

City of Howell

Pool Information - spas/hot tubs

BUILDING CODE GOALS

There are 3 main areas of the building codes for pools, spas and hot tubs.

1. To provide barrier protection around any body of water deeper than 2 feet to help prevent accidents.
2. Ensure Proper Electrical installations. Water, electricity and children can be a danerous combination. The electrical requirements can be daunting. If you are not experienced in electrical installations and codes, we recommend you contract with a licensed electrical contractor for installation of the electrical requirments for your pool.
3. Entrapment is a vacuum or suction that is caused by drains that attach to the filters, heaters and skimmers. These orifices are usually located at the bottom of pools. Clothing and hair can get caught in these devices and cause drowning. The entrapment codes require a release in the suction and prevent this occurrence.

Information provided by:
Livingston County Bldg. Dept.

POOL SAFETY - THE PURPOSE OF THE CODES

According to the Consumer Product Safety Commission (CPSC) approximately 350 Children under 5 years of age drown each year in residential swimming pools, spas and hot tubs. A CPSC study, Child Drowning Study: A report on the epidemiology of Drowning's in Residential Pools of children under age five, found that the majority of victims lived in or were visiting the residence where the accidents happened. Less than 2% of the drowning incidents occurred when a child trespassed on the property. For these reasons the appendix chapter states that all swimming pools, spas and hot tubs must be enclosed to prevent young children from gaining unsupervised access to the pool areas. The codes provide prescriptive details for the construction of enclousres around swimming pools, spas and hot tubs to make it more difficult for children, particularly children under 5 years old, to enter such areas unsupervised.

Drowning is the second leading cause of accidental death in the home for children under five years of age. It has been the number one cause of accidental deaths in a home for that age group in a number of states, includnig Arizona, Texas and Florida. The effective use of swimming pool barriers is the best way to reduce these tragic loses.

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Documentation Needed to Apply:

- Completed Application for Building Permit
- Copy of survey (mortgage) with the following indicated:
 - Location of Pool
 - Dimensioned setbacks from property boundaries
 - Distance from accessory and principal structures
 - Fencing and material specifications (including height)
 - Location of overhead electrical wires
- Pool Manufacturers Specifications
- Dimensions and Depth of Pool

Additional Information:

- Decks shall require a separate permit and fees
- Fences shall require a separate permit and fee

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Building Codes from 2009 Michigan Residential Code

AG104 Permanently Installed Spas and Hot Tubs

Permanently installed spas and hot tubs shall be designed and constructed in conformance with ANSI/NSPI-3 as listed in Section AG108.

AG104.2 Portable spas and Hot Tubs

Portable spas and hot tubs shall be designed and constructed in conformance with ANSI/NSPI-6 as listed in Section AG108.

Section AG105 Barrier Requirements Application

The provisions of this chapter shall control the design of barriers for residential swimming pools, spas and hot tubs. These design controls are intended to provide protection against potential drowning and near drowning by restricting access to swimming pools, spas and hot tubs.

AG105.2 Outdoor Swimming Pool

An outdoor swimming pool, including an in-ground, above-ground or on-ground pool, hot tub or spa shall be surrounded by a barrier which shall comply with the following:

1. The top of the barrier shall be at least 48 inches (1210 mm) above grade measured on the side of the barrier which 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 which faces away from the swimming pool. Where the top of the pool structure is above grade, such as an above-ground pool, the barrier may be at ground level, such as the pool structure, or mounted on top of the pool structure. Where the barrier is mounted on top of the pool structure, the maximum vertical clearance between the top of the pool structure and the bottom of the barrier shall be 4 inches (102 mm).
2. Openings in the barrier shall not allow passage of a 4-inch –diameter (102 mm) sphere.
3. Solid barriers which do not have openings, such as a masonry or stone wall, shall not contain indentations or protrusions except for normal construction tolerances and tooled masonry joints.
4. 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 ¾ inches (44mm) in width. Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 1 ¾ inches (44 mm) in width.
5. Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is 45" or more, spacing between vertical members shall not exceed 4". Where there are decorative cutouts within the vertical members, spacing within the cutouts shall not exceed 1 ¾" in width.

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6. Maximum mesh size for chain link fences shall be 2 ¼ inch (57mm) square unless the fence has slats fastened at the top or the bottom which reduce the openings to not more than 1 ¾ inches (44mm)
7. Where the barrier is composed of diagonal members, such as a lattice fence, the maximum opening formed by the diagonal members shall not be more than 1 ¾ inches (44mm).
8. Access gates shall comply with the requirements of Section AG105.2, Items 1 through 7, 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. 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 and openings shall comply with the following:
 - 8.1 The release mechanism shall be located on the pool side of the gate at least 3 inches (76mm) below the top of the gate; and the gate and barrier shall have no opening larger than ½ inch (13mm) within 18 inches (457 mm) of the release mechanism.
 - 8.2 The gate and barrier shall have no opening larger than ½ inch (13 mm) within 18 inches (457 mm) of the release mechanism.
9. Where a wall of a dwelling serves as part of the barrier, one of the following conditions shall be met:
 - 9.1 Where a wall of a dwelling serves as part of the barrier, one of the following conditions shall be met.
 - 9.2 Doors with direct access to the pool through that wall shall be equipped with an alarm which produces an audible warning when the door and/or its screen, if present, are opened. The alarm shall be listed in accordance with UL2017. The deactivation switches shall be at least 54" above the threshold of the door or
 - 9.3 Other means of protection such as a self closing door with self latching devices, which are approved by the governing body, shall be acceptable as long as the degree of protection afforded is not less than the protection afforded by item 9.1 or 9.2 described above.
10. 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:
 - 10.1 The ladder or steps shall be capable of being secured, locked or removed to prevent access, or
 - 10.2 The ladder or steps shall be surrounded by a barrier which meets the requirements of Section AG105.2 Items 1 through 9. When the ladder or steps are secured, locked or removed, any opening created shall not allow the passage of a 4-inch diameter (102mm) sphere.

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AG103 Indoor Swimming Pool

Walls surrounding an indoor swimming pool shall comply with Section AG105.2, Item 9.

AG105.4 Prohibited Locations

Barriers shall be located to prohibit permanent structures, equipment or similar objects from being used to climb them.

AG105.5 Barrier Exceptions

Spas or hot tubs with a safety cover which complies with ASTM F 1346, as listed in Section AG107, shall be exempt from the provisions of this appendix.

Section AG106 Entrapment Protection for Swimming Pool and Spa Suction Outlets

AG106.1 General

Suction outlets shall be designed and installed in accordance with ANSI/APSP7

Chapter 42 – Swimming Pool Electrical Requirements

Contact Livingston County Building Department

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