



**Pesticide Watch 2024**  
Community science project



# Pesticide Watch is an innovative citizen science program that is working with communities to learn how pesticide residues are impacting our waterway ecosystems.

## Understanding the Impact of Pesticides on Freshwater Ecosystems

The potential contamination of the natural environment by pesticides is an issue of growing significance globally. Pesticides can be toxic, bioaccumulative, and persistent to varying degrees depending on the chemical properties of each pesticide.

Rivers and streams are crucial components of our environment, acting as pathways that can carry various substances across landscapes. Among these substances, pesticides stand out due to their potential harm to biodiversity and human health. Pesticides are chemicals designed to eliminate pests but can inadvertently affect other species. Globally, millions of tonnes of pesticides are used in agriculture each year, with their movement and impact on ecosystems still not fully understood.

In Australia, there are over 11,000 registered pesticide products, generally falling into the broad types of insecticides (targeting insect pests), herbicides (targeting plant pests) and fungicides (targeting fungal growth). Surprisingly, some of these are banned in other parts of the world due to health risks. What's more concerning is that some banned pesticides, known as legacy pesticides, continue to linger in the environment, adding to the overall toxic-

ity to non-target species. This ongoing environmental exposure highlights the need for widespread monitoring of pesticide residues to understand how these chemicals move through ecosystems and affect both ecosystems and humans.

However, monitoring pesticides is usually a complex and costly task, often requiring specialised equipment and expertise. As a result, large-scale monitoring of Australia's waterways has been limited. However, cutting-edge analytical instrumentation has been able to make screening for large numbers of compounds like pesticides possible with minimal tricky sample preparation. This presents an opportunity for community scientists to contribute significantly to this field.

Community science has already played a vital role in Australia, particularly in conservation biology. Yet, its potential in monitoring harmful substances like pesticides in waterways remains largely untapped. That's where Pesticide Watch comes in—a new, innovative project launched by Deakin University. You can help us conduct a large-scale, multi-year baseline study—join us in helping keep our streams healthy!

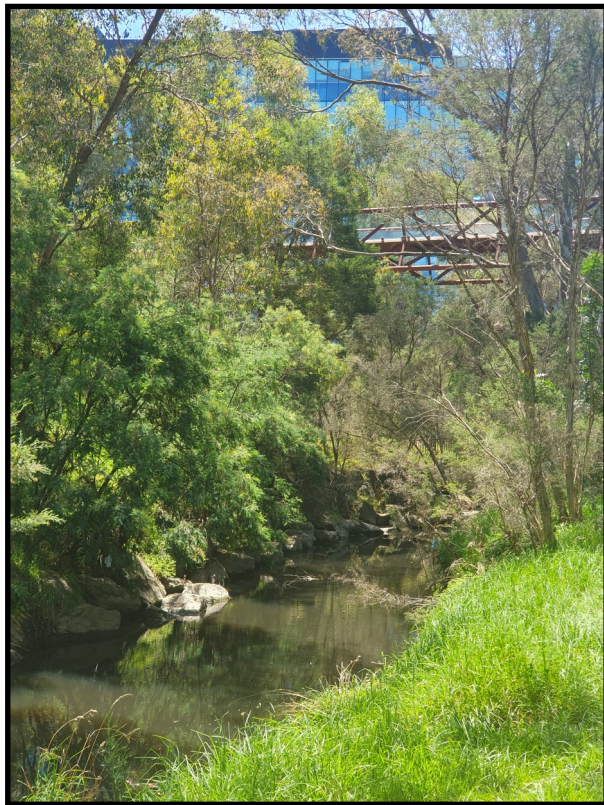
## Want to get involved in 2024?

For the 2024 Pesticide Watch program, we are accepting individuals and groups who currently conduct water quality monitoring through either WaterWatch, River Detectives, Landcare, Friends Groups, or other similar program. If you have any questions about whether you can participate, please get in touch.

You can register your interest by contacting me directly via the email address below or via a facilitating Catchment Management Authority.

Thanks for your interest in this exciting program!

This study has received Deakin University ethics approval (reference number: SEBE-2024-08).



View the Plain Language Statement  
(PLS) by scanning the QR code



[brady.hamilton@deakin.edu.au](mailto:brady.hamilton@deakin.edu.au)

