

Information Sheet

Engineering Department

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Swimming Pools, Hot Tubs, and Spas

Frequently asked questions:

Do I need a permit?

Yes, if it is intended for swimming or recreational bathing and contains water over 24 inches deep.

Do I need a fence?

Yes- barriers such as fences and walls are required for pools containing over 24 inches of water. The pool area must be completely contained within these barriers. The specific requirements are as follows:

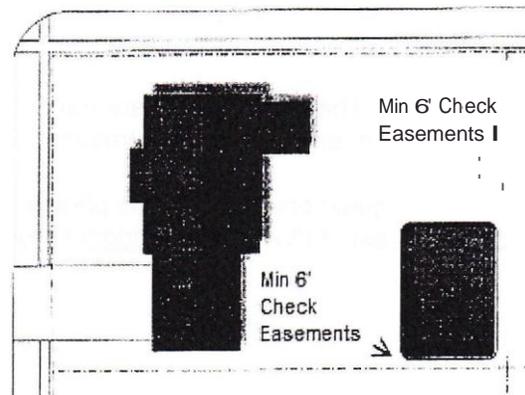
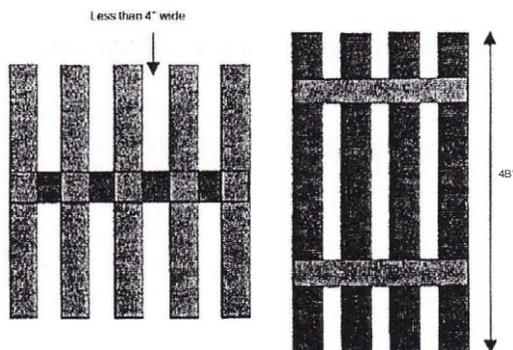
- The top of the barrier must be at least 48" tall on side facing away from pool. Above ground pools with minimum 48" tall sidewalls can serve as the barrier.
- Openings in the barrier cannot allow passage of a 4" sphere.
- Any door, within a wall or barrier with direct access to the pool area must be alarmed. There are specific alarm requirements per National Code.
- Any ladders or steps must be

secured or removed to prevent access when not in use.

Are there specific location requirements for my pool, hot tub, or spa?

Yes- Pools, Hot tubs, and spas are referred to as Accessory structures. This means they must meet the zoning requirements of the area where they will be located. Refer to diagrams for more information.

- Minimum distance to side or rear property line is 6 feet, but in no case in an easement. Depending on zone district the distance from the property line may be 10' or 25'.
- Verify overhead power lines.
- Maximum lot coverage of all may be 10% - 30%, depending on zoning district. Please check with the Engineering Department.



Example:

Lot size: 12,500 sq ft in R-3 Zone

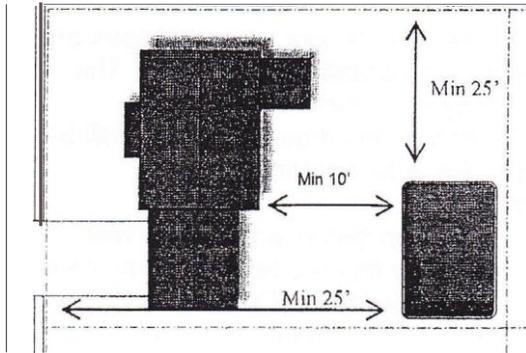
House/garage area: 2400 sq ft

Driveway: 20' X 25' = 500 sq ft

23.2% of lot is covered.

Pool and deck area can be up to 850 sq ft.

- Minimum distance from the front and side street property lines is 25 feet. (May be up to 50 feet, depending on zoning class)
- Minimum distance from house is 10 feet. (May be up to 20 feet, depending on zoning class.)



Is there anything else I should know?

Yes- There are also special electrical requirements that are very important. Please consult a qualified electrician for the full wiring safety techniques.

