittings and the fittings are at least 3 feet apart measured from their centers.

2.) Disabling the main drain, provided that there are other methods to return the water to the pump (skimmers). The disablement must be permanent in nature.

3.) Install an unblockable drain fitting larger than 15" x 23" in size. This installation must provide a suitable sump area to transport the water. (See Definition) (diagram – right)



4.) Install a main drain cover that is third party listed as compliant with ANSI / ASME A122.19.8

(2007). This cover must be marked with the logo of the testing agency and the standard to which the cover is tested. The main drain fitting must have enough open area to maintain a velocity less than 1.5 feet per second through the fitting. Then one of the following must also be present.

A.) An SVRS installed per the manufacturer's installation instructions. They must be liste as meeting ASTM/ANSI standard F2387 or ANSI ASME standard A112.19.17. These may not be installed in pools with hydrostatic relief valves. There is also a question of whether they will function on pumps with skimmers piped into the suction line:

NOTE: Many SVRS devices will not function properly in pools with properly installed hydrostatic relief valves. Many pools in Oregon have hydrostatic relief valves in the main drain sump to protect the pool from floating in high ground water conditions. Plugging, capping or otherwise disabling the hydrostatic relief valves can cause the pool to float out of the ground. Once raised, the pool is usually considered a total loss.

B.) A "suction-limiting vent system." These devices are installed during construction of a new pool. There are not voluntary standards for the design of these. To install a vent system, a qualified engineer must design it and receive approval from the department.

C.) A "gravity drainage system," where the water runs by gravity into a separate water storage vessel such as a collector tank, surge tank or surge pit. Standards for these are found in the Oregon rules for Public Swimming Pools:

D.) An "automatic pump shutoff system." Currently there are no standards for these types of devices. Some SVRS devices, by function, would meet this definition. They may not work if the pool had a hydrostatic relief valve in the main drain sump, and thus cannot be installed on pools with hydrostatic relief valves (See Note above.). There is a question as to whether they will function when the pump is also tied to a skimmer line;

E.) A system that in the judgment of the Department provides equivalent protection.

OREGON RECOMMENDATIONS:

Because of the concern that the secondary protection system will not function under the options of 4.) (A) & (C), and 4.) (B) & (C) would require reconstruction of an existing pool, The Department of Human Services recommends that pool operators, with pools using hydrostatic relief valves, use options 1, 2 or 3 above when modifying a single main drain pool.

Pools with Multiple Main Drains:

For pools with more than one main drain fitting connected to each pump, the main change will be to replace the existing main drain grate with a new grate compliant with the requirements of ANSI / ASME A112.19.8 (2007), listed as compliant by a recognized third party testing agency. The cover will have the logo of the listing agency and the standard to which it was tested. The main drain fitting must have enough open area to allow 100% flow through each drain fitting at less than 1.5 feet per second. When there are more than two fittings, all tied together, each fitting must accommodate a ratio of flow equal of 200 % of the flow rate through the combined fittings.