Declared Plant Policy
under the Natural Resources Management Act 2004

water hyacinth (*Eichhornia crassipes*)

Water hyacinth is an aquatic perennial with floating rosettes of leaves. It originated in the Amazon Basin of South America, and is now a weed in Africa, Asia, the Americas and Australia. It is not established in South Australia but still occurs in cultivation here, and is naturalised in some other States.

**Management Plan for Water Hyacinth**

**Outcomes**

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

**Objectives**

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

**Implementation**

- Any infestation of water hyacinth discovered to be treated as an incursion and destroyed.
- Sale and movement to be prohibited.
- NRM authorities to inspect waterways and wetlands for presence of water weeds.

**Regional Implementation**

Refer to regional management plans for further details.

<table>
<thead>
<tr>
<th>NRM Region</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adelaide and Mount Lofty Ranges</td>
<td>prevent entry or sale; destroy if detected</td>
</tr>
<tr>
<td>Alinytjara Wilurara</td>
<td>prevent entry or sale; destroy if detected</td>
</tr>
<tr>
<td>Eyre Peninsula</td>
<td>prevent entry or sale; destroy if detected</td>
</tr>
<tr>
<td>Kangaroo Island</td>
<td>prevent entry or sale; destroy if detected</td>
</tr>
<tr>
<td>Northern and Yorke</td>
<td>prevent entry or sale; destroy if detected</td>
</tr>
<tr>
<td>South Australian Arid Lands</td>
<td>prevent entry or sale; destroy if detected</td>
</tr>
<tr>
<td>South Australian Murray Darling Basin</td>
<td>prevent entry or sale; destroy if detected</td>
</tr>
<tr>
<td>South East</td>
<td>prevent entry or sale; destroy if detected</td>
</tr>
</tbody>
</table>
water hyacinth policy

Declaration

To implement this policy, water hyacinth is declared under the *Natural Resources Management Act, 2004* throughout the whole of the State of South Australia. The movement or transport of the plant on a public road by itself or as a contaminant, its entry to South Australia, 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 hyacinth plants growing on their properties.

Water hyacinth is declared in category 1 under the Act, for the purpose of setting maximum penalties and for other purposes. Any permit to allow its movement or sale can only be issued by the Chief Officer pursuant to section 188.

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

<table>
<thead>
<tr>
<th>Sections of Act</th>
<th>Region</th>
</tr>
</thead>
<tbody>
<tr>
<td>175(1) Prohibiting entry to area</td>
<td>X X X X X X X</td>
</tr>
<tr>
<td>175(2) Prohibiting movement on public roads</td>
<td>X X X X X X X</td>
</tr>
<tr>
<td>177(1) Prohibiting sale of the plant</td>
<td>X X X X X X X</td>
</tr>
<tr>
<td>177(2) Prohibiting sale of contaminated goods</td>
<td>X X X X X X X</td>
</tr>
<tr>
<td>180 Requiring notification of infestations</td>
<td>X X X X X X X</td>
</tr>
<tr>
<td>182(1) Landowners to destroy the plant on their properties</td>
<td>X X X X X X</td>
</tr>
<tr>
<td>182(2) Landowners to control the plant on their properties</td>
<td>X X X X X X</td>
</tr>
<tr>
<td>185 Recovery of control costs on adjoining road reserves</td>
<td>X X X X X X</td>
</tr>
</tbody>
</table>

Review

This policy is to be reviewed by 2020 or in the event of water hyacinth being found established in SA.

Weed Risk

Invasiveness

Most fresh water in slow-flowing or stagnant streams, swamps, reservoirs and farm dams could provide habitat for water hyacinth.

Plants reproduce vegetatively by offsets and short stolons. They have buoyant inflated leaf bases and develop roots from all nodes, spreading to form mats from which broken pieces can drift downstream and start new colonies. Growth from a single plant can cover 60 square metres in a season in warm climates.

Reproduction by seed has also been observed in Australia. Seeds are dispersed along waterways by water movement, birds or boats, and germinate on fringing mud.
Impacts

Water hyacinth forms dense mats that increase loss of water through transpiration, degrade habitat for aquatic fauna by reducing light levels, temperature and oxygen, and reduce water quality as they decay and deplete oxygen. Infestations may also restrict access to water for livestock and native animals, impede control of mosquitoes, and block small boat access or irrigation intakes.

Potential distribution

Water hyacinth could grow anywhere in South Australia where a permanent body of static or slow-moving fresh water exists. It is a threat mainly to the River Murray system where it could occupy backwaters and billabongs.

Feasibility of Containment

Control costs

Control of an infestation could be expensive as access for spraying may require a boat. Herbicide use would also be complicated by the close proximity of infestations to water resources used for irrigation, human and livestock consumption and to plants susceptible to off-target damage.

Persistence

Water hyacinth has no rhizomes or other reserves below the surface, and is dependent on foliage at the surface that would be vulnerable to herbicides.

Current distribution

Not present in the wild in South Australia. Some plants are likely to persist in gardens.

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:

<table>
<thead>
<tr>
<th>Land use</th>
<th>Weed Risk</th>
<th>Feasibility of control</th>
<th>Response at State Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aquatic</td>
<td>high 109</td>
<td>very high 0</td>
<td>destroy infestations</td>
</tr>
</tbody>
</table>

Considerations

Water hyacinth is a tropical plant native to north-eastern Brazil, French Guiana, Guyana, Surinam and Venezuela. It is now naturalised in NSW and Queensland, but also recorded from Western Australia and Victoria. Infestations in the Gwydir River system near Moree, NSW, have been the subject of an interstate control program since 1976.
Water hyacinth was established by 1939 in the River Murray with a large infestation over 16 ha at Ramco. The infestation was destroyed by the late 1950s. Small plantings are found at the rate of a few each year in home gardens and ponds.

Due to its high weed risk, presence in this State only as a rare cultivated plant, and very high feasibility of control, water hyacinth is regarded as a State Alert Weed and a high priority surveillance target to increase the likelihood of early detection.

Water hyacinth has been recognised as a Weed of National Significance and will be the subject of a national control strategy.

**Synonymy**


Nomenclatural synonym:

Priaropus crassipes (Mart.) Raf., Fl. Tellur. 2: 81 (1836)

Taxonomic synonyms:

- Eichhornia speciosa Kunth., Enum. Pl. 4: 131 (1843)
- Priaropus mesomelas Raf., Fl. Tellur. 2: 81 (1836)
- Heteranthera formosa Miq., Linnaea 17: 61 (1843)

Other common names include bèo tây, bèo lộc bình, bèo nhật ban, po piu, dai soy ping, lilac devil, Nile lily, jacinto de agua and water orchid.

**Reference**