

Hunter Region Priority Weed

Water hyacinth

Costs billions of dollars in control costs
and economic losses



Management guide



In NSW, weeds are regulated by the *NSW Biosecurity Act, 2015*. All land managers have a **General Biosecurity Duty** to contain the spread of weeds.

“General Biosecurity Duty means that any person dealing with plant matter must take measures to prevent, minimise or eliminate the biosecurity risk (as far as is reasonably practicable).”

The Regional priority for Water hyacinth is to eradicate all infestations within the Biosecurity Zone. This includes all of the State except, in the Hunter, the local government areas of City of Cessnock, City of Lake Macquarie, MidCoast, City

of Maitland, City of Newcastle or Port Stephens. In order to achieve this Land Managers within the Biosecurity Zone are asked to:

Eradicate this weed where practicable, or as much of the weed destroyed as practicable, and any remaining weed suppressed. The local control authority must be notified of any new infestations of this weed within the Biosecurity Zone.

For further information contact your local Biosecurity (Weeds) Officer via [Hunter Regional Weeds](#) or visit [NSW WeedWise](#).

Impacts

Water hyacinth is justifiably called the world's worst aquatic weed. It rapidly forms dense, impenetrable mats over the water surface in fresh water.

- Blocks irrigation channels and rivers.
- Restricts livestock access to water, destroying pastures and crops when large floating rafts settle over paddocks after flood events.
- Destroys fences, roads and other infrastructure when large floating rafts become mobile during flood events.
- Destroys natural wetlands; eliminates native aquatic plants.
- Reduces water quality from decomposing plants; increases water loss through transpiration (greater than evaporation from an open water body).
- Alters aquatic habitats by reducing infiltration of sunlight; changing the temperature, pH and oxygen levels of water; reducing gas exchange at the water surface.
- Tourism and recreation are affected when it limits recreational activities.
- Economically, it is extremely costly in its impacts, and in control measures.
- A Weed of National Significance*

**These weeds are regarded as the worst weeds in Australia because of their invasiveness, potential for spread, and economic and environmental impacts.*

Management

Water hyacinth is difficult to control in all freshwater aquatic environments.

- Access can be limited by the presence of the weed itself.
- Early detection and rapid response offer the greatest likelihood of successful control and the opportunity for eradication.
- It is essential that any new infestations are controlled as soon as possible.
- If allowed to become established, the seed bank rapidly expands, increasing costs and massively increasing the duration of the control program.
- Physical removal is best on small or contained infestations before seed set in October.
- Cultural control methods include minimising nutrient run-off into infested waterways.
- Drainage of isolated water bodies, although seed bank remains viable for 20+ years.
- Introduced salty water has been effective where possible.
- Windrowing and/or mulching to compost removed or flood-deposited debris. Material may take months to break down.
- Chemical control by high volume application from the bank or boats, or aerial application. Apply to only one third of infestation at a time to limit deoxygenation of the water.
- Bio control agents should not be solely relied upon for control.

Spread

- Water hyacinth will rapidly take over an entire waterway.
- Can double its mass every five days, forming new plants on the ends of stolons.
- Also grows from seed which can remain viable for 20 years or longer. Seed can survive very long periods even in dry soil.
- Seeds are carried in water, mud (e.g. on machinery or boots) and by birds.
- During high water flows and flooding, infestations can break up and be moved to new locations.
- Spread by human activity such as planting in ornamental ponds or dams and discarding unwanted aquarium plants.
- Spread by contaminated boating equipment.

Identification



Water hyacinth will cover the entire surface of a water body. *Photo: Tahlia Darcy Shaw*



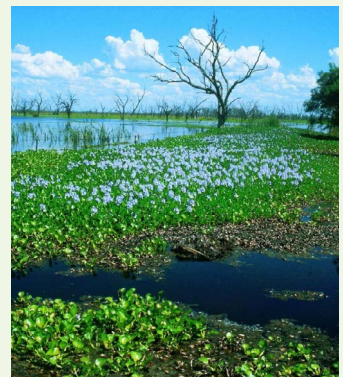
Water hyacinth has characteristic blue-ish-purple flowers with a yellow centre. *Photo: Tahlia Darcy Shaw*



When all the flowers on a spike have withered, the stalk gradually bends into the water and after two to three weeks the seeds are released and sink. *Photo: Tahlia Darcy Shaw*



Biological control agents *Top: Water hyacinth weevils - Neochetina sp. Bottom: Water hyacinth moth - Niphograptus alboguttalis*
Photos: M Julien



Some dieback and sinkage can occur due to biocontrol agents. *Photo: Bob Trounce*

Management Calendar

The calendar below outlines the management approach for a typical year.

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Growth stage	Flowering		Seed falls as flower stalks wither	Frosts cause leaves to die off, mature plants overwinter as dormant crowns				Germination of seed; regrowth from crowns		Daughter plants can spread patches rapidly		
Action	Best time for herbicide control			Mechanical and non-herbicide practices						Best time for herbicide control		
Bio control agents are available. See your local Weeds Officer												

Recommended control options may vary according to your area. There are experienced professional Biosecurity (Weeds) Officers based in each Local Government Area who have local knowledge and can provide expert advice for your weed management situation. Contact your expert Biosecurity (Weeds) Officer at your local Council or at **Hunter Regional Weeds**.

Herbicide control options for all areas in NSW, including current herbicide registrations, are available for Water hyacinth at **NSW WeedWise**.

Remember that all herbicide must be used and handled in accordance with the label or permit.

<https://weeds.dpi.nsw.gov.au/Weeds/Waterhyacinth>



Get the WeedWise app

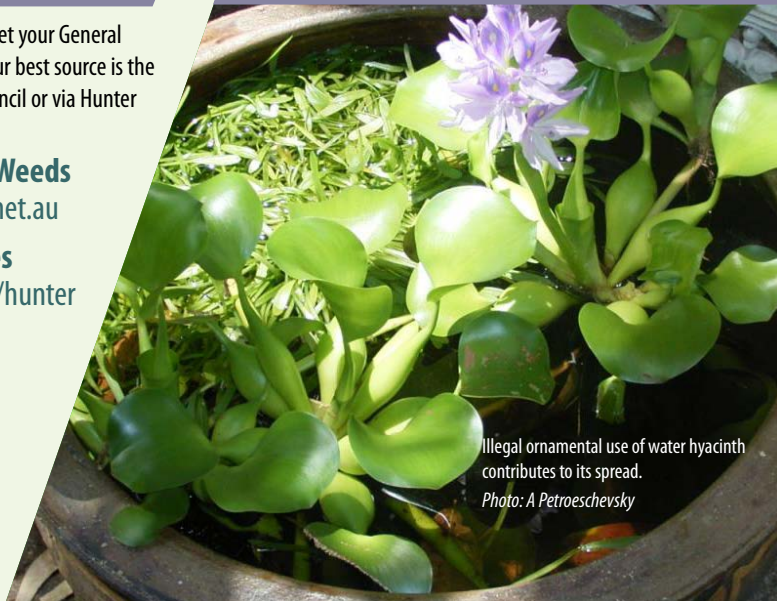
Further information

For further information on how to meet your General Biosecurity Duty on your property, your best source is the expert Weeds Officer at your local Council or via Hunter Regional Weeds.

Contact Hunter Regional Weeds
www.hunterregionalweeds.net.au

Hunter Local Land Services
www.lls.nsw.gov.au/regions/hunter

NSW Weed Wise
www.weeds.dpi.nsw.gov.au



Illegal ornamental use of water hyacinth contributes to its spread.

Photo: A Petroeshevsky