

## Electrical System Safety at Public Swimming Pools

As you may have heard from statewide news reports, a lifeguard was killed in a tragic accident over the 2016 Labor Day weekend at a public swimming pool in Raleigh. The preliminary autopsy indicated that the lifeguard was electrically shocked and then drowned in the pool. The North Carolina Department of Labor, OSHA and other code and law enforcement agencies investigated how this accident occurred.

The inspection report points to a severed underground grounding conductor. The grounding conductor, which was located a significant distance from the pool, was buried several feet underground. The conductor appeared to be damaged by time and corrosion. If you are interested in reviewing the full report, it is available at this link:

<https://mgtvwn.cn.files.wordpress.com/2016/09/heritage-point-community-pool.pdf>

**Regular inspections, by a licensed electrician, can help reduce the risk of electrocutions at pools due to faulty or deteriorated electrical system components. It is recommended that every pool facility evaluate the safety of its electrical systems on a regular basis.** Most electrical systems are comprehensively inspected only once during the course of initial construction. In all likelihood, the electrical system at your pool was last inspected in its entirety when your pool was built. Even if you have had recent electrical work done and permits were pulled and inspectors were onsite, it is very unlikely that your pool's electrical system, as a whole, was inspected. Typically, only the work being completed at the time is inspected. If your pool has added electrical components that were not installed by a licensed electrician or has not been inspected to determine if it is within code, you may be placing your swimmers and your employees at considerable risk. **It is a good idea to have the entire electrical system inspected at regularly defined intervals by a licensed electrician.**

**Here are items that pool facilities may want their electrician to be aware of:**

### **SHIELD YOUR ELECTRICAL SYSTEMS WITH GROUND FAULT CIRCUIT INTERRUPTERS**

The electrical codes did not begin to require that all electrical inputs at pools be protected by GFCI equipment until 2014. As a result of the recent tragedy, all facilities should consider upgrading their electrical equipment panels to current standards, in particular installing GFCI (Ground Fault Circuit Interrupters) on all power sources.

### **MAKE SURE THAT ALL ELECTRICAL COMPONENTS IN THE PUMP ROOM ARE PROPERLY GROUNDED**

Pool pumps and other electrical devices in the pump room should be properly grounded at all times.