

Microbial water quality monitoring

Find out about EPA's role in monitoring for microbial water quality in Victoria's recreational waters.

About microbial water quality

Swimmers who ingest water contaminated by faecal pollution may become ill. E. coli and Enterococci bacteria are one of the many groups of bacteria found in the intestines of humans and warm-blooded animals. They are a useful indicator of faecal contamination from sewage or animal manure. They often increase quickly after heavy rainfall due to runoff and flooding, but then decrease quickly.

Monitoring water quality a shared responsibility

Monitoring microbial water quality in recreational waters is a shared responsibility.

EPA sets standards for microbial water quality, specifying acceptable levels of E. coli and Enterococci for recreational activities. While EPA sets these standards, no single authority is responsible for monitoring or managing all the different sources that can impact microbial water quality. If a waterbody is popular for recreation, the relevant authority of that waterway can assess risks and decide if monitoring is needed.

Relevant authorities could include:

- Local government
- Parks Victoria
- Department of Environment, Energy and Climate Action
- Catchment Management Authorities
- Great Ocean Road Coast and Parks Authority

If a source of faecal pollution is identified, this will determine which stakeholders will be involved and how the issues will be addressed.

For example:

- if the source was from leaking or faulty septic tanks, the responsibility would be with Council.

epa.vic.gov.au

Environment Protection Authority Victoria
GPO Box 4395, Melbourne VIC 3001
1300 372 842

- If it was a sewer leak from a sewage treatment plant, the responsibility would be with the water authority.
- If the source was from a business or industry, it would be with EPA.

EPA's role in recreational water quality

EPA has a role in setting standards, sharing water quality data, giving technical advice, and regulating businesses and industries.

Setting and reviewing standards for recreational water quality

EPA sets and reviews standards for recreational water quality through the Environment Reference Standard (ERS). This includes microbial and broader recreational water quality.

These standards are in line with National Health and Medical Research Council Guidelines for Managing Risks to Recreational Water.

(<https://www.epa.vic.gov.au/about-epa/laws/compliance-and-directions/environment-reference-standard>).

Beach Report in Port Phillip Bay and Yarra Watch in Greater Melbourne

EPA coordinates Beach Report, and Yarra Watch in partnership with Melbourne Water.

These programs focus on microbial water quality and provide information to the community. This can help community make safe decisions about swimming.

They:

- provide water quality forecasts twice a day throughout the year.
- regularly monitor 36 beaches in Port Phillip Bay.
- Regularly monitor four sites on the Yarra River.

Long-term microbial water quality is reported annually to inform long-term water quality management.

Learn more: <https://www.epa.vic.gov.au/for-community/monitoring-your-environment/monitoring-victorias-water-quality>

General advice and support to land managers with recreational waters

EPA technical experts can provide advice on:

- Application of ERS to recreational waters.
- Monitoring and assessment of recreational waters.
- Methods for understanding pollution sources to recreational waters.
- Potential health risk and advice to the community.

EPA authorised officers can:

- Respond to pollution incidents and emergencies.
- Carry out activities to ensure sites with a permission meet their licence conditions.
- Provide advice to business and industry on their environmental obligations.
- Ensure compliance with the Environment Protection Act 2017.

Regulation of business and industries that could pollute recreational waters

EPA issues permissions to allow businesses or industries to undertake certain activities. The permission sets out environmental standards that must be met to ensure any activity that poses a risk to human health and the environment is eliminated or minimised as much as possible.

Sewage or other contaminated water can pose a significant risk if not managed appropriately. It can escape through groundwater or directly into waterways impacting water quality. Sites that manage this form of waste in certain amounts must therefore have an EPA permission.

The permission requires the business to have the necessary infrastructure, systems, and procedures in place to prevent this type of harm from occurring. EPA conducts compliance activities and where non-compliance is identified, EPA takes regulatory action.

Recreational water quality during emergencies

In emergencies, EPA is a support agency. We provide technical advice to government, industry and the community.

We provide scientific, engineering, and regulatory expertise on the environmental and public health impacts of pollution and waste.

This includes microbial water quality in recreational waters impacted by emergencies such as flooding and bushfires.

See EPA's response to 2022 floods here: <https://www.epa.vic.gov.au/for-community/flood-impacted-waterways#results>