

SWIMMING POOL REGULATION

All other state and national codes still apply and must be adhered to in addition to the City of Muskego Ordinance. This includes the current adopted National Electrical Code.

1. Type of pools requiring permits:

- (a) Above ground pools with a depth of 24 inches or more or a diameter of more than 10 feet.
- (b) Spas and hot tubs.
- (c) Inground pools.
- (d) Public pools. All public pools shall be built and maintained in accordance with the rules of the State Board of Health, Chapter ISS 171.

2. Permits required:

- (a) **Registration or Construction Permit:**
\$9.00 per \$1,000 of valuation (\$60.00 minimum) plus \$30.00 plan review fee for *in-ground* pools only.
- (b) **Zoning Permit:**
Required for all spas and pools. Minimum fee is \$20.00.
- (c) **Electric Permit:**
Required for spas/pools with electrical equipment. Minimum fee is \$60.00. Must be taken out by electrician licensed to work in Muskego.
- (d) **Plumbing Permit:**
Required for spas/pool filters and pumps requiring plumbing connections or water supply lines. Minimum fee is \$60.00. Rarely applicable. When required, a licensed plumber must take out permit.
- (e) **Engineering Fees:**
Engineering review fees \$40.00-\$80.00/hour.

3. Items required when applying for pool permit:

- (a) 3 surveys or accurate drawings of the property, showing all existing structures, proposed pool location, fencing if required, and location of any underground or overhead utilities. Also, any existing or proposed concrete and/or asphalt on site.

- (b) 3 brochures showing the type, style, etc., of the pool to be installed.
- (c) Location of well, if applicable.
- (d) Waukesha County Health Department approval for properties served by private septic system.
- (e) Pool height above highest point of grade (above ground pools only).
- (f) Type and height of fence, if proposed, showing gate and latch details, or other method used to prevent unauthorized access.
- (g) Show any changes in finish grade around pool.
- (h) Proof of site inspection by Digger's Hotline.
- (i) If constructing a deck, information regarding material type, component size and spacing, as well as railing details, shall be submitted. All construction to meet requirements of Wisconsin Uniform Building code #30.44.

4. Location. In no case shall a pool be permitted closer than 10 feet to a lot line. In no case shall a pool be located in the front yard (or street side) of the principal building. The pumps and filter equipment may not be closer than 20 feet to a property line and must be adequately housed and muffled.

5. Fencing requirements:

- (a) Inground pools shall be completely fenced, before filling, by a permanent, sturdy fence, not less than 4 feet or more than 6 feet in height. Access to any such pool shall be through a gate or gates in the fence, equipped with a self-closing, self-latching device placed at a minimum height of 3 feet above the ground.
- (b) Above ground pools having a height of less than 3 ½ feet (42 inches) above ground at any portion of the poolside wall are required to be fenced the same as inground pools. When fencing is required, it shall be installed to extend a minimum of 4 feet beyond any area less than 42 inches high.
- (c) When the height of a poolside wall is such that a fence will not be required (42 inches or higher), all ladders, steps or other means of access to an above ground pool shall be removed and/or designed to prevent access when the pool is unattended.

6. General pool regulations:

- (a) **Lighting.** Lights shall be erected so as to eliminate direct rays and minimize reflected rays of light onto adjoining properties and roadways. Lighting installation shall be done in accordance with the State of Wisconsin Electrical Code. Also, contact the Planning Department for any other above ground lighting.
- (b) **Safety devices.** Every swimming pool, which has a capacity for water exceeding four (4) feet in depth at any point, shall be equipped with at least one life preserver and/or other safety devices.
- (c) **Electrical.** Separation from overhead and underground electrical wiring shall be in accordance with the State of Wisconsin Electrical Code and/or local code. Required electrical wiring supplying all pools shall be installed in accordance with Article 680 of the National Electrical Code by an electrical contractor licensed by the City of Muskego. The following parts of swimming pools shall not be placed under existing service-drop conductors or any other overhead wiring; nor shall such wiring be installed above the following:
 - 1. Swimming pool and the area extending 10 feet horizontally from the inside of the walls of the pool.
 - 2. Diving structure.
 - 3. Observation stands, towers, or platforms.
Note: The National Electrical Code requires the use of ground Fault Interrupter's with outlets.

6A. Storable Swimming or Wading Pool. Those that are constructed on or above the ground and are capable of holding water to a maximum depth of 1.0 m (42 in), or a pool with nonmetallic, molded polymeric walls or inflatable fabric walls regardless of dimension.

