

Pathogens in our waterways

LIVING NEAR LAKE MACDONALD

There are many types of naturally occurring micro-organisms within our waterways, which usually pose little risk to human health. However, the input of disease-causing microbes, known as pathogens, into waterways can have serious impacts on water quality and humans.

What are pathogens?

Bacteria, viruses, protozoa and parasites are all types of pathogens, and are usually associated with human and animal faeces.

The smallest amount of human or animal waste (excreta or phlegm) can contain millions of pathogens with the potential to contaminate a drinking water source.

Are pathogens harmful to my health?

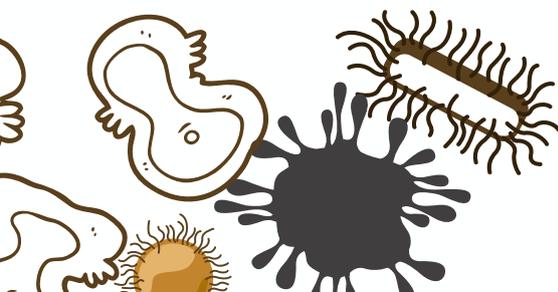
While each of these organisms can lead to different illnesses of varying severity, they can cause some very unpleasant symptoms, including diarrhoea, nausea, abdominal cramps and low-grade fevers.

In extreme cases, some illnesses can cause death. Furthermore, pathogens can impact the health and productivity of your livestock. Contaminated water can affect livestock weight gain, milk production and their susceptibility to infections and disease.

How long do pathogens survive in waterways?

The survival of pathogens is dependent on several factors, including temperature, pH, solar radiation, media (i.e. soil, water, and faeces), nutrient levels, competing micro-organisms and the availability of a carrier.

E.coli, a common type of faecal coliform bacteria, has been observed to take longer to decay in waters of low salinity, lower temperature conditions, and in sediments with a high content of fine particles and organic matter. These conditions are very common for freshwater systems.

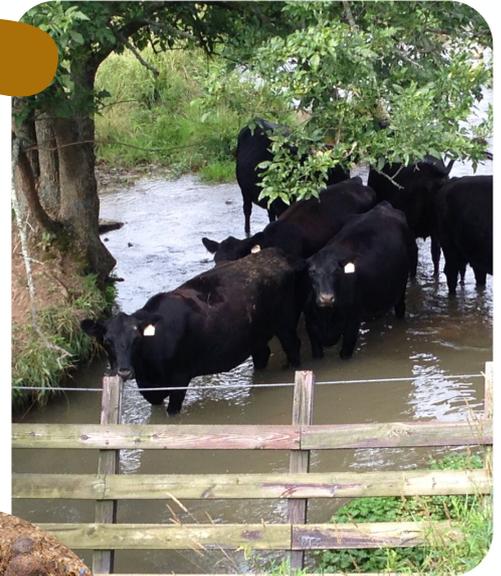


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Sources of pathogens:

- Sewage spills or accidental discharge
- Recreational use of waterways
- Faecal matter from livestock:
 - wash-off with overland flow in pastures
 - direct defecation in waterways
 - incidental discharges from slurry storage facilities and farmyards



There are many ways you can reduce pathogens from entering our waterways:

- upgrade, and maintain home sewage treatment systems
- restrict livestock from directly accessing waterways such as installing fencing, livestock bridges and water troughs
- provide waterways with an adequate buffer from agricultural practices
- implement farm manure management systems such as slashing and harrowing paddocks, composting, bagging and reusing effluent.

PROGRAM PROFILE

Water Supply Catchment Program

Seqwater and Noosa and District Landcare have partnered to better protect the quality of water in the Lake Macdonald catchment. The Water Supply Catchment Protection Program aims to bring landholders and local experts together to share knowledge and find ways to prevent sediment, nutrients and pathogens such as livestock faeces from entering the lake.

To learn more about the program and how you can get involved please contact:

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