- All metal in proximity of the pool must be bonded.
- Underground conduits and wires have location, depth, and material type restrictions.
- Equipment cords have specially designed lengths, plugs, and receptacle types for wet locations.
- Grounding is required between the service panel and the pool equipment.
- Lighting and landscape fixtures may require extra protection.

If you have any questions or doubts regarding electrical requirements please consult a qualified electrician.

Drainage- Attention is required to ensure pool drain water and any cover pump discharge may neither cause a nuisance to neighbors nor be discharged to the street. Neighborhood Regulations - Be sure to check with subdivision covenants and restrictions for additional specific regulations.

For applicants on the Village Collection System please see Ordinance section 50.086, if a separate water meter is desired.

What is the next step?

Complete and submit your permit application with site plan. This can be obtained at the Village Hall.

PLEASE NOTE: These guidelines are not a comprehensive presentation of all the ordinances involved in placing, erecting, or constructing a pool, hot tub, or spa.

If you have any questions or concerns please contact the Shiloh Engineering Department at (618) 632-1022 ext. 113 or engineering@shilohil.org.

Portable Pools Pose Drowning Risk for Young Kids

Mon, Jun 20, 2011

MONDAY, June 20 (HealthDay News) -- Portable swimming pools, including the increasingly popular, inflatable models, pose serious risks to young children, experts warn.

In a new study, investigators at Nationwide Children's Hospital in Columbus, Ohio, detail the drowning deaths of more than 200 children under 12 years old linked to a variety of above-ground pools, some large and deep, others small and shallow.

"About every five days a child drowns in a portable pool in the U.S.," said lead researcher Dr. Gary A. Smith, director of the hospital's Center for Injury Research and Policy.

Because these pools are inexpensive and easy to assemble, many parents may not consider them as big a risk as in-ground pools, he said. The greatest risks are for children younger than 5 years, the researchers found.

The report, published in the June 20 online edition of *Pediatrics*, highlights the need for safety precautions around *all* pools, safety advocates said.

"Safe Kids has been concerned about the increasing use of backyard pools that are too small for consumers to consider investing in fencing but too large to make them easy to empty and secure safely after each use," said Meri-K Appy, president of Safe Kids USA in a statement Friday. "This important study confirms our speculation that portable pools in backyards across America pose special risks to young children."

For the study, Smith's team used 2001-2009 data from the U.S. Consumer Product Safety Commission. During this period, the researchers identified 209 drowning deaths and 35 near-drownings in children under 12.

They found that 94 percent of the children were under 5 and most (56 percent) were boys. In addition, about three-quarters of the deaths took place in the child's own yard, usually during the summer.

More than 40 percent of the drownings occurred when the child was being supervised; 39 percent happened with no adult supervision; and 18 percent were blamed on a lapse of supervision.

About 40 percent of the drownings happened in a shallow wading pool, Smith said.

"That's in 18 inches or less of water," Smith said. "Children can drown in very small amounts of water. Very young children can drown in a five-gallon bucket with water in the bottom. It only takes a couple of inches and a few minutes."

"Close supervision of young children around water is really important, but supervision alone isn't enough," he continued.

While a variety of safety measures such as alarms and fencing are available for in-ground pools, Smith said, this is not the case for portable pools. The researchers call for industry development of affordable fencing and reliable pool alarms and covers for portable pools.

Many techniques used to deny access to in-ground pools, such as fencing, cost more than a portable pool itself, he said. "We have to come up with other strategies that are affordable and effective for portable pools."

Experts said the study also raises concerns about pool ladders. "Most of the kids got into the pool using a ladder that was provided with the pool," Smith said.

He suggested removing the pool ladder when no one is bathing and storing it where children can't get to it.

Dr. Barbara Gaines, director of trauma and injury prevention at Children's Hospital of Pittsburgh, said that "this reminds us that while water is very inviting for children, it is also extremely hazardous."

