

# Action statement

*Flora and Fauna Guarantee Act 1988*

## Water Shield (*Brasenia schreberi*)

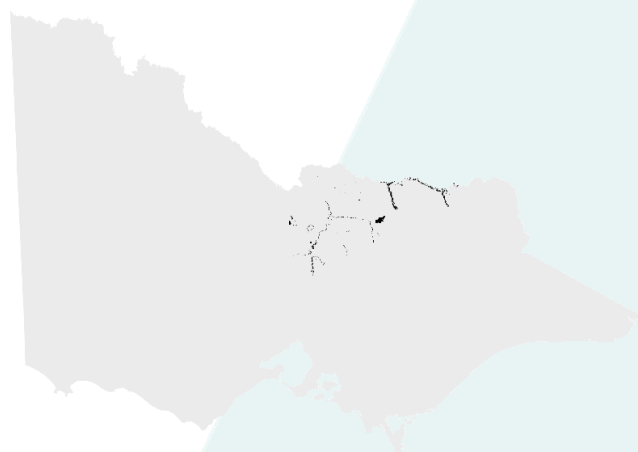
Taxon ID: 500487

Action statements are developed under the *Flora and Fauna Guarantee Act 1988* (FFG Act). Their preparation and implementation complement the FFG Act strategy *Protecting Victoria's Environment – Biodiversity 2037* and its vision that “Victoria’s biodiversity is healthy, valued and actively cared for”.

### Species and Distribution



Water Shield. Image source: Atlas of Living Australia.



This habitat distribution model displays the indicative range of Water Shield based on occurrence records and likely habitat. See [NatureKit](#) for an interactive map.

### Conservation Status

#### Critically Endangered

**Listing criteria:** 3.1.2(a)(b)(i)(ii)(iii)(iv)(v) of the Flora and Fauna Guarantee Regulations 2020.

This means that:

- its geographic distribution is extremely restricted; and
- it is restricted to a limited number of areas that are subject to the same threat or suite of threats that can impact all individuals present; and
- there is a continuing decline or reduction in:
  - its extent of occurrence; and
  - its area of occupancy; and
  - the area, extent or quality of habitat; and
  - the number of locations or subpopulations; and
  - the numbers of mature individuals.

**Corresponding International Union for the Conservation of Nature (IUCN) criteria:** B1ab(i,ii,iii,iv,v).

More information on IUCN listing criteria can be found here: [IUCN Red List Criteria](#).

## Species Information

Species information such as its description, distribution, ecology and references are provided in the [Water Shield Species Forecast Report](#) and [VicFlora](#).

## Threats

The threats below have been identified through expert input, published literature and spatial analysis.

Threat	Description
<b>Altered hydrology</b>	
Altered wetland water regime	<ul style="list-style-type: none"> <li>Changes to wetland hydrology, because of local wetland draining or hydrological changes upstream or in the surrounding landscape, can lead to habitat loss and plant mortality.</li> </ul>
<b>Climate change</b>	
Altered rainfall and temperature regimes	<ul style="list-style-type: none"> <li>Climate change, increasing temperature and altered rainfall are likely to magnify existing threats and may reduce the stability, extent, and condition of habitat.</li> </ul>
<b>Habitat loss, degradation or modification</b>	
Land use change	<ul style="list-style-type: none"> <li>Ploughing of ephemeral wetlands can damage or lead to the loss of these habitats.</li> </ul>
Livestock	<ul style="list-style-type: none"> <li>Livestock can cause habitat degradation through the combined effects of herbivory, trampling, soil compaction, soil erosion, pugging of wet areas, and excess nutrient loads.</li> </ul>
<b>Human disturbance</b>	
Ground disturbance	<ul style="list-style-type: none"> <li>Trampling and the use of off-road motor vehicles impacts the soil, damages habitat and may directly and indirectly cause species mortality.</li> </ul>
<b>Introduced species</b>	
Introduced plants	<ul style="list-style-type: none"> <li>Introduced plants can directly compete for resources and reduce species abundance and diversity.</li> </ul>
Feral goats	<ul style="list-style-type: none"> <li>Feral goats (<i>Capra hircus</i>) can cause direct mortality of plants and degrade habitat through herbivory and trampling, and decrease soil stability which contributes to erosion.</li> </ul>
Feral pigs	<ul style="list-style-type: none"> <li>Feral pigs (<i>Sus scrofa</i>) cause direct mortality and damage habitat through pugging and wallowing that compacts soils. Pigs can also cause erosion and increase nutrient loads that result in degraded water quality and changes to vegetation structure.</li> </ul>
Rabbits	<ul style="list-style-type: none"> <li>The European Rabbit (<i>Oryctolagus cuniculus</i>) can cause direct mortality of plants and significantly impact recruitment. Rabbits also damage habitat through the construction of warrens that can cause soil erosion, and provide habitat for other introduced species.</li> </ul>
<b>Water properties</b>	
Changes to salinity	<ul style="list-style-type: none"> <li>Changes to natural salinity levels in waterways and/or wetlands can degrade habitat or result in a change in habitat type, impacting persistence at the site.</li> </ul>

