

Water Pollution

What is water Pollution?

We all use water. We use it to shower and bathe; we use it to wash the fruit we're going to eat; we couldn't live without clean water to drink. Everytime we use water, we contribute to producing sewage which in turn can pollute the environment.

Why is Pollution a problem?

Plants and animals living in streams, rivers and oceans, rely on water to provide them with oxygen, which is essential for life. Pollutants such as sewage, vegetable and animal waste, silt and detergents can all reduce the amount of oxygen available. Pollutants such as fertilisers, chemicals and oil can directly poison animal and plant life.

How is water polluted?

Water pollution happens when sewage is not effectively treated before it is released into the environment or water becomes polluted by people's activities (littering or dumping). This can happen in many ways, some are accidental but others are deliberate.



Water Pollution

Industry

Pollution to our waterways can occur through direct discharge into waterways, contamination of soil and emission of gas. As well as carelessly or accidentally putting waste chemicals and materials into the sewage system, some industries or people deliberately dump wastes into the sewers or directly into the waterways.

Urban Development

- Building and construction can wash soil into our waterways.
- Rainwater that falls on our houses and roads is carried away in a system of pipes that is separate from the sewerage system. These stormwater drains also collect any litter or other material, including animal droppings that lie around our streets. All of this rubbish is generally carried straight into rivers or out to the sea by the stormwater drains.
- Stormwater drains are also commonly responsible for carrying either deliberately or accidentally spilled toxic chemicals, such as pesticides, detergents, fertilisers, oils, petrol and other materials into the sea.
- Sewage treatment plants may also break down. However, they are generally designed with enough back-up systems to prevent any major water pollution problems. Modern treatment plants treat sewage to a stage where it is safe to release back into the environment and there is a growing use of recycled sewage.

Farming and horticulture

Most farmers use a wide range of fertilisers, herbicides, insecticides and other chemicals on their crops and this can run into the waterways. The movement of cattle roaming and grazing around on the farm can also cause soil to be washed into the waterways.

Mining

Sand and gravel mining can disturb the natural flow of the waterways and remove natural vegetation. Mining can also result in extra runoff and sedimentation problems.

People's activities

People's deliberate activities, such as littering and dumping have a negative effect on our waterways.

Recreational activities

- Four wheel driving and trail bikes can disturb vegetation which can cause erosion along the waterways.
- Boating can result in oil spills and discharge and erosion of the riverbanks.
- Caravanning and camping can result in septic tank and sewage disposal into waterways.
- Swimming can stir sediments.

What are the types of water pollution?

There are many forms of water pollution. Here are some of the common ones that you often read about:

• E. coli:

These bacteria (microorganisms) come from animal (mainly human) waste and provide definite evidence of faecal pollution. The level of E. coli in water is used as a guide to the amount of animal or human waste in the water and may indicate the presence of pathogenic or disease-causing bacteria.

• Toxic chemicals:

Many chemicals used in industry are poisonous to wildlife (and humans). Dioxin and heavy metals, such as mercury, are well known examples of the thousands of toxic chemicals produced by industry. Even in very small quantities, toxic chemicals are a very serious cause of water pollution.

• oil:

All kinds of oil ends up in our waterways through accidental spills or illegal dumping. Because oil floats on the surface of water, any oil spill can be disastrous for marine life. The oil film can stop oxygen dissolving into the water. Fish require dissolved oxygen to 'breathe' through their gills. The oil film can also coat the feathers on birds and seal fur, this can allow the feathers or fur to become water logged and the animals drown.

• Plastics:

An average Australian family uses around 2,000 plastic bags in a year. Plastic bags and other plastic items are very useful around the home but can also have disastrous effects on marine life. A great deal of this plastic pollution finds its way into the sea through stormwater drains.

Who's responsible?

Whenever there is a problem with water pollution it is important to know who is the responsible authority:

- Queensland Government - Healthy Waterways is responsible for large stormwater drains and for rivers and creeks. They also undertake a monitoring program to measure water quality in rivers and streams.
- Ipswich City Council is responsible for Ipswich City stormwater drains and for managing septic tanks.
- Ipswich Water is responsible for water supply and wastewater services in the Ipswich supply area.
- Environment Protection Authority is responsible for setting environmental standards and helping companies and individuals achieve these standards. They can do this with incentives or penalties for those who breach environmental laws.