



Clearances for Swimming Pools

Electrical safety around swimming pools, hot tubs, and water features is critical, as the combination of water and electricity can create dangerous and unintended paths of electric current. Installations of in-ground and above ground swimming pools typically require a permit from the city. The city permitting department, pool and spa contractors, and property owners must be informed and work together to ensure all laws, regulations and local requirements are met.

The clearance requirements specified in the Ontario Electrical Safety Code (OESC) Section 68, Pools, tubs, and spas are harmonized with Canadian Standards Association (CSA) Standard C22.3 No. 1 Overhead systems and CSA Standard C22.3 No. 7 Underground systems. Niagara Peninsula Energy Inc. (NPEI) references these CSA Standards as part of their electrical safety distribution regulation.

Overhead

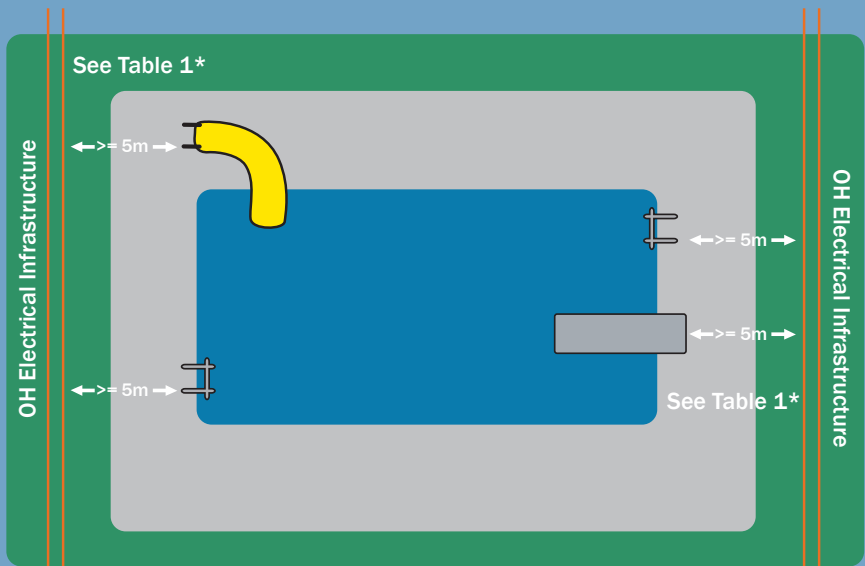
Swimming pools, hot tubs, and water features shall not be located under or adjacent to overhead electrical infrastructure, or within 5 m (16 ft) horizontal distance of the pool area. It is important to factor in not only the pool, but any pool accessories (see Figures 1 & 2 and Table 1) and includes:

- Un-fixed equipment such as hand-held vacuums and pool skimmers or removable ladders
- Fixed equipment such as slides, diving boards, swings, lights, or platforms
- Structures such as sheds, decks, or fences.

Underground

Electrical infrastructure and other utilities that are underground pose a risk of tingling or shock to bathers. NPEI should be contacted to ensure the required clearances are met based on the type of buried infrastructure, see Figure 2 and Table 2.

