

Protection of Public Health and Environmental Values during Chemical Weed Control

Local Governments undertake a risk assessment and management process to protect public health and environmental values during chemical weed control

Our communities enjoy a diverse range of parks, streetscapes, open spaces and public places. Green spaces are vital to our quality of life and health, provide an environment to exercise our pets, give habitat for native plants and animals, and conserve cultural heritage. They support liveability, the economy and our wellbeing. The management of weeds in green spaces helps to protect these values and meet the level of service expected by communities.

Risk assessment and management

Chemical weed control plays an important role in integrated weed management. Local Governments consider the following factors to determine the appropriate weed control method, assess and manage risks, and increase treatment effectiveness:

- the extent of the weed infestation
- the reproductive biology of the target weed e.g. seeder or resprouter
- the season and timing of reproduction
- cost and effectiveness of available control methods
- susceptibility of the weed to specific control methods
- potential residual effects of herbicides and damage to off-target species
- site sensitivities e.g. proximity to wetlands, schools and dog exercise areas
- weather conditions e.g. rain and wind
- known herbicide resistance and the potential development of herbicide resistance
- workplace health and safety affecting employees, such as manual handling/repetitive movements

Responsible use of herbicides

Herbicides are chemicals that destroy or inhibit the growth of plants. Local Governments aim to minimise unnecessary pesticide use and select low toxicity options. In Australia, the [Australian Pesticides and Veterinary Medicines Authority](#) (APVMA) regulates chemicals to the point of sale, including the approval and review of active constituents in herbicides and registration of chemical products. The State and Territory Governments regulate chemical use. In Western Australia, the Department of Health oversees the management and licensing of herbicide use.

Local Governments implement the following measures to ensure chemical weed control complies with the Commonwealth and State health and safety requirements:

- use herbicides that are approved by the APVMA or relevant APVMA off-label permit

- adhere to the WA State Government's [Health \(Pesticides\) Regulations 2011](#), which includes requirements around signage and operator licencing
- use herbicides according to product label instructions, which includes dilution rates and consideration of weather conditions to maximise product effectiveness and avoid spray drift
- abide by safety requirements on product Material Safety Data Sheets
- comply with internal weed control procedures and policies
- engage licensed Pest Management Technicians and ensure staff receive training and education in the safe use of herbicides
- use appropriate signage and advertise when using chemical controls, which may include Pesticide Use Notification plans
- use marker dye to allow for easy identification of sprayed areas (best practice approach)

Local Governments may also offer Pesticide Use Exclusion Registers for community members.

Local Governments display warning signs during and post pesticide treatment in accordance with legislative requirements so community members can avoid accidental contact. The *Health (Pesticides) Regulations 2011* require signage to be in place while the pesticide is being applied and until the surface to which the pesticide was applied has dried, with re-entry periods in accordance with label instructions.

Protection of the environment

The protection of the environment when using herbicides is achieved through consideration of the chemical toxicity, mode of action of the active constituent in the herbicide and the residual effect of the herbicide (if any).

The WA Poisons Regulations have a Schedule classification system for chemicals. Herbicides used by Local Government, that aren't exempt under the Schedule classification scheme, are generally classified as Schedule 5 or 6:

- Schedule 5: Chemicals with a low potential for causing harm which can be reduced by use of packaging and labelling with warning and safety directions.
- Schedule 6: Chemicals with a moderate potential for causing harm but the risk can still be effectively managed with packaging and labelling.

Herbicides can be classified based on their mode of action. Pre-emergent herbicides typically aren't used in natural areas as they can negatively impact on the germination of native species. Local Governments primarily use post-emergent herbicides that control weeds after they have emerged. These herbicides may be divided into:

- Translocated or contact herbicides: translocated herbicides mode of action is via transport mechanisms within the plant, such as xylem and phloem; contact herbicides only affect parts of the plant they come into contact with.
- Selective or non-selective herbicides: selective herbicides kill target weeds and not desired plants, while non-selective herbicides affect all plants.

Glyphosate is a Schedule 5 herbicide that works through translocation to prevent biosynthesis and kill the plant. It is widely used by Local Government and considered by the [APVMA](#) and the [Department of Health](#) to be low risk when used in accordance with product label instructions.

Some herbicides may be residual, which means they remain active in the soil for an extended period of time (months) and can act on successive weed germination. These herbicides have the potential to contaminate soil or groundwater. The Department of Health's [Circular PSC88 Use of Herbicides in Water Catchment Areas](#) lists the herbicides that may be used within water catchment areas whilst ensuring the protection of surface and groundwater sources.