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# Minnesota Law Requires Carbon Monoxide Detectors on Boats

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A new state law will require thousands of Minnesota boaters to install carbon monoxide detectors in their watercrafts.

The Star Tribune reports that the legislation, **called Sophia's Law**, is named after 7-year-old Sophia Baechler, who **died last October of carbon monoxide poisoning** when the gas leaked from a hole in a boat's exhaust pipe on Lake Minnetonka.

The bill passed in April after the Edina girl's family came up with the idea, lobbied for it and testified about her death.

The law mandates that any motorboat with sleeping area, galleys and other "enclosed accommodation areas" must have a hard-wired, marine-certified carbon monoxide detector by May 1, 2017.

The Minnesota Department of Natural Resources estimates that about 8,000 boats will need carbon monoxide detectors under the new law.

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<http://kstp.com/politics/sophie-baechler-sophies-law-carbon-monoxide-watercraft/4172038/> **(End of Article)**

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## **Electrical hazards from operating a portable generator include shock and electrocution.**

Keep the generator dry and do not use in rain or wet conditions. To protect from moisture, operate the generator on a dry surface under an open, canopy-like structure. Dry your hands if wet before touching the generator.

NEVER try to power the house wiring by plugging the generator into a wall outlet, a practice known as "backfeeding." This is an extremely dangerous practice that presents an electrocution risk to utility workers and neighbors served by the same utility transformer. It also bypasses some of the built-in household circuit protection devices. Plug appliances directly into the generator, or use a heavy duty, outdoor-rated extension cord that is rated (in watts or amps) at least equal to the sum of the connected appliance loads. Check that the entire cord is free of cuts or tears, and that the plug has all three prongs, especially a grounding pin.

If you must connect the generator to the house wiring to power appliances, have a qualified electrician install the appropriate equipment in accordance with local electrical codes. Or, check with your utility company to see if it can install an appropriate power transfer switch.

### **Arizona Boating and Water Sports**

"You do not have to be inside the boat to be at risk," Game and Fish Boating Law Administrator Kevin Bergersen said. "Boaters have died from exposure on the swim platforms of their boats and in other areas where carbon monoxide exhaust may accumulate or be emitted. Be aware of the early symptoms like irritated eyes, headache, nausea, weakness and dizziness."

### **CPSC**

#### **Electrical Hazards**

Generators pose a risk of shock and electrocution, especially if they are operated in wet conditions. If you must use a generator when it is wet outside, protect the generator from moisture to help avoid the shock/electrocution hazard, but do so without operating the generator indoors or near openings to any building that can be occupied in order to help avoid the CO hazard. Operate the generator under an open, canopy-like structure on a dry surface where water cannot reach it or puddle or drain under it. Dry your hands, if wet, before touching the generator.

### **CARBON MONOXIDE: DEADLY SHIP MATE**

Carbon Monoxide on boat is deadly! The state of Minnesota recently enacted legislation called Sophie's Law, which requires all new boats sold in Minnesota, that have enclosed accommodations, to have a Carbon Monoxide Detector and warning labels in three places. This won't go into effect until 2017, but is already resonating with other states and with boating organizations across the country. So what can the boat builder and boat owner do, other than just installing a marine carbon monoxide detector on their boat?

There are many things you can do to prevent CO poisoning. The first is to make sure boat engines are tuned and running at their best. Make sure engine room ventilation system not only meets the requirements for exhausting fumes, but supply enough air for the engines to get all the air they need to run properly. Do the same for auxiliary generators.

This is a common mistake made by boat builders and boat owners. They believe wrongly that if their boat complies with USCG ventilation requirements, that it is getting enough air. Ventilation rules are designed only to do one thing, exhaust gasoline fumes from the compartment and keep the fuel air mixture below the explosive limit. They do not address the amount of air an engine may need to run efficiently. A quick and easy check can show if enough air is getting to the engine. Start it up with the engine compartment closed. When the engine is running at its normal speed and temperature, open the hatch. If the engine speeds up it is not getting enough air! If that is the case it is probably producing CO.