Figure 1: Pool Top View



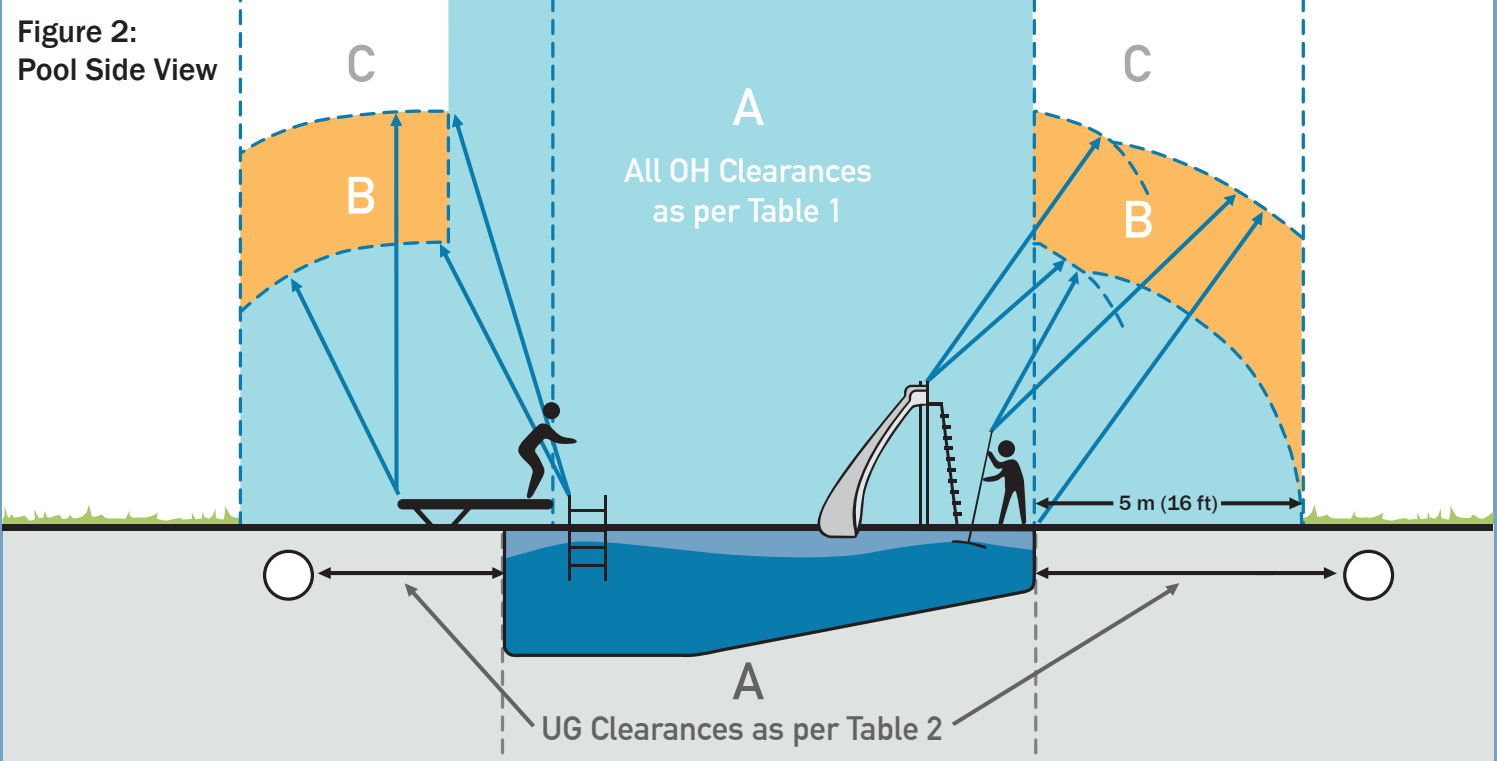
* From closest point from the electrical equipment to the edge of the pool and pool accessories or unfixed equipment, e.g. diving board, hand rail, slide



Table 1: OVERHEAD CLEARANCES	
Electrical Infrastructure Voltage Level	Minimum Radial Clearances from Inside Walls of Pool and the Outer Edge of Pool Accessories to Energized Conductor or Equipment
A	NOT PERMITTED
B 0 - 750V	5 m (16 ft)
C 750V - 46kV	7.5 m (25 ft)

Table 2: UNDERGROUND CLEARANCES	
Electrical Infrastructure Voltage Level	Minimum Clearances from Inside Walls of Pool
A	NOT PERMITTED
0 - 750V	1.5 m (5 ft)
750V - 15kV	3 m (10 ft)
15kV - 28kV	6 m (20 ft)

Figure 2: Pool Side View



Contact Us:
 Niagara Peninsula Energy Inc.
 Phone: 1-877-270-3938
 Email: info@npei.ca

