

The RECIRCULATOR

DEPARTMENT OF PUBLIC HEALTH
 DIVISION OF ENVIRONMENTAL HEALTH
 VOL. 64, NO. 3 – DECEMBER 2008

Certified Pool/Spa Operator® (CPO®) Courses – January - June 2009

Sponsor	Dates	Location	Contact	Address	Telephone
Iowa Parks & Recreation Association	January 13-14 February 10-11 March 10-11 March 31-April 1 April 14-15 May 12-13 June 9-10	Cedar Falls Sioux City Ames Iowa City Clear Lake Cedar Rapids Fort Dodge	Cathy Shutts	1534 Penrose St Grinnell, IA 50112 E-mail: cshutts@pcpartner.net	(641)236-3917 Fax: (641)236-6779
SLC Pool Consultants	February 26-27 March 10-11 March 25-26 April 7-8 April 21-22 June 24-25	Des Moines Bettendorf Okoboji Council Bluffs Des Moines Des Moines	Steve Craig	Swimming Pool Supply 5292 NW 111th Drive Grimes, IA 50111 E-mail: steve@spspools-spas.com	(515)986-3931
Certified Pool Trainers of Iowa & Minnesota	February 24-25 March 18-19 March 31-April 1 May 19-20	Spencer Cedar Falls Story City Altoona	John Szymanski	65910-267 th Street Alden MN 56009-4211	(800)253-7235 Fax: (507)863-2367

Check with the individual training organizations, your inspection agency, or the Iowa Department of Public Health at (515)281-8722 for courses that may be scheduled later.

Pool and Spa Safety Act Updates

Last year, the US Congress passed the “Virginia Graeme Baker Pool and Spa Safety Act” (VGB). The legislation was signed into law on December 19, 2007. The act was passed to prevent entrapment injuries and deaths at swimming pools and spas.

IDPH has published information about VGB here and has mailed a fact sheet to all of the facilities for which we have addresses. A summary of the requirements of the act, updates on Consumer Product Safety Commission (CPSC) decisions, and information on parts availability are below.

The law requires that within a year after the signing of the bill:

1. “...each swimming pool or spa drain cover manufactured, distributed, or entered into commerce in the United States shall conform to the entrapment protection standards of the ASME/ANSI A112.19.8 performance standard,

or any successor standard regulating such swimming pool or drain cover.”

2. “Each public pool and spa in the United States shall be equipped with anti-entrapment devices or systems that comply with the ASME/ANSI A112.19.8 performance standard, or any successor standard.”
3. A pool or spa with a single main drain that is not a gravity drain and that is not “unblockable” must also be modified or equipped as prescribed by the law. The options are described below.

CPSC Interpretations

CPSC staff has interpreted the requirement for all public pools (defined similarly in the law to Iowa public pools) to be equipped with “anti-entrapment devices or systems that comply with the ASME/ANSI A112.19.8” to mandate that each drain have a cover meeting the standard. **This is the only requirement**

for swimming pools and spas with multiple drains, gravity drains, or “unblockable” drains. Multiple drains must be separated by three feet or more on center or on separate pool surfaces (floor and wall, for example).

Swimming pools and spas with single main drains that are not “unblockable” and are not gravity drains must install an ASME standard-compliant cover and either:

1. Make the main drain “unblockable,” (unblockable is discussed below), or
2. Convert the main drain to be a gravity drain. This would involve installing a collection tank and valves to balance the flow between the main drain and the skimmers, or
3. Install a safety vacuum release system (SVRS). An SVRS will shut down the pump or otherwise relieve the vacuum if a blockage is detected. The performance standard for SVRS is ASME/ANSI A112.19.17. Systems are available that comply with the standard, or
4. Install a vent pipe in the pipe from the main drain to the pump. The vent would need to be installed where the pipe is below the water level. No design standards have been published for this option, or
5. Install an automatic pump shut-off device. Some SVRS devices use this method, and one company has a system based on current detection at the pump, but there is no standard to evaluate devices in this category, or
6. Disable the main drain. Considerations for this option are discussed below.

“Unblockable” is defined in ASME A112.19.8-2007 based on an 18” x 23” rectangular mat with rounded (4” diameter) corners. A drain cover that is large enough or of such a shape that it cannot be covered by the mat is unblockable. Examples include a 24” x 24” or larger grate, a 24” diameter cover, or a long thin channel.

Disabling the Main Drain

An option generally discussed for single main drains, but also available for multi-drain pools is closing off or disabling the main drain(s). Shutting off the main drain(s) removes the requirement for installing standard-compliant covers, however, the hydraulic system of the pool must be evaluated carefully before this option is employed.

