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Fiberglass – An Overlooked Aquatic Pollutant

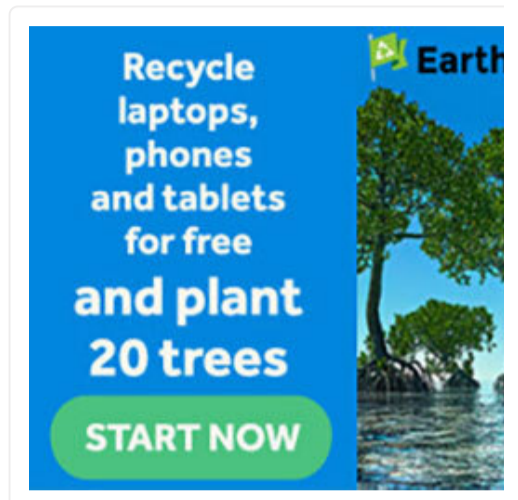
By [Gemma Alexander](#)

SEP 12, 2023

[boating](#), [fiberglass pollution](#), [recycling](#), [water pollution](#)

From [garbage gyres](#) that choke aquatic life to [microplastics](#) that accumulate in the human body, plastic pollution in the ocean is a [huge problem](#). People are starting to pay attention to ocean plastic. Another type of ocean pollution still doesn't get much notice – fiberglass. On the coasts as well as along lakes and rivers, abandoned and derelict vessels (ADV) break down in the water and wreak aquatic havoc.

Technically, fiberglass pollution is just another type of plastic pollution. [Fiberglass](#), sometimes called glass fiber or fiber-reinforced plastic, is a composite material made from plastic resin (usually polyester, vinyl ester or epoxy) and glass fibers. It is extremely strong, lightweight, flexible, water resistant, and non-biodegradable. These qualities make it extremely useful for construction and aquatic applications.



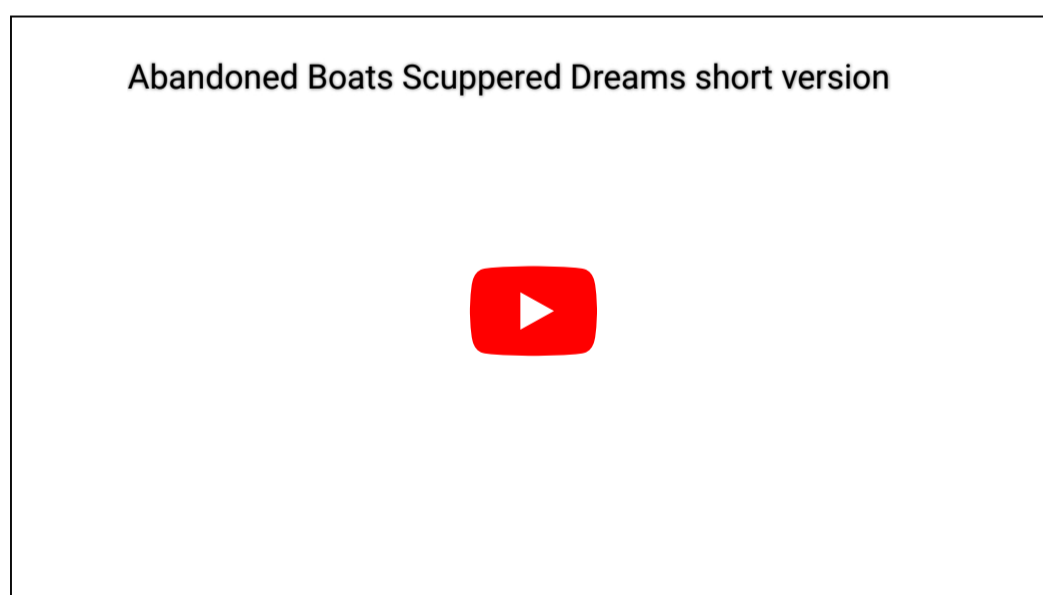
Fiberglass' durability makes it very hard to dispose of when products are no longer functional or wanted. Manufacturing fiberglass is also a very energy intensive process that uses fossil fuels and can release toxic [air pollutants](#) such as styrene, [VOCs](#) and smog.

