

Water Pollution

Water pollution occurs when a body of water is adversely affected due to the addition of large amounts of materials to the water. The sources of water pollution are categorized as being a point source or a non-source point of pollution. Point sources of pollution occur when the polluting substance is emitted directly into the waterway. A pipe spewing toxic chemicals directly into a river is an example. A non-point source occurs when there is runoff of pollutants into a waterway, for instance when fertilizer from a field is carried into a stream by surface runoff.

Types of Water Pollution

Toxic Substance -- A toxic substance is a chemical pollutant that is not a naturally occurring substance in aquatic ecosystems. The greatest contributors to toxic pollution are herbicides, pesticides, pharmaceutical and industrial compounds.

Organic Substance -- Organic pollution occurs when an excess of organic matter enters the water. A type of organic pollution can occur when inorganic pollutants such as nitrogen and phosphates accumulate in aquatic ecosystems.

Thermal Pollution -- Thermal pollution can occur when water is used as a coolant near a power or industrial plant and then is returned to the aquatic environment at a higher temperature than it was originally. Thermal pollution can lead to a decrease in the dissolved oxygen level in the water while also increasing the biological demand of aquatic organisms for oxygen.

Specific Sources of Water Pollution

Farming:

- Farms often use large amounts of herbicides and pesticides, both of which are toxic pollutants.
- Farms also frequently use large amounts of chemical fertilizers that are washed into the waterways and damage the water supply and the life within it. Fertilizers can increase the amounts of nitrates and phosphates in the water, which can lead to the process of eutrophication.

Business:

- Waste and sewage generated by industry can get into the water supply, introducing large organic pollutants into the ecosystem.
- Many industrial and power plants use rivers, streams and lakes to dispose of waste heat. The resulting hot water can cause thermal pollution. Thermal pollution can have a

disasterous effect on life in an aquatic ecosystem as temperature increases decrease the amount of oxygen in the water, thereby reducing the number of animals that can survive there.

Homes:

- Sewage generated introduce organic pollutants that can cause eutrophication.
- Fertilizers, herbicides and pesticides used for lawn care can runoff and contaminate the waterway. As with agricultural fertilizers, home fertilizers can lead to the eutrophication of lakes and rivers.
- Improper disposal of hazardous chemicals down the drain introduce toxic materials into to the ecosystem, contaminating the water supplies in a way that can harm aquatic organisms.

River polluted with...

Name of the river

Location of the river (map)

The river is polluted by...

Effects of this pollution

Press – News

Pictures