



Discharge from a Chinese fertilizer factory winds its way toward the Yellow River. Like many of the world's rivers, pollution remains an ongoing problem.

PHOTOGRAPH BY GREG GIRARD, NAT GEO IMAGE COLLECTION

REFERENCE

Water pollution is a rising global crisis. Here's what you need to know.

The world's freshwater sources receive contaminants from a wide range of sectors, threatening human and wildlife health.

BY CHRISTINA NUNEZ



PUBLISHED MARCH 16, 2010 • 6 MIN READ

From big pieces of garbage to invisible chemicals, a wide range of pollutants ends up in our planet's lakes, rivers, streams, groundwater, and eventually the oceans. Water pollution—along with drought, inefficiency, and an exploding population—has contributed to a [freshwater crisis](#), threatening the sources we rely on for drinking water and other critical needs.

Research has revealed that [one pollutant in particular](#) is more common in our tap water than anyone had previously thought: PFAS, short for poly and perfluoroalkyl substances. PFAS is used to make everyday items

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percent of the world is covered by water, only 2.5 percent of it is fresh. And just one percent of freshwater is easily accessible, with much of it trapped in remote glaciers and snowfields.

Water pollution causes

Water pollution can come from a variety of sources. Pollution can enter water directly, through both legal and illegal discharges from factories, for example, or imperfect water treatment plants. Spills and leaks from oil pipelines or [hydraulic fracturing \(fracking\) operations](#) can degrade water supplies. Wind, storms, and littering—especially of [plastic waste](#)—can also send debris into waterways.

Thanks largely to [decades of regulation](#) and legal action against big polluters, the main cause of U.S. water quality problems is now "[nonpoint source pollution](#)," when pollutants are carried across or through the ground by rain or melted snow. Such runoff can contain fertilizers, pesticides, and herbicides from farms and homes; oil and toxic chemicals from roads and industry; sediment; bacteria from livestock; pet waste; [and other pollutants](#).

Finally, drinking water pollution can happen via the pipes themselves if the water is not properly treated, as happened in the case of lead contamination in [Flint, Michigan](#), and other towns. Another drinking water contaminant, [arsenic](#), can come from naturally occurring deposits but also from industrial waste.

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Freshwater pollution effects

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Beautiful tendrils fill the now-dry Colorado River Delta in northern Mexico. So much water has been taken out of the river upstream that it rarely reaches the sea.



Water and flood these oxygen. Algae rash destinations thanks to their unpleasant looks and odors. High levels of nitrates in water from nutrient pollution can also be particularly harmful to infants, interfering with their ability to deliver oxygen to tissues and potentially causing "blue baby syndrome." The United Nations Food and Agriculture Organization estimates that 38 percent of the European Union's water bodies are under pressure from agricultural pollution.

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Globally, unsanitary water supplies also exact a health toll in the form of disease. At least 2 billion people drink water from sources contaminated by feces, according to the World Health Organization, and that water may transmit dangerous diseases such as cholera and typhoid.

Freshwater pollution solutions



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[plastic pollution](#).

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There have been setbacks, however. Regulation of pollutants is subject to changing political winds, as has been the case in the United States with [the loosening of environmental protections](#) that prevented landowners from polluting the country's waterways.

Anyone can help protect watersheds by disposing of motor oil, paints, and [other toxic products properly](#), keeping them off pavement and out of the drain. [Be careful](#) about what you flush or pour down the sink, as it may find its way into the water. The U.S. Environmental Protection Agency [recommends](#) using phosphate-free detergents and washing your car at a commercial car wash, which is required to properly dispose of wastewater. [Green roofs](#) and [rain gardens](#) can be another way for people in built environments to help restore some of the natural filtering that forests and plants usually provide.

This story was updated on January 24, 2020.

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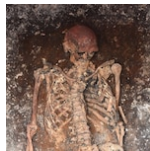
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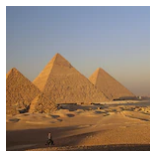
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