1. The overflow system (skimmers, gutters) must

have the capacity to carry the full required recirculation flow.

2. If the pool has a sand filter, the flow through the overflow system must allow for backwashing the filter.
3. There must be sufficient inlets arranged and aimed to permit distribution of treated water throughout the pool.
4. The valve for the main drain must be secured by removing the handle or otherwise locked down so the valve cannot be easily opened.

CPSC has stated this is an acceptable option, though they recommended that the drain be filled in or sealed off. For existing pools sealing the main drain sump will usually be impractical. The main drain sump contains the hydrostatic relief valve; the pool could be severely damaged if the hydrostatic relief valve is disabled.

ASME/ANSI A112.19.8 – 2007 (2008a)

The standard sets performance requirements for cover/grates. These include stringent requirements for UV resistance for plastic parts, structural strength, corrosion resistance for metal components (screws and brackets), and prevention of hair entrapment.

To ensure that the products comply with the standard, the cover/grates must be tested by one of several third-party testing agencies; if a product passes the testing, it is “listed” by a listing agency (which may also be the testing agency). In the United States, the primary listing agencies for cover/grates are the International Association of Plumbing and Mechanical Officials (IAPMO, www.iapmo.org), NSF International (www.nsf.org), and Underwriters Laboratories (UL, www.ul.com). A product will typically be listed with only one agency.

The NSF site is easy to navigate and lists all of the companies and products on one page with information about the standard that is the basis for listing. For both IAPMO and UL you need to find the product listing area and search for “suction fittings.” You get a list of company links which need to be checked individually to find out which models are listed. You should also check the date of the listing and read the text to ensure the product was tested to the 2007 version of the standard.

Listed products must be marked with the listing agency mark, the product standard (ASME A112.19.8-2007 or 2008a), a maximum flow rate, a life rating (plastic parts), whether the part is for floor or wall installations (or both), and the product model number. CPSC has

recommended that the parts be marked with “VGB 2008” also. The marking must be on the top surface of the part.

Existing Standard-Compliant Fittings

ASME A112.19.8 was first published in 1987 and primarily covered spa suction fittings and the fittings for equalizer openings in swimming pools. Many fittings have been certified and listed to the standard. The current revision of the standard strengthens the UV resistance and structural requirements for the fittings and revises the hair entrapment testing. CPSC, in response to a direct question, has said that fittings certified to previous versions of the ASME standard must be replaced with fittings that meet the current version. It’s unclear that fittings that can directly replace existing fittings are available, though fittings are available for new installations.

One particular area of concern is the fitting that covers the skimmer equalizer opening below the water of a swimming pool or spa. Iowa has required for about 10 years that these fittings be ASME standard-compliant, but, to the best of our knowledge, no fittings have been tested to the current version of the standard. **IDPH recommends plugging the equalizer line inside the skimmer. To protect your pump, you will need to monitor the water level to ensure the level doesn’t fall below the skimmer opening.**

Parts Availability

As of this writing, parts are available, at least in limited numbers, for 8-inch round drain sumps, and for 9x9 and 12x12 square sumps. There are still no 18x18 grates available. Check with one or more pool service companies to see if parts are available and the cost.

Flow Rates

The new drain covers and grates have a specific maximum flow rates stamped on them. In most cases, the flow rate is less than would have been permitted under Iowa rules for the existing cover/grate. For example, the Hayward 12x12 flat grate could be used for flow up to 317 GPM; its standard-compliant replacement is rated for 256 GPM. The Aquastar 12x12 is rated for 206 GPM (a new model offers a higher flow rating). For smaller swimming pools, this will not be a problem, but for larger pools and particularly for some spas, the flow rates must be considered before a new cover/grate is selected.

Example: A 2000 gallon spa has a minimum filter flow of 67 GPM, but could often run at 80 GPM or more, depending on the choice of pump and the condition of the filter. A 3HP jet pump will give 140-

150 GPM depending on the piping and the number of jets. Many of these have been installed with both pumps drawing from a pair of 12x12 grates. Iowa rules and national standards require that each of two main drains be sized for the full flow of both pumps.

Field Fabricated Outlets

Many municipal and other larger swimming pools have main drains and outlets on walls that are of unusual size and shape. VGB still requires that the covers for these outlets are compliant with ASME A112.19.9-2007, but commercially-available products for these outlets are not and will not be available. CPSC has not offered guidance about these outlets.

