

Water pollution, the release of substances into subsurface groundwater or into lakes, streams, rivers, estuaries, and oceans to the point where the substances interfere with beneficial use of the water or with the natural functioning of ecosystems. In addition to the release of substances, such as chemicals or microorganisms, water pollution may also include the release of energy, in the form of radioactivity or heat, into bodies of water.

Sewage And Other Water Pollutants

Water bodies can be polluted by a wide variety of substances, including pathogenic microorganisms, putrescible organic waste, plant nutrients, toxic chemicals, sediments, heat, petroleum (oil), and radioactive substances. Several types of water pollutants are considered below. (For a discussion of the handling of sewage and other forms of waste produced by human activities, *see* waste disposal.)

Sources and effects of water pollution

Water pollution can be caused in a number of ways, one of the most polluting being city sewage and industrial waste discharge. Indirect sources of water pollution include contaminants that enter the water supply from soils or groundwater systems and from the atmosphere via rain.

Soils and groundwaters contain the residue of human agricultural practices and also improperly disposed of industrial wastes.

Types of water pollutants

Pollutants can be of varying kinds: organic, inorganic, radioactive and so on. In fact, the list of possible water contaminants is just too vast to be listed here.

Chemical pollution

The most common type of water pollution, chemicals can infiltrate both underground water sources and those sitting on the Earth's surface. As [an integral component of the agricultural industry](#), it's unsurprising that much of chemical contamination comes from the pesticides and fungicides used in farming, but metals and solvents from industrial sites are also leading contributors.

Groundwater pollution

As mentioned above, agriculture is a key source of water pollution, especially for groundwater. Fertilisers and pesticides applied to crops can seep into the ground and contaminate underwater rivers and waterbeds, thus compromising the quality of wells, boreholes and other places from which groundwater is extracted for human use.

Microbiological pollution

Unlike most others on this list, microbiological pollution is a naturally occurring form of water contamination. Microorganisms such as bacteria, protozoa and viruses can infiltrate water supplies, causing diseases such as bilharzia and cholera. Humans are most susceptible to this kind of pollution in places where adequate water treatment systems are not yet in place.

Nutrient pollution

While they're vital for underwater flora and fauna to flourish, an excess of nutrients can upset the delicate imbalance of water-based ecosystems. Fertilisers contain a high concentration of nutrients which, if they contaminate rivers, lakes and coastal areas, can cause algal blooming that can block out sunlight and inhibit the growth of other organisms.

Oxygen-depletion pollution

Another consequence of algal blooms is their consumption of oxygen supplies. This means that those species which depend upon oxygen to survive are killed off, while anaerobic ones thrive. Some anaerobic microorganisms are capable of producing ammonia, sulphides and other harmful toxins, which can make the water even more dangerous to animals (and humans, too).

Surface water pollution

Referring to all water sources above ground, such as rivers, lakes, seas and oceans, surface water pollution can occur both naturally, accidentally and intentionally. For example, [monitoring has an all-important role in natural flood management](#), which can lead to poor water quality, while accidental oil spills and negligent industries emptying waste into water bodies are also key contributors.

Suspended matter

arded waste, such as fragments of