Parents need to be very watchful when their children are in and around water, including pools, ponds and bathtubs, Gaines said. "Never underestimate water."

Gaines advises parents who have wading pools to empty it out when the pool is not in use. "That's the safest thing," she said.

Also, parents must actively supervise their children, Gaines said. "Someone has to be on pool duty."

Safe Kids promotes a pool-safety concept called "Lock, Look and Learn":

- *LOCK*: Erect fencing at least 4 feet high with a self-latching gate and keep it locked at all times unless an adult is present.
- *LOOK*: Parents and caregivers should watch children in or near the water at all times, and not socialize, read or sleep.
- *LEARN*: "Adults should learn to swim themselves and provide swimming lessons to their children from an early age," Appy said. They should also know how to respond to an emergency -- "use rescue equipment, call 911 and perform CPR," she added

**SECTION 3109
SWIMMING POOL ENCLOSURES AND
SAFETY DEVICES**

3109.1 General. Swimming pools shall comply with the requirements of this section and other applicable sections of this code.

3109.2 Definition. The following word and term shall, for the purposes of this section and as used elsewhere in this code, have the meaning shown herein.

SWIMMING POOLS. Any structure intended for swimming, recreational bathing or wading that contains water over 24 inches (610 mm) deep. This includes in-ground, above-ground and on-ground pools; hot tubs; spas and fixed-in-place wading pools.

3109.3 Public swimming pools. Public swimming pools shall be completely enclosed by a fence at least 4 feet (1290 mm) in height or a screen enclosure. Openings in the fence shall not permit the passage of a 4-inch-diameter (102 mm) sphere. The fence or screen enclosure shall be equipped with self-closing and self-latching gates.

3109.4 Residential swimming pools. Residential swimming pools shall comply with Sections 3109.4.1 through 3109.4.3.

Exception: A swimming pool with a power safety cover or a spa with a safety cover complying with ASTM F 1346.

3109.4.1 Barrier height and clearances. The top of the barrier shall be at least 48 inches (1219 mm) above grade measured on the side of the barrier that faces away from the swimming pool. The maximum vertical clearance between grade and the bottom of the barrier shall be 2 inches (51 mm) measured on the side of the barrier that faces away from the swimming pool. Where the top of the pool structure is above grade, the barrier is authorized to be at ground level or mounted on top of the pool structure, and the maximum vertical clearance between the top of the pool structure and the bottom of the barrier shall be 4 inches (102 mm).

3109.4.1.1 Openings. Openings in the barrier shall not allow passage of a 4-inch-diameter (102 mm) sphere.

3109.4.1.2 Solid barrier surfaces. Solid barriers which do not have openings shall not contain indentations or protrusions except for normal construction tolerances and tooled masonry joints.

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3109.4.1.3 Closely spaced horizontal members.

Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is less than 45 inches (1143 mm), the horizontal members shall be located on the swimming pool side of the fence. Spacing between vertical members shall not exceed 1.75 inches (44 mm) in width. Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 1.75 inches (44 mm) in width.

3109.4.1.4 Widely spaced horizontal members.

Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is 45 inches (1143 mm) or more, spacing between vertical members shall not exceed 4 inches (102 mm). Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 1.75 inches (44 mm) in width.

3109.4.1.5 Chain link dimensions. Maximum mesh size for chain link fences shall be a 2.25 inch square (57 mm square) unless the fence is provided with slats fastened at the top or the bottom which reduce the openings to no more than 1.75 inches (44 mm).

3109.4.1.6 Diagonal members. Where the barrier is composed of diagonal members, the maximum opening formed by the diagonal members shall be no more than 1.75 inches (44 mm).

