



Living with mangrove odours

Mangroves grow in various wetlands and swamps across our city and are protected under the State Government's *Fisheries Act 1994*.

If you live close to mangroves you may notice a pungent rotten egg-like odour, usually from May to November. An increase in residential development in coastal regions has led to a rise in enquires and complaints regarding the odours associated with mangrove wetlands.

The importance of mangroves in our coastal environment

Mangrove wetlands and swamps are an important part of our environment as they assist in nutrient cycling and the lifecycle of many plants and animals. Mangrove plants can produce up to one kilogram of organic material (leaves, twigs, seeds etc) per square metre per year.

During spring, when mangroves produce seeds, the amount of organic material increases. The majority of this material needs to be broken down so nutrients are available through the food chain. This is an important process for estuarine ecosystem functioning and why mangrove wetlands are important nursery grounds for fish and crustaceans such as prawns and crabs.

Many mangrove wetlands are nationally and internationally recognised as an important roosting and feeding area for migratory bird species. They also help stabilise and maintain the coastline and reduce erosion from rough seas, currents, waves and tides.

How mangrove odours occur

The odours are a result of a complex chemical process that occurs during the breakdown of organic matter. Bacteria facilitate the breakdown or decay of organic material by consuming oxygen from the water, creating a sulfur reaction. This reaction produces hydrogen sulfide gas known as 'rotten egg gas'.

Several factors influence the intensity of the hydrogen sulfide gas including the:

- proximity to mangroves
- time of year (usually May to November when seed production is greatest)
- wind speed (influences the rate of odour dispersion and dilution)
- seasonal factors, such as rainfall and tides (high tides distribute organic matter upstream and closer to houses)
- yield of mangrove seeds (more seeds results in more organic matter breaking down)
- air temperature (cooler temperatures disperse less rotten egg gas).



Are there any health risks associated with mangrove odour exposure?

Queensland Health advises there are no long-term health impacts associated with exposure to hydrogen sulfide odours, as they are at very low levels; well below those known to cause health effects.

In the short-term the smell can cause worry, anxiety and resentment and repeated odour events may culminate in real symptoms such as headaches, fatigue and nausea. Although these are not direct health effects, medical advice states this is a normal reaction from the body when exposed to strong odours and symptoms should subside rapidly when exposure to the odour is minimised.

What should I do if I become sick?

If you suspect you are suffering any symptoms, contact your doctor or call Queensland Health (24 hours-a-day, seven days-a-week) on 13 HEALTH (13 432 584).

For more information

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