



**ROYAL CANADIAN MARINE  
SEARCH & RESCUE**  
*Saving Lives on the Water*

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Safety and Training Board – Operations/Safety Bulletin  
Fitness Test in/near Marinas

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**RE: Electrical Shock Drowning (ESD)**

Station Leaders,

Electric shock drowning is **when electric currents leak into surrounding bodies of water**, causing the water to become energized. People unknowingly jump into the water only to be electrocuted so severely, they lose consciousness and drown. The possibility of Electrical Shock Drowning (ESD), while remote, was discussed by the Safety and Training Committee, especially regarding in water fitness tests and exercises which occur in a marina environment.

The following offers guidance and considerations have been developed to mitigate ESD risks that may exist in your communities:

- Ensure docks/piers and vessels equipped with alternating current systems are in good repair and have been maintained by qualified individuals.
- Where possible, in water exercises should be carried out at locations that are away from power sources and cabling. In water exercises such as the fitness test, may be best accomplished in a controlled environment such as a pool.
- If possible, consider turning off the power at docks for the duration of in water training sessions, including implementing and utilizing a lock out procedure

A reminder to all personnel operating in freshwater environments, the human body can be a better conductor in fresh water than the water itself. This amplifies the risk of electrical shock drowning in fresh water.

RCMSAR HQ assesses that the risk of ESD is low, but stations should be aware of the potential and take steps to mitigate the risk. If in doubt, find another location. Annual fitness testing remains a requirement of all active crew members.

Sincerely,

Amber Sheasgreen  
Operations Manager/ STC Chairperson  
RCMSAR