3109.4.1.7 Gates. Access gates shall comply with the requirements of Sections 3109.4.1.1 through 3109.4.1.6 and shall be equipped to accommodate a locking device. Pedestrian access gates shall open outward away from the pool and shall be self-closing and have a self-latching device. Gates other than pedestrian access gates shall have a self-latching device. Release mechanisms shall be in accordance with Sections 1008.1.8 and 1109.13. Where the release mechanism of the self-latching device is located less than 54 inches (1372 mm) from the bottom of the gate, the release mechanism shall be located on the pool side of the gate at least 3 inches (76 mm) below the top of the gate, and the gate and barrier shall have no opening greater than 0.5 inch (12.7 mm) within 18 inches (457 mm) of the release mechanism.

3109.4.1.8 Dwelling wall as a barrier. Where a wall of a dwelling serves as part of the barrier, one of the following shall apply:

1. Doors with direct access to the pool through that wall shall be equipped with an alarm that produces an audible warning when the door and/or its screen, if present, are opened. The alarm shall be listed in accordance with UL 2017. The audible alarm shall activate within 7 seconds and sound continuously for a minimum of 30 seconds after the door and/or its screen, if present, are opened and be capable of being heard throughout the house during normal household activities. The alarm shall automatically reset under all conditions. The alarm shall be equipped with a manual means, such as touchpad or switch, to temporarily

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deactivate the alarm for a single opening. Such deactivation shall last for not more than 15 seconds. In dwellings not required to be Accessible, Type A or Type B units, the deactivation switch shall be located 54 inches (1372 mm) or more above the threshold of the door. In dwellings required to be Accessible, Type A or Type B units, the deactivation switch(es) shall be located at 54 inches (1372 mm) maximum and 48 inches minimum above the threshold of the door.

2. The pool shall be equipped with a power safety cover that complies with ASTM F 1346.
3. Other means of protection, such as self-closing doors with self-latching devices, which are approved by the administrative authority, shall be accepted so long as the degree of protection afforded is not less than the protection afforded by Section 3109.4.1.8, Item 1 or 2.

3109.4.1.9 Pool structure as barrier. Where an above-ground pool structure is used as a barrier or where the barrier is mounted on top of the pool structure, and the means of access is a ladder or steps, then the ladder or steps either shall be capable of being secured, locked or removed to prevent access, or the ladder or steps shall be surrounded by a barrier which meets the requirements of Sections 3109.4.1.1 through 3109.4.1.8. When the ladder or steps are secured, locked or removed, any opening created shall not allow the passage of a 4-inch-diameter (102 mm) sphere.

3109.4.2 Indoor swimming pools. Walls surrounding indoor swimming pools shall not be required to comply with Section 3109.4.1.8.

3109.4.3 Prohibited locations. Barriers shall be located so as to prohibit permanent structures, equipment or similar objects from being used to climb the barriers.

3109.5 Entrapment avoidance. Suction outlets shall be designed to produce circulation throughout the pool or spa. Single-outlet systems, such as automatic vacuum cleaner systems, or other such multiple suction outlets whether isolated by valves or otherwise shall be protected against user entrapment.

3109.5.1 Suction fittings. All pool and spa suction outlets shall be provided with a cover that conforms to ASME A112.19.8M, a 12-inch by 12-inch (305 mm by 305 mm) drain grate or larger, or an approved channel drain system.

Exception: Surface skimmers.

3109.5.2 Atmospheric vacuum relief system required. All pool and spa single- or multiple-outlet circulation systems shall be equipped with an atmospheric vacuum relief should grate covers located therein become missing or broken. Such vacuum relief systems shall include at least one approved or engineered method of the type specified herein, as follows:

1. Safety vacuum release systems conforming to ASME A112.19.17; or
2. Approved gravity drainage system.

3109.5.3 Dual drain separation. Single- or multiple-pump circulation systems shall be provided with a minimum of two suction outlets of the approved type. A minimum horizontal or vertical distance of 3 feet (914 mm) shall separate such outlets. These suction outlets shall be piped so that water is drawn through them simultaneously through a vacuum-relief-protected line to the pump or pumps.

3109.5.4 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).