Probably the best-known use of fiberglass is [insulation](#). New fiberglass insulation no longer contains [asbestos](#), and it is not considered a cancer risk. However, like asbestos, damaged fiberglass is friable, and the tiny particles are contact irritants when touched, inhaled, or ingested. When the fiberglass makes up the hull of a boat, it becomes a water pollutant as well.

Fiberglass Ocean Pollution

In 2018, a centuries-old oyster fishery in England closed due to massive die-off. Researchers traced the die-off to a new kind of microplastic pollution. Each kilogram of oyster meat examined contained up to [7,000 microscopic shards](#) of fiberglass. Fiberglass "sheds" into the water when hulls scrape against rocks or the sandy bottom of lake shores and as paint flakes off. A [study](#) from the University of Oldenburg in Germany found that microplastics shed from boat hull coatings made up two-thirds of the pollution in the North Sea.

Many [boats are dumped](#) when the cost of disposal exceeds the resale value. [Abandoned boats](#) are found in every coastal state and in lakes and rivers. Although fiberglass is [technically recyclable](#), there is no market for recycled fiberglass. In most cases, disposal in a landfill is the only option. But recycling capabilities vary by location, so you might be able to [recycle your fiberglass boat](#) – or at least parts of it. Much like [junk cars](#), boats require some processing before responsible disposal. Drain fluids for recycling or disposal. Electronics and batteries should be removed and recycled, as should any valuable metals or other recyclable materials before the remaining structure is landfilled.



Although boat hulls shed fiberglass throughout their lifespan, what you do with the boat at the end of its useful life has the greatest impact on pollution. Whether abandoned on the shore, or purposely sunk, the boat will eventually break down. Fuel, heavy metals like [lead](#), and other pollutants enter the water alongside the fiberglass particles from the decaying hull. Some of these materials [enter the food chain](#). Sunken boats near the surface can even become a [watersport](#) and [navigation hazard](#) to other boaters. Pieces of decaying boats can become tangled in motors.

Foregoing Fiberglass

Avoiding fiberglass is the easiest way to prevent future water pollution. There are [alternatives](#) to fiberglass hulls, depending on the size and use of your boat.

Old-fashioned [wooden boats](#) are beautiful, but they can be expensive and require more maintenance than other materials. Many of the best types of wood for boat construction are [hard to source sustainably](#).

Steel is inexpensive and easily recyclable, but heavy. Aluminum is lightweight and easily recyclable, but it's expensive and more easily damaged than steel.

Polyethylene – essentially the same material used in [beverage containers](#) – is cheap and lightweight but can become brittle over time and is incompatible with adhesives and vinyl cement. Bio-based plastics and [basalt fiber](#) are [emerging options](#) for more sustainable hull materials.

Better Boating

The [lifespan of a fiberglass boat](#) can range from just 10 years to as long as 50 years, depending primarily on [maintenance](#). Water can penetrate fiberglass, freezing in winter and eventually de-laminating the multi-layer cores. [Long haul out periods](#) can reduce the likelihood of winter damage.

Impeccable maintenance is one of the most important things you can do to reduce the environmental impact of your boat. Scraping, grinding, and replacement of damaged sections of hull generate fiberglass dust. When possible, do repairs away from water – ideally even indoors where dust can be vacuumed and safely disposed.

Policy Changes

Activists have [suggested](#) that better ownership records, clear licensing and insurance policies with end-of-life requirements for pleasure vessels would help reduce the number of abandoned boats.

California charges fines up to \$3000 for illegally dumping boats. The state also established a [vessel turn-in](#) program to provide free boat disposal and offer [grants to public agencies](#) to help clean up abandoned vessels. In [Maryland](#) and [Washington](#), for example, boat registration is compulsory, which makes it easier to identify owners of abandoned boats. Maryland also imposes a sales tax on new boats funds a statewide abandoned boat clean-up program.

Even if you are not a boat owner yourself, you can contribute to cleaner waterways by contacting your [state](#) and local representatives to support similar policies.



[Reading time: 4 mins](#)

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By [Gemma Alexander](#)

Gemma Alexander has an M.S. in urban horticulture and a backyard filled with native plants. After working in a genetics laboratory and at a landfill, she now writes about the environment, the arts and family. See more of her writing [here](#).

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