## Conservation Objectives

Conservation objectives are informed by the conservation status and criteria in which the species was listed under the FFG Act. This provides a framework to understand how we can work towards recovery and improve the species' conservation status over time as per the objectives of the FFG Act.

The key objectives of this action statement are:

- Mitigate threats to populations and habitat to increase resilience, increase genetic fitness and minimise future population decline;
- Increase the Water Shield's range and/or extent, by providing opportunities for natural movement/dispersal;
- Increase knowledge of biology, ecology, distribution, demography, emerging threats, and conservation requirements; and
- Support community participation and improve awareness of the Water Shield and conservation of its habitat, including the restoration of cultural knowledge where appropriate.

## Conservation Actions

The actions below have been identified through expert input, published literature and spatial analysis. Actions are listed in alphabetical order to allow all interested parties to prioritise based on their context, capacity and capability. Holistic management of the cultural landscape where this species occurs is encouraged noting additional actions including cultural practice may benefit this species. For more information on where to undertake actions that benefit multiple species and identify the most beneficial locations to undertake actions for this species, please refer to [NatureKit](#).

Action	Description
Climate adaptation	<ul style="list-style-type: none"> <li>• Consider the incremental and/or transformational adaptation actions that may be required to support the recovery of the species. This may be done by applying the climate adaptation lens and triggers for transformational adaptation from the Victorian Government's Climate Change Adaptation Action Plans.</li> </ul>
Community engagement and awareness	<ul style="list-style-type: none"> <li>• Increase landholder awareness of the species and the impacts of livestock grazing. Provide guidance on the changes to grazing that may be required, such as exclusion, to support the recovery.</li> </ul>
Control feral goats*	<ul style="list-style-type: none"> <li>• Implement and maintain effective control of feral goats in priority areas.</li> </ul>
Control feral pigs*	<ul style="list-style-type: none"> <li>• Implement and maintain effective control of feral pigs in priority areas.</li> </ul>
Control introduced plants*	<ul style="list-style-type: none"> <li>• Implement and maintain effective control of introduced plants in priority areas and undertake revegetation with appropriate native species, where required.</li> </ul>
Control rabbits*	<ul style="list-style-type: none"> <li>• Implement and maintain effective control of rabbits in priority areas.</li> </ul>
Manage environmental water	<ul style="list-style-type: none"> <li>• Explore options for the provision of environmental water where required.</li> </ul>
Manage public access	<ul style="list-style-type: none"> <li>• Exclude access from horse-riding, vehicles and motorbikes, and discourage human trampling through the provision of appropriate fencing, signage and community education.</li> </ul>
Permanent protection*	<ul style="list-style-type: none"> <li>• Investigate incentives, voluntary agreements, covenants, and other permanent protection measures to protect and restore habitat.</li> </ul>
Protect key habitat	<ul style="list-style-type: none"> <li>• Minimise alterations to hydrological regimes upstream or in surrounding landscapes.</li> </ul>

Survey and monitoring	<ul style="list-style-type: none"> <li>• Monitor representative populations to determine trends and management needs.</li> <li>• Undertake targeted field surveys to confirm the extent of all known populations and seek to discover previously undetected populations based on predicted habitat and ecological information.</li> </ul>
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*\*Indicates landscape-scale actions that may deliver benefits to multiple species*

## Past Actions

The key conservation management actions listed below have been delivered in the past 10 years.