An option given in the ASME standard is for a “registered design professional” (in Iowa, a licensed professional engineer) to certify that the outlet cover meets the requirements of the standard. The certification involves evaluation of the structural strength of the cover, the flow velocity through the open area of the cover (must be 1.5 feet/second or less), how the cover is secured to the pool structure, and, for plastic materials, UV resistance. The design professional must estimate the probable life of the cover.

One design company that works extensively in Iowa and has generally used field fabricated outlets is supplying the certification for the company’s clients. They have contacted CPSC and individuals associated with the development of the ASME standard to get sign-off on their approach. One concession recognized by the CPSC is that UV resistance does not need to be a consideration for the outlet covers for indoor pools.

I have enclosed text from the letter the design company is sending to its clients. Your designer or another engineer may be able to use these ideas. The ASME standard must be purchased from ASME (www.asme.org) or ANSI (www.ansi.org) [ANSI provides electronic copies; ASME did not as of earlier this year].

Iowa Considerations

Iowa rules do not currently address most of the specifics of VGB, so we do not have the authority to enforce facilities to comply with the law. IDPH does intend to amend its rules (641 IAC Chapter 15) before the 2009 outdoor swimming season. VGB compliance will be a checklist item next summer.

If you purchase parts for VGB compliance, you need to keep the purchase information (receipts, packing slips and product information) with your pool record file. These documents will be used by

inspectors to confirm compliance with the VGB-related Iowa rules. If an engineer certifies your field fabricated outlets, you must have a letter from the engineer documenting the certification with your pool records.

Questions about VGB can be directed to Michael Magnant at the IDPH, (515)281-8722, mmagnant@idph.state.ia.us.

We recommend that you monitor the CPSC site, www.cpsc.gov; the NSPF web site, www.nspf.org; and the Association of Pool and Spa Professionals (APSP) web site, www.apsp.org. If you become aware of other helpful web sites, please contact Michael Magnant.

CPSC Statement 12/15/2008

U.S. Consumer Product Safety Commission
Monday, December 15, 2008

To the public pool and spa safety community:

U.S. Consumer Product Safety Commission (CPSC) recognizes and appreciates the efforts that all of you have made throughout this year to come into compliance with Section 1404 of the Virginia Graeme Baker Pool & Spa Safety Act, which was signed into law on December 19, 2007. Congress set out a strict, one-year timeframe in which pool and spa owners/operators needed to comply. With the requirements of the Act going into effect on Friday, December 19, 2008, there are success stories to share - from a motel chain with hundreds of pools to an operator of a single community pool who have improved the safety of their pools and spas by complying with the law.

We are aware that for many pool and spa owners, operators and installers, the production, availability and delivery of unblockable sized drain covers are the keys to your success. While others are facing the challenge of being on waiting lists for the services of a professional diver or awaiting approval of work plans by county or state officials.

Although we acknowledge the challenges that many owners and operators are still trying to overcome, this 1-year-old law is clear: all public pools and spas have until December 19, 2008 to have ASME/ANSI A112.19.8-2007 compliant drain covers safely and securely installed and a 2nd anti-entrapment system installed where there is only a single main drain.

CPSC has an obligation to carry out the will of the Congress and to enforce the Pool & Spa Safety Act as written. This message today seeks to clarify our enforcement priorities.

First, for seasonal pools and spas that are currently closed, CPSC's Office of Compliance has granted enforcement discretion that these facilities do not need to comply until the day they re-open in 2009.

Second, considering the limited resources and enormous mission of the agency, CPSC will prioritize enforcement of the law to facilities that pose the greatest risk of drain entrapment to children, specifically:

- wading pools,
- pools designed specifically for young children, and
- in-ground spas,

where they use flat drain grates and single main drain systems.

We recommend that state and local health and safety agencies take the same approach of establishing priorities. CPSC staff has been communicating with state enforcement agencies about the Act throughout the year and we are relying on them to be co-enforcers of the law.

CPSC staff would like to quell rumors that we intend to bring million dollar fines or prison sentences against individual pool and spa operators. The Act does allow for the closure of a non-compliant pool until the owner/operator can successfully bring the facility into compliance.

CPSC staff has worked diligently during the past year to interpret the law, participate in conference calls and Webinars, work with state and county health officials, post information online, and individually respond to thousands of phone calls and e-mails. Significant efforts were made to educate the pool and spa community about the law and many of you helped in that effort and we thank you.

For those still in need of large covers, manufacturers have brought and will continue to bring certified unblockable sized covers to the marketplace. We encourage all affected parties to continue to make a good faith effort to come into compliance by pre-purchasing the products you need; hiring a certified, licensed professional to assess your facility; and having an installer at the ready to complete the work.

