



Swimming Pool Electrical Safety

By **law**, electrical work is required to be completed by a licensed electrician and be inspected by the Building Permits and Inspections Department.

Electrical work includes, but is not limited to:

- Replacing pump
- Replacing pump motor
- Disconnecting and reconnecting wires to work on pump and/or motor

As part of the routine process for the operation permit and inspection visits for your public swimming pool, Environmental Health Specialists (EHS) are required to enter the equipment room and visually inspect the pump and motor. In addition to the assessment of equipment and the equipment room for routine permitting purposes, the EHS will conduct a visual inspection of the pool pump and motor in regards to the following items:

- Replacement pump and/or pump motor compared to last year
- Copper bonding wire intact, attached, and undamaged
- Electrical power supply wire for the motor not wrapped in electrical tape or connected with wire nuts

If the EHS sees any issues with the bonding wire, or observes a new or different pump than what was observed last year without an electrical inspection, they will not be able to complete the inspection or issue the operation permit.

Only after an electrical inspection from the Building Permits and Inspections Department in your jurisdiction has taken place, will the EHS will be able to return for the operation permit and/or inspection visit.

Regular inspections of your pool's electrical system, completed by a licensed electrician, can help reduce the risk of electrocutions that are caused by faulty or deteriorated electrical system components. It is recommended that the operator have their swimming pool(s) evaluated for the safety of its electrical system 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 the pool was built. Even if recent electrical work has been completed with the proper permits and inspection, it is very unlikely that the pool's electrical system, as a whole, was inspected. Typically, only the work being completed at the time, is inspected. If the pool has had electrical components added and/or repaired, but not by a licensed electrician and those additions/repairs have not been inspected to determine if they are within code requirements, you may be placing your swimmers and your employees at considerable risk.

Safety Recommendations to Consider:

- Shield your electrical system(s) with Ground Fault Circuit Interrupters
 - The electrical codes did not begin to require that all electrical inputs at pools be protected by Ground Fault Circuit Interrupters (GFCI) equipment until 2014.
 - Facilities should consider upgrading their electrical equipment panels to current standards, in particular, installing GFCI on all power sources.
- Make sure all electrical components in the equipment room are properly grounded
 - Pool pumps and other electrical devices in the equipment room should be properly grounded at all times.