

## **ESDPA Position Statement on “Green Light Devices” (June 6, 2016)**

First a little background. When an electric fault occurs in wiring or equipment at a dock, the water around the dock can become electrified. It could be a small amount of electricity that causes a tingling sensation, or enough to cause paralysis resulting in drowning, or even immediate cardiac arrest. One never knows how or when these faults will appear. The fault condition can produce mild effects at one location and devastating effects at another. Intentionally entering the water in the vicinity of the dock equipped with electrical wiring and equipment is not unlike playing Russian Roulette. If in the water when the fault condition exists or occurs, the result can be fatal.

So what are "green light devices?" They are products intended to alert one to the presence of electricity in the water. They detect and measure voltages that appear where they're not supposed to (like in the water near a dock). They are considered "green light devices" when used to indicate by some visual means (such as a green indicator) that it's safe to enter or be in the water; and by some form of visual and audible indication when it is not.

These alarm systems create a false sense of safety when used as a "swimming green light" and are of serious concern to the ESDPA. These alarm devices are reactive in nature; not predictive. They don't warn of impending danger; they indicate only that the danger exists. When that inviting green light is on, areas adjacent to docks could be populated with numerous swimmers. And then, out of the blue, the fault condition strikes. Depending on its location and nature, many people could be suddenly, and without notice, seriously affected. Some might feel just a tingle and have the ability and presence of mind to swim away. Others will panic and swim toward the supposed "safe haven" of the dock itself (the source of the electricity) and become ESD victims. Those already too close may drown or be electrocuted before any response is possible. So, while the green light device could save lives, it is also possible that others could experience a serious injury or life-ending disaster.

Codes and standards are designed to provide an acceptable margin of safety for anyone who might accidentally find themselves in the water around an electrically-equipped dock. Codes and standards are not intended to be a "green light" for swimming or entering the water.

Ground fault circuit interrupters (GFCIs), such as those found in bathrooms and kitchens, are designed to turn off the power when electricity "escapes" from the circuit into places where it can injure or kill. GFCIs are generally required for wet locations (including dock electrical systems) by codes and

standards. They are somewhat fragile electronic devices subject to the same environmental harshness as any other part of a waterfront electrical system. GFCIs can and do fail, too often without switching off the power. This is why you should NEVER purposefully put yourself, or any other family member, friend, guest, pet, etc., in a position where they rely on one of these devices to ensure their safety.

Swimming with electricity is dangerous! Would you grab a hair dryer and jump in the bath tub? Even if the device was protected by its own GFCI? That's exactly what you are doing when you jump in the water around a dock using electrical power for any purpose (boats, boat lifts, lighting, appliances, etc.). Is it worth the risk for a purely recreational activity?

Our research has led us to the conclusion that not one single life would have been lost had people not been in the water near the electrical fault. In fact, most all of the accidents occurred in close proximity to the source of the electricity. A distance of 150 feet from any and all electrical wiring and equipment provides reasonable assurance of very low risk of harm in a worst case ESD scenario. Accordingly, the ESDPA strongly recommends no swimming or entry into the water whatsoever within 150 feet of any electrical source on the water, in the water, or at the water's edge.

The use of electricity around recreational waters has grown exponentially over the past few decades. We must change the culture of swimming and recreating in our freshwater lakes, rivers and basins. Electrical safety has to be made a major concern.

Monitoring devices used as a "green light" to indicate it is safe to swim around electrified docks will put a lot of people at great risk. Staying out of these potentially dangerous waters for recreation is the only way to eliminate the risk. If used solely to alert an owner that there are electrical safety problems on the dock, then the ESDPA fully supports their use. But NEVER as a "green light" for swimming or other in-water activity.

Please contact the ESDPA at [www.electrictyshockdrowning.org](http://www.electrictyshockdrowning.org) for more information.