Water Pollution Case Study

Water pollution occurs when harmful substances—often chemicals or microorganisms—contaminate a stream, river, lake, ocean, aquifer, or other body of water, degrading water quality and rendering it toxic to humans or the environment.

Water is uniquely vulnerable to pollution. Known as a “universal solvent,” water is able to dissolve more substances than any other liquid on earth. It’s the reason we have Kool-Aid and brilliant blue waterfalls. It’s also why water is so easily polluted. Toxic substances from farms, towns, and factories readily dissolve into and mix with it, causing water pollution.

This widespread problem of water pollution is jeopardizing our health. Unsafe water kills more people each year than war and all other forms of violence combined. Meanwhile, our drinkable water sources are finite: Less than 1 percent of the earth’s freshwater is actually accessible to us. Without action, the challenges will only increase by 2050, when global demand for freshwater is expected to be one-third greater than it is now.

Your task is to find a real-world example of a specific type of water pollution. Find out:

* Where the pollution took place or is taking place.
* Identify the specific threats surrounding the water pollutant
* Explain effects of the pollutant on the ecosystem and local communities
* List strategies the government has implemented to reduce the pollutant. Evaluate the effectiveness of the laws or policies
* Evaluate the government pollution strategies. Identify the strengths and limitations of the strategy. Is it sustainable or unsustainable? What evidence did you find to determine if it was sustainable or unsustainable?

Make sure you cite your sources carefully and be prepared to explain your case studies to the rest of the class.

Floating Debris

Organic Pollution

Inorganic Plant Nutrients (Eutrophication)

Toxic Metals

Synthetic Compounds

Suspended solids

Hot Water

Oil

Radioactive pollution

Pathogens

Light

Noise

Biological Pollutants (invasive species)