Past Action	Description
Control deer	<ul style="list-style-type: none"> <li>• Implemented and maintained effective control of deer in priority areas.</li> </ul>

## Decision Support Tools

Decision making for conservation actions is supported through the following Victorian Government tools which may be of assistance in choosing the most appropriate or beneficial actions for biodiversity:

- [Choosing actions for nature](#)
- [Biodiversity Knowledge Framework](#)

## Further Information

- [Water Shield Species Forecast Report](#)
- [Threatened Species Assessment Report - Water Shield \(\*Brasenia schreberi\*\)](#)
- [Victoria's changing climate - understanding the impacts of climate change in Victoria](#)
- [Commonwealth Threat Abatement Plans](#)
- [Flora and Fauna Guarantee Regulations 2020](#)
- [IUCN criteria summary](#)
- [Natural Environment Climate Change Adaptation Action Plan 2022-2026](#)

## Get Involved and Take Action

If you are interested in supporting this species' recovery, there are some important things to consider.

The Department of Energy, Environment and Climate Action (DEECA) is committed to engaging and partnering with Traditional Owners on how they wish to be involved in the planning and implementation of actions for this species. Steps must be taken to avoid harm and where appropriate ensure actions can deliver cultural benefits.

You can find advice about required approvals, land manager and/or owner permissions, options and incentives for private land conservation, and engagement with Traditional Owners and public land managers here: [Action statements \(environment.vic.gov.au\)](#)

To identify the relevant Traditional Owners, use the [Aboriginal Cultural Heritage Register and Information System \(ACHRIS\) Welcome to Country and Acknowledgements Map](#).

You can also register your interest in taking action so we can connect you to other people or organisations working to help us secure the future for this species at [threatened.species@deeca.vic.gov.au](mailto:threatened.species@deeca.vic.gov.au)

## Reporting Actions

Activity data are critical to monitoring the implementation and progress of actions and evaluating action statements. These data are also used to:

- determine progress towards achieving the contributing targets for [Protecting Victoria's Environment – Biodiversity 2037](#).
- inform the five-yearly State of the Environment Report.

For guidance on reporting actions undertaken on this species, refer to [Activity Data](#).

## Submitting Monitoring Data

The Victorian Biodiversity Atlas (VBA) provides a foundational dataset showing where biodiversity occurs across the Victorian landscape and how it may have changed over time. As a core input for decision support tools that inform conservation action, public land management, research activities and reporting, we encourage all participants in the delivery of on-ground actions to submit species records and observations, including for weeds or introduced animals, as they carry out their projects.

For further information see: [Victorian Biodiversity Atlas \(environment.vic.gov.au\)](#)

Sign up and begin submitting your data today at: <https://vba.biodiversity.vic.gov.au/>

## Indigenous Data Sovereignty

DEECA is committed to recognising and enabling Indigenous Data Sovereignty (IDS). Indigenous data comprise any information or knowledge of species and Country collected or recorded by, or about, Traditional Owners. IDS asserts Traditional Owner rights to access and have governance over the collection, ownership and use of their data, including that which is included or referred to in this Action Statement.

### Acknowledgement

We acknowledge and respect Victorian Traditional Owners as the original custodians of Victoria's land and waters, their unique ability to care for Country and deep spiritual connection to it. We honour Elders past and present whose knowledge and wisdom has ensured the continuation of culture and traditional practices.

We are committed to genuinely partner, and meaningfully engage, with Victoria's Traditional Owners and Aboriginal communities to support the protection of Country, the maintenance of spiritual and cultural practices and their broader aspirations in the 21st century and beyond.



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