



## Electric Shock Drowning California State Parks, Division of Boating and Waterways

[www.BoatCalifornia.com](http://www.BoatCalifornia.com)

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Electrical shock drownings can occur when marina electrical systems leak electrical current into the water. Boats can also serve as the source of an electrical leakage. This leakage can cause a shock that can injure, disable, or kill a person in the water in and around marinas. Please follow these guidelines to avoid severe consequences of electrical shock drowning:

### **Swimming Safety**

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Never allow swimming near the boat, marina, or launching ramp. Residual current could flow into the water from the boat, or the marina's wiring, potentially putting anyone in the water at risk of electrical shock drowning (ESD).

### **Put it to the Test**

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Be sure your boat is properly maintained and have it inspected annually. Ground fault circuit interrupters (GFCIs) and equipment leakage circuit interrupters (ELCIs) should be installed and tested monthly to ensure functionality. Conduct leakage testing to determine if electrical current is escaping the vessel.

### **Use the Right Tool**

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Never use household cords near water. Use only portable GFCIs or shore power cords (including "Y" adapters) that are "UL-Marine Listed" when using electricity near water.

### **Know Your Surroundings**

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Know where your main breaker(s) are located on both the boat and the shore power source so that you can respond quickly in case of an emergency. Be aware of any potential electrical hazards by checking for nearby power lines before boating, fishing, or swimming.

### **Learn the Code**

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On a regular basis, have your boat's electrical system inspected and upgraded by a certified marine electrician to be sure it meets the required codes for your area, which may include [National Electrical Code®](#) (NEC®), [NFPA](#), and [American Boat & Yacht Council](#) (ABYC) safety codes and standards.

### **Sources**

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<http://www.boatus.com/seaworthy/ESD.asp>

<http://www.electricshockdrowning.org/esd-resources.html>

<https://community.nfpa.org/community/safety-source/blog/2016/09/02/what-every-boater-should-know-about-marina-safety>

<http://www.electricshockdrowning.org/>

<http://www.nfpa.org/news-and-research/news-and-media/press-room/news-releases/2016/nfpa-and-esfi-share-boating-and-marina-electrical-safety-resources>