In an effort to address other key issues that have arisen since CPSC staff issued its June 2008 interpretation of Section 1404, all stakeholders should be aware that:

- The ASME/ANSI A112.19.8-2007 standard allows for licensed pool engineers to independent

review and test pre-existing field fabricated grates and certify them if they pass the standard.

- Submerged equalizer lines are considered suction outlets by CPSC staff and are required to either have an approved cover installed or be plugged off.
- New FAQs, with the staff's position on sumps and spacing between drains, will be posted on our Web site (www.cpsc.gov/whatsnew.html#pool) in the near future.

CPSC is committed to implementing and enforcing the Pool & Spa Safety Act to prevent the hidden and tragic hazard of drain entrapments in pools and spas.

Thank you.

NSPF Press Release 12/12/2008

Colorado Springs, CO/December 12, 2008

Controversial New Pool & Spa Safety Act Will Create Public Pool Closures Nationwide

Legislation could force 300,000 public pools to shut down December 19. Most of the 300,000 public pools and spas in the U.S. are required to close on December 19, 2008 according to the Consumer Product Safety Commission (CPSC) if they do not comply with the Virginia Graeme Baker Pool & Spa Safety Act (the Act). The Act was named honoring Miss Baker, granddaughter of James Baker III, former U.S. Secretary of State, who died in 2002 when entrapped on a drain in a private in-ground spa.

“Even though we fully support the goal of the Act, forcing public pools and spas to close has unexpected and undesirable consequence,” states Thomas M. Lachocki, Ph.D., and CEO of the National Swimming Pool Foundation[®] (NSPF[®]). Suction entrapment claims about one to two victims per year based on historic data from the CPSC. In contrast, drowning claimed the lives of 761 children aged 14 and under in 2004 and those numbers may increase since fewer children will attend swim lessons when pools are closed.

The new federal law requires all public pools and spas, including those at community parks, YMCAs, apartments, condominiums, and other homeowner associations, waterparks, hotels, schools, and universities to be equipped with drain covers that are certified to comply with the new ASME/ANSI 2007 standard, as well as other safety measures to prevent entrapment and evisceration. CPSC, the enforcing agency of the Act, may impose enormous financial penalties and seek imprisonment for violators.

“Swimming pool operators support preventing entrapment,” says Dr. Lachocki. NSPF has funded suction entrapment and drowning prevention research for decades and trains over 20,000 pool and spa operators each year. “Despite good faith efforts, organizations nationwide will not comply with this law by the deadline for reasons that are outside of their control,” asserts Lachocki, who outlines the current issues to include:

- The Pool & Spa Safety Act budgets \$5 million per year for an educational program requiring CPSC to establish and carry out education to the public pool service companies, pool facility owners, operators, and others. No such programs exist. As a result, facilities are either unaware or confused about the requirements of the Act.
- Some compliant covers are only now becoming available.
- Large and unique shaped (unblockable) compliant drain covers will not be available by the deadline.
- The Act requires existing large, “unblockable” drains to be replaced with no evidence the change will reduce the risk of entrapment. In addition to the drain cover, the area below the cover (the sump) must sometimes be excavated and replaced in order to be compliant. Confusion over this exists and can increase compliance costs which can reach \$200,000 per pool. See discussion below.
- There are conflicts between engineering requirements in the Act and local laws already in place to prevent entrapment.
- State laws require local health departments to review and approve changes to pools before work begins. The Pool & Spa Safety Act is an unfunded mandate for health departments who do not have the capacity to review changes on all public pools in their jurisdiction prior to the deadline. Thus, operators must choose to either break a state law by making changes before the deadline, or to break a federal law by seeking state approval and missing the federal deadline.
- There are a limited number of qualified engineers, contractors, and design professionals available to design and implement changes.
- Design professionals are not willing to certify aquatic facilities as compliant due to ambiguity in the law and substantial fines and risk of imprisonment.

Controversy and confusion revolves around replacing existing unblockable drains. The Pool & Spa Safety Act defines unblockable drains as “drains of any size and shape that a human body can not sufficiently block to create a suction entrapment hazard.” There is no evidence that an entrapment has ever occurred on an unblockable drain. Yet the Act and CPSC further require unblockable drains (drains larger than 18” x 23”) to satisfy a standard that will require tens of thousands of unblockable drains to be replaced.