Next is to make sure the bulkhead between the engine room and the living spaces on your boat is air tight. Look for small openings around pipes, wires and conduit. Limber holes used to drain incidental water out of compartment can also be a path for exhaust fumes.

Check your exhaust system for the engines and generators and make sure there are no leaks. Replace any worn exhaust hose, pipes, mufflers, etc.

When docked or at anchor don't run the generator with the cabin all sealed up and tight. Make sure you have adequate ventilation that flows through the cabin, especially if you are running an air conditioner. Air conditioner intakes have been known to be the means that the carbon monoxide from the exhaust got into the cabin.

Check to see where holes in the side of your boat are located in relation to the exhaust. Intake cowls for engines, drains for sinks and showers, fans bringing air into the cabin, can all be sources of CO if the exhaust is upwind, and/or too close to openings. ABYC Standards say at least 15 inches, but even that may not be far enough. If you have negative pressures in the cabin, that is the cabin pressure is less than that outside, then CO can be sucked in through these opens. You always need to have positive cabin pressure or the same pressure as the outside air to keep the CO out.

Studies have shown that simply opening a hatch, or window when you are moving can provide enough air to ventilate living spaces. But make sure it is a door window or hatch that is on the upwind side. If a boat is traveling downwind and you open a door, hatch or window on the aft side of the

cabin, the station wagon effect may result in CO being brought into the cabin. If you are not familiar with the station wagon effect on boats; look here.

There are lots of sites that have information on CO. Here's mine. Scroll down a little and the links will be on the right side. [Carbon Monoxide Links](#)  
More CO links on Portable generators

US Fire Administration

<https://search.usa.gov/search?utf8=%E2%9C%93&affiliate=usfa&query=carbon+monoxide>

CPSCCO Hazards

<http://www.cpsc.gov/cpscpub/pubs/portgen.html>

Carbon Monoxide Poisoning . Com <http://www.carbon-monoxide-poisoning.com/index.html>

Michigan.gov [http://www.michigan.gov/documents/michiganprepares/CO-Generators\\_190461\\_7.pdf](http://www.michigan.gov/documents/michiganprepares/CO-Generators_190461_7.pdf)

T-Rex Generators

[http://www.trexgenerators.com/includes/pr/Press\\_Release\\_4-20-07.htm](http://www.trexgenerators.com/includes/pr/Press_Release_4-20-07.htm)

USCG Boating Safety Circular 86 on Carbon Monoxide

<http://uscgboating.org/recreational-boaters/carbon-monoxide.php>

Center For Disease Control (CDC)

<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5428a2.htm>

<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5315a3.htm>

<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm4949a1.htm>

<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5137a3.htm>

<http://www.cdc.gov/niosh/topics/coboating/>

<http://www.cdc.gov/niosh/topics/coboating/pdfs/ntlcaselistings.pdf>

Wisconsin DHS

<http://www.dhs.wisconsin.gov/eh/Air/fs/generators.htm>

Oregon Marine Board on CO

<https://www.oregon.gov/OSMB/info/Documents/News%20Releases/MediaKits/16AllBoatingSafetyTips.pdf>

BoaterExam.com

<http://www.boaterexam.com/canada/education/carbonMonoxide-en.aspx>

findgenerators.net

[http://www.findgenerators.net/Portable\\_Generator\\_Safety.html](http://www.findgenerators.net/Portable_Generator_Safety.html)

Kansas Dept Of Health

[http://www.kdheks.gov/news/web\\_archives/2014/11052014.htm](http://www.kdheks.gov/news/web_archives/2014/11052014.htm)

Boating Side Kicks <http://www.boatingsidekicks.com/cobro/cobrochure.pdf>

DetectCarbonMonoxide.com <http://detectcarbonmonoxide.com/>

Arizona Boating And Watersports

<http://www.arizonaboatingandwatersports.com/neardeath.php>

UL 2201 <http://ulstandards.ul.com/standard/?id=2201>

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