6B. 680.8 Overhead Conductor Clearances. Overhead conductors shall meet the clearance requirements in this section. Where a minimum clearance from the water level is given, the measurement shall be taken from the maximum water level of the specified body of water.

- a. **Power.** With respect to service drop conductors and open overhead wiring, swimming pool and similar installations shall comply with the minimum clearances given in Table 680.8 and illustrated in Figure 680.8.

- b. **Communications Systems.** Communication, radio, and television coaxial cables within the scope of Articles 800 through 820 shall be permitted at a height of not less than 3.0 m (10 ft) above swimming and wading pools, diving structures, and observation stands, towers, or platforms.
- c. **Network-Powered Broadband Communications Systems.** The minimum clearances for overhead network-powered broadband communications systems conductors from pools or fountains shall comply with the provisions in Table 680.8 for conductors operating at 0 to 750 volts in ground.

Table 680.8 Overhead Conductor Clearances

Clearance Parameters	Insulated Cables, 0-750 Volts to Ground, Supported on and Cabled Together with an Effectively Grounded Bare Messenger or Effectively Grounded Neutral conductor		All Other conductors Voltage to Ground			
			0 – 15 kV		Over 15 – 50 kV	
	m	ft	m	ft	m	ft
A. Clearance in any direction To the water level, edge Of water surface, base of Diving platform, or Permanently anchored raft	6.9	22.5	7.5	25	8.0	27
B. Clearance in any direction To the observation stand, Tower, or diving platform	4.4	14.5	5.2	17	5.5	18
C. Horizontal limit of Clearance measured from Inside wall of the pool	This limit shall extend to the outer edge of the structures listed in A and B of this table but not to less than 3m (10')					

6C. Underground Wiring Location. Under ground wiring shall not be permitted under the pool or within the area extending 1.5 m (5 ft) horizontally from the inside wall of the pool unless this wiring is necessary to supply pool equipment permitted by this article. Where space limitations prevent wiring from being routed a distance 1.5 m (5 ft) or more from the pool, such wiring shall be permitted where installed in rigid metal conduit, intermediate metal conduit, or a nonmetallic raceway system. All metal conduit shall be corrosion resistant and suitable for the location. The minimum burial depth shall be as given in Table 680.10.

Table 680.10 Minimum Burial Depths

Wiring Method	Minimum Burial	
	mm	in
Rigid metal conduit	150	6
Intermediate metal conduit	150	6
Nonmetallic raceways listed for direct burial without Concrete encasement	450	18
Other approved raceways*	450	18

*Raceways approved for burial only where concrete encased shall require a concrete envelope not less than 50 mm (2 in) thick.

6D. Storable Pools

- a. **680.30 General.** Electric installations at storable pools shall comply with the provisions of this article.
 - b. **680.31 Pumps.** A cord-connected pool filter pump shall incorporate an approved system of double insulation or its equivalent and shall be provided with means for grounding only the internal and nonaccessible non-current-carrying metal parts of the appliance. The means for grounding shall be an equipment grounding conductor run with the power-supply conductors in the flexible cord that is properly terminated in a grounding-type attachment plug having a fixed grounding contact member.
 - c. **680.32 Ground-Fault Circuit Interrupters Required.** All electrical equipment, including power supply cords, used with storable pools shall be protected by ground-fault circuit interrupters. All 125-volt receptacles located within 6 m (20 ft) of the inside walls of a storable pool shall be protected by a ground-fault circuit interrupter. In determining these dimensions, the distance to be measured shall be the shortest path the supply cord of an appliance connected to the receptacle would follow without piercing a floor, wall, ceiling, doorway with hinged or sliding door, window opening, or other effective permanent barrier.
- 7. Nuisance.** All pools designed to keep water throughout the summer shall be maintained in such a way as to not create a nuisance, hazard, eyesore, or otherwise result in a substantial adverse effect on neighboring properties, or to be in any way detrimental to public health, safety, or welfare. Drainage or draining of any pool cannot be discharged onto abutting property, but must be absorbed into the streets or city gutters which would then empty into the city storm system.

8. Equipment. Equipment of circulating pumps and filters must be located as not to create a nuisance or a noise problem, if necessary, shield or build a protective barrier.

9. Inspections Required. Inspections are required, the type and timing of which will vary depending upon the particular project in question. When applying for your permit, inquire as to inspection information.