A facility would have to close the pool, drain it, perform an engineering review, seek and gain local health department approval - in some cases seek competitive bids - dig trenches beneath the pool, replace the sump beneath the drain covers, repair the structural steel and pool shell, re-plaster the pool, and re-fill and re-start the pool. This process could take a year and cost hundreds of thousands of dollars, and disrupt or permanently close the pool. One Massachusetts middle-school reports an estimate of \$110,000. That pool, they say, will remain closed due to lack of money.

Many professionals do not understand if a drain is “unblockable” and not a risk of entrapment, why it has to be replaced at all. Since many unblockable drains are “field fabricated” by the pool builder and are unique in size and shape, there is not a “manufacturer” who will build and have them tested to the 2007 standard required by the Pool & Spa Safety Act and the CPSC. As a result, new compliant “unblockable drains” are not available in the market. “The controversy around replacing ‘unblockable drains’ is an example where a slight oversight can jeopardize the intent of the Act,” concludes Lachocki.

Swim lessons are one of the key tools to prevent drowning. Unfortunately, closing thousands of public pools means fewer children will learn to swim and fewer lifeguards will be trained.

Closing pools also disrupts those who are refining their swimming skills. “Within the interscholastic swimming program across the United States, there were over 264,000 participants in 2007-2008,” says Becky Oakes, National Federation of State High School Associations Assistant Director. “The possible suspension of use of any pools could certainly impact students in their school

programs.” “We need to keep people swimming,” states Adolph Kiefer, the 1936 Olympic gold medalist in backstroke and an aquatics safety advocate.

Dozens of leading organizations have communicated with the CPSC to request a 12 to 18 month delay in implementation. These include the National Recreation and Park Association (NRPA), the YMCA of the USA, National Swimming Pool Foundation, and many others. A delay in implementation of the Pool & Spa Safety Act would allow activities that benefit people (swim lessons, aquatic therapy and rehabilitation, lifeguard training, physical exercise, family-together activities) to continue while the local pool and spa facility works to also reduce the risk of suction entrapment.

NRPA, whose 21,000 members manage municipal aquatic facilities, also sees the challenge with complying and has provided case studies to the CPSC outlining the impact. “There are a host of external factors that are creating roadblocks for compliance, including product availability, local water ordinances, availability of installation engineers, and the financial burden, estimated at \$1,000 to \$15,000 per pool, on many local governments at a time when their budgets are already stretched. Many communities manage many more than just one public pool, and some agencies operate scores of pools.

Additionally, many older pools have field fabricated drains that are uniquely shaped and would require specially designed covers or grates,” says Barbara Tulipane, CEO of NRPA. She adds that, “As a result, many facilities will be forced to shut down. Our member agencies tell us that the potential disruptions will be nationwide.”

“An implementation delay makes sense to resolve technical issues and to solve the entrapment problem - without creating a drowning problem, reducing public services, and hurting our fragile economy,” Lachocki reinforces. “This is not a money issue. Everyone agrees we need to prevent entrapment. How we get it done will dictate if lives are saved or lost. Furthermore, if we do it right, we can also help prevent painful job losses of thousands of people and preserve valuable, safe programs for citizens. It may be a harder path, but it is the right path,” he concludes.

Continuing Education Courses – January - June 2009

Sponsor	Dates	Location	Contact	Address and Telephone	Credit
Iowa Parks & Recreation Association	January 12 February 9 March 9 March 30 April 7 April 13 May 11 June 8	Cedar Falls Sioux City Ames Iowa City Coralville Clear Lake Cedar Rapids Fort Dodge	Cathy Shutts	1534 Penrose St Grinnell, IA 50112 (641)236-3917 E-mail: cshutts@pcpartner.net	2.5 hours
SLC Pool Consultants	March 10 March 16 March 24 April 7 April 13 May 4	Bettendorf Des Moines Okoboji Council Bluffs Des Moines Des Moines	Steve Craig	Swimming Pool Supply 5292 NW 111th Drive Grimes, IA 50111 (515)986-3931 E-mail: steve@spspools-spas.com	2.0 hours
Certified Pool Trainers of Iowa & Minnesota	February 26 March 20 April 2 May 21	Spencer Cedar Falls Story City Altoona	John Szymanski	65910-267 th Street Alden MN 56009-4211 (800)253-7235	4.0 hr

Remember that Certified Pool Operators[®] in Iowa must obtain 10 hours of continuing education in the five years between renewals of the CPO[®] certificate. The individual CPO[®] must maintain a record of the continuing education. The record must be available to the inspection agency at each facility for which the CPO[®] is responsible.

Check with the sponsoring organization for the subject matter at these courses and for courses scheduled later.