

A8: Understanding ecological risks from pesticide spraying activities on or near waterways and suitable management alternatives

Objective(s)

To investigate risks and potential continuous improvement opportunities for vegetation management activities conducted by Melbourne Water on or near waterways.

Why this research is important

This project seeks to understand the environmental risks of chemicals used by Melbourne Water on or near waterways, as well as potential alternatives. Melbourne Water manages diverse and complex environments. Vegetation management in these areas is essential to protect local biodiversity and maintain assets. Herbicides, particularly glyphosate, are used in vegetation management globally, however, growing concern about the potential risks of glyphosate has led Melbourne Water to reassess the risks of glyphosate use and investigate reduction opportunities. This work will inform Melbourne Water's herbicide use policies and practices and support obligations under the Environment Protection Act General Environmental Duty.

Contribution to Melbourne Water research priorities

Key Research Area: Streamside vegetation and instream habitat: Understanding the environmental impacts of pollutants, including contaminants of concern and litter, to inform risk-based management of waterways across the region.

Achievements to date

Assessment of alternative instream vegetation management activities in Westernport

Experiments were carried out comparing the effectiveness and potential impacts on waterway health of using a rig versus boom spray for glyphosate application instream in the Koo Wee Rup district. Measurements include chemical concentrations in water and sediments and assessments of biological measures e.g. macroinvertebrates and instream vegetation (Summary Report due end Year 2)

Assessment of risks from herbicide spraying to waterway health and environmental values at WTP.
Review of various herbicide practices at WTP and a risk assessment (due end Year 2).

Approach for Year 3

Field assessment of risks from herbicide spraying to waterway health and environmental values at WTP.
Following the review of various herbicides practices at WTP, this part of the project will focus on glyphosate use and risks to Growling Grass Frogs in conservation areas.

Integrated Vegetation Management trials at WTP

Investigate and plan for an IVM trial at WTP, assembling a Melbourne Water led team to develop the program. IVM trial to be conducted in Year 4.

Key outputs for Year 3

- Assessment of environmental and operational spray activities to waterway values at WTP
- Summary report on outcomes from assessment of spray impacts to waterway values at WTP
- Engagement with Melbourne Water around a suitable Integrated Vegetation Management trial at WTP and identification of project team (MW led)

Expected benefits

- Guidance on effective vegetation management practices to reduce risks to environmental values.
- Scientific foundation for use of certain instream vegetation management approaches in the Melbourne region to underpin Melbourne Water policy and practice documentation.
- Actions to support the Draft Growling Grass Frog Guideline for Species Management at Western Treatment Plant

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A collaborative research partnership delivering practical management solutions to reduce pollution in our waterways