



Government  
of South Australia

## Declared Plant Policy

*This policy relates to natural resources management under section 9(1)(d) of the Landscape South Australia Act 2019 (the Act), enabling co-ordinated implementation and promotion of sound management programs and practices for the use, development or protection of natural resources of the State. Specifically, this policy provides guidance on the use and management of natural resources relating to the prevention or control of impacts caused by pest species of plants that may have an adverse effect on the environment, primary production or the community, as per object s7(1)(f) of the Act.*

### water soldier (*Stratiotes aloides*)

Water soldier is a submerged and floating aquatic annual herb. Native to Europe and northwest Asia, it is now regarded as a weed in Europe and has recently been found in Canada. It is not known to be present in Australia and is a prohibited import, but might be smuggled into the country as an ornamental.

### Management Plan for Water Soldier

#### Outcomes

- Maintain waterways free of blockages and keep streams and wetlands free of major weed threats.

#### Objectives

- Prevent incursion and establishment of water soldier in Australia.
- Destroy any detected water soldier plants.

#### Best Practice Implementation

- Any infestation of water soldier discovered to be treated as an incursion and destroyed.
- Any sale or transport of water soldier to be prevented.
- Regional landscape boards Green Adelaide to monitor waterways and wetlands for presence of aquatic weeds.

#### Regional Implementation

Refer to regional management plans for further details.

water soldier policy

Region	Actions
Alinytjara Wilurara	Prevent entry or sale; destroy if detected
Eyre Peninsula	Prevent entry or sale; destroy if detected
Green Adelaide	Prevent entry or sale; destroy if detected
Hills and Fleurieu	Prevent entry or sale; destroy if detected
Kangaroo Island	Prevent entry or sale; destroy if detected
Limestone Coast	Prevent entry or sale; destroy if detected
Murraylands and Riverland	Prevent entry or sale; destroy if detected
Northern and Yorke	Prevent entry or sale; destroy if detected
South Australian Arid Lands	Prevent entry or sale; destroy if detected

## Declaration

To implement this policy, water soldier is declared under *the Landscape South Australia Act 2019* throughout the whole of the State of South Australia. Its entry to South Australia, movement or transport on a public road by itself or as a contaminant, or sale by itself or as a contaminant, are prohibited. Notification of infestations is necessary to ensure these are destroyed. Land owners are required to destroy any water soldier plants growing on their properties.

Water soldier is declared in category 1 under the Act for the purpose of setting maximum penalties and for other purposes. Any permit to allow its entry, road transport or sale can only be issued by the Chief Executive of the Department for Environment and Water or their delegate pursuant to section 197.

Under the *Landscape South Australia (General) Regulations 2020*, Regulation 27 specifies the conditions under which a person is exempt from the operation of section 186 and may transport wool, grain or other produce or goods carrying water soldier on public roads or bring them into the State. Regulation 28 specifies conditions under which a person is exempt from the operation of section 188(2) and may sell wool, grain or other produce or goods carrying water soldier. Note that certain produce or goods may be excluded from these general movement and sale exemptions by Gazettal Notice of the Chief Executive, DEW.

The following sections of the Act apply to water soldier throughout each of the regions noted below:

Sections of Act	Region								
	AW	EP	GA	HF	KI	LC	MR	NY	SAAL
186(1) Prohibiting entry to area	X	X	X	X	X	X	X	X	X
186(2) Prohibiting movement on public roads	X	X	X	X	X	X	X	X	X
188(1) Prohibiting sale of the plant	X	X	X	X	X	X	X	X	X
188(2) Prohibiting sale of contaminated goods	X	X	X	X	X	X	X	X	X
190 Requiring notification of presence	X	X	X	X	X	X	X	X	X
192(1) Land owners to destroy the plant on their properties	X	X	X	X	X	X	X	X	X
192(2) Land owners to control the plant on their properties									
194 Recovery of control costs on adjoining road reserves									

## Review

This policy is to be reviewed by 2025 or in the event of water soldier being found established in South Australia.

## Weed Risk

### Invasiveness

Water soldier reproduces by offsets that enable a rosette to spread forming a larger colony, or can break away and drift in the water to form new colonies. Seed is rarely produced.

### Impacts

Water soldier grows underwater for most of the year, but in late spring it rises and flowers while floating at the surface. Under favourable conditions, it forms dense mats that exclude native aquatic plants. It lowers light levels under the water, further affecting aquatic flora and fauna.

### Potential distribution

Water soldier can grow in static or slow-moving water. It could be expected to survive in freshwater ponds, lakes and streams in the southern part of South Australia including the limestone country of the South-East region as it is associated with calcareous water in its native range.

## Feasibility of Containment

### Control costs

While its foliage is above water level in summer, water soldier can be controlled by herbicides such as glyphosate and diquat. However, control would be labour-intensive and may be limited by risks of off-target damage to native species.

### Persistence

Control actions may need to be followed up for several years because plants growing underwater cannot be reached by herbicides.

### Current distribution

Water soldier is not known to be present anywhere in Australia.

## State Level Risk Assessment

Assessment using the Biosecurity SA Weed Risk Management System gave the following comparative weed risk and feasibility of containment scores by land use:

Land use	Weed Risk	Feasibility of control	Response at State Level
Aquatic	medium 42	very high 0	contain spread, alert

## Considerations

Risk assessment indicates containment as a management action. However, since water soldier is absent from Australia, containment is best implemented by preventing its entry or establishment.

The Australian Weeds Committee agreed at meeting no. 6, April 2003, to revise their Tier 1 and Tier 2 aquatic weed lists, adding water soldier to Tier 1. Uniform national proclamation is necessary to ensure that these species never become established in Australia. South Australia consequently agreed to proclaim these species under the same legislative provisions as the original Tier 1 species, with prohibition on sale and enforced destruction if found.

There is no evidence that water soldier is available in cultivation anywhere in Australia. Due to its medium weed risk, absence from the country and very high feasibility of control, it is regarded as a State Alert Weed and a high priority surveillance target to increase the likelihood of early detection.

## Synonymy

*Stratiotes aloides* L., Sp. Pl. 1: 535 (1753)

Taxonomic synonyms:

*Stratiotes aculeatus* Stokes, Bot. Mat. Med. 3: 52 (1812)

*Stratiotes aquaticus* Pall., Reise Russ. Reich. 3: 115 (1776)

*Stratiotes generalis* E.H.L.Krause, Deutschl. Fl. (Sturm), ed. 2. 4: 96 (1905)

Other common names include water aloe, pineapple plant, and crab's claw.

Hon David Speirs MP  
**Minister for Environment and Water**

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