Western Regional Strategic Weed Management Plan
2017 - 2022

Developed in partnership with the Western Regional Weed Committee
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Acknowledgment of Country

The Western region covers, in whole or in part, the traditional lands of twenty eight Aboriginal tribal groups (see list below). The Western Local Board acknowledges and pays its respects to Elders, both past and present of these nations.

We acknowledge that the protection and promotion of Aboriginal culture, heritage, traditional land management practices and spiritual beliefs is an issue of great importance to the traditional owners of these lands and waters and is of benefit to the whole community. Stronger shared cultural values, will ensure a more reconciled and resilient community in the Western region.

- Badji
- Barindji
- Barkindji
- Baranbinja
- Danggali
- Jitajita
- Karenggapa
- Koamu
- Kula
- Kureinji
- Maljangapa
- Maraura
- Milpulo
- Morowari
- Muthimuthi
- Naulko
- Ngemba
- Ngurunta
- Parundji
- Tatitati
- Ualarai
- Wadikali
- Watiwati
- Wanjwalku
- Weilwan
- Wiliakali
- Wiradjuri
- Wongaibon
Acknowledgment of contributors

This plan was developed by the Western Regional Weed Committee on behalf of the Western Local Board, for endorsement by the Board.

The Western Local Board wishes to acknowledge the work of the committee and regional support staff in developing this plan.

The Board would also like to thank the State Weeds Committee (particularly the technical sub-committee) for support in weed risk prioritisation and the Office of Environment and Heritage and NSW Department of Primary Industries for their guidance in the development of this document.

We also wish to acknowledge that some text within this plan was drawn from a range of NSW Department of Primary Industries publications, including the draft Invasive Species Plan, NSW Biosecurity Strategy 2013 – 2021 and the Biosecurity Act 2015 Discussion Paper: Weeds. A full list of references used can be found in Chapter 10: References on page 57.

The involvement of the following individuals, who provided additional information essential to the compilation of this plan is also gratefully acknowledged.

- Lis Arundell, formerly Project Officer, Macquarie Valley Weeds Advisory Committee
- David Creeper, Manager, Biosecurity, Western Local Land Services
- Paula Bosse, Regional Noxious Weeds Project Officer, Murray and Riverina Weed Action Programs
- Stephen Watts, Weeds Officer, Wentworth Shire Council
- Dr. Stephen Johnson, Weed Ecologist, NSW Department of Primary Industries
- Jasmine Wells, Senior Land Services Officer, Western Local Land Services
- Paul Erkelenz, Astrebla Agribusiness & NRM Consulting

Development of this plan was supported through NSW Weeds Action Program funding from the NSW Government.

Burr ragweed - *Ambrosia confertiflora.*
Chair’s foreword

Ben Barlow  
Chairperson - Western Local Board

Covering 40 per cent of the land mass of NSW, the Western region is a vast area with a unique blend of industries, natural resources and communities.

While it is dominated by arid and semi-arid rangelands, it supports a diverse range of industries including extensive livestock grazing, dryland agriculture, irrigated agriculture, mining and tourism. Other land uses, such as for nature conservation and urban and cultural purposes, are also significant.

The Western Local Board plays a leading role in setting priorities and developing strategies for the delivery of programs and related services associated with agricultural production, biosecurity, natural resource management and emergency management. Through this, and the efforts of Western Local Land Services staff and other organisations we collaborate with, we will make a significant contribution to the achievement of our vision of “Resilient communities in productive, healthy landscapes” in the Western region.

Biosecurity risks, including weeds, pose a significant threat to the achievement of this vision. Developing and facilitating the delivery of appropriate programs to better manage these risks is a clear priority of this Board, as highlighted in our recently released Local Strategic Plan. Weeds are already estimated to cost NSW agriculture $1.4 billion annually, let alone the environmental and social impacts.

Ongoing changes to factors such as climate, land use, transportation and trade in agricultural produce could greatly increase these risks and costs, unless a well thought-out, proactive and integrated approach to weed management is taken.

This Regional Strategic Weed Management Plan will play a key part in developing such an approach. It takes the strategies and actions outlined in our Local Strategic Plan relating to weed management a step further.

Developed in collaboration with our regional partners, it will not only guide where resources and effort will be focussed in the coming years but also provide a clear local context for land managers and other community members to enable them to carry out their General Biosecurity Duty for weeds, under the new Biosecurity Act 2015. I am very confident that its development will be seen as a significant moment in the protection and future development of the region’s natural resources, industries and communities.

I would like to warmly acknowledge the efforts and expertise of the Western Regional Weed Committee, staff of Western Local Land Services and other stakeholders from industry, the community and state and local government in developing this plan.
Shane Wilson  
Chairperson - Western Regional Weed Committee

On behalf of the Western Regional Weed Committee, I am pleased to present this Regional Strategic Weed Management Plan to the Western Local Board and by extension, to our stakeholders, collaborators and the wider community of Western NSW.

The Western region has a number of characteristics that make the effective management of weeds particularly challenging. The diversity of land uses and management aims often mean that a plant that is considered a great threat by one land manager is considered unimportant (or even useful) by another.

The region’s vast areas and distances, combined with a small, mostly scattered, population make it difficult to identify new outbreaks of weeds quickly, as well as control existing ones. Taking into account these factors and others, we believe it is essential that a strategic approach to managing the risks posed by weeds be taken. This plan is an important first step in implementing such an approach.

The purposes of this plan are to guide the allocation of resources and investment in weed management in the region, and to inform land managers and the community on how best to meet their General Biosecurity Duty for weeds under the Biosecurity Act 2015. Combined with other sources of information such as the existing knowledge and experience of land managers, best practice management guides and the advice of experts in the field, we believe it will be an essential tool for anyone in the region who needs to make decisions about preventing weed spread and controlling existing outbreaks.

The plan has been developed using a “risk based” approach. This has not only allowed us to better identify which particular weed species are considered the higher priorities for our region but also the most appropriate “mix” of measures that need to be undertaken to best manage the risks posed by each species.

This plan has not been developed in isolation. It has drawn upon numerous previous and existing plans and incorporates the knowledge, experience and aspirations of our stakeholders, collaborators and regional community. We therefore believe that it reasonably reflects our community’s current position and expectations in relation to best practice weed management. It will be a key task of this Regional Weed Committee to continue to develop community ownership of this plan and encourage active involvement in its implementation.

The development of this plan under such tight timeframes would not have been possible without the efforts of a number of individuals and organisations. I would particularly like to acknowledge the staff of Western Local Land Services, all members of the Western Regional Weed Committee, the State Weeds Committee and staff of the NSW Department of Primary Industries and NSW Office of Environment and Heritage.
Executive summary

Our vision

Biosecurity protects the economy, environment and community from the negative impacts of pests, diseases and weeds. As such, it is vital for the health, wellbeing and prosperity of the state. The Western Regional Strategic Weed Management Plan focuses on managing weeds to improve the region’s biosecurity. Our vision is to protect the Western region’s environment, landscape, livelihood, cultural and lifestyle values from weeds by strengthening the sustainability of the natural environment, primary industries, and local communities in the region.

In line with new Commonwealth biosecurity measures, NSW has reformed its weed, pest and disease legislation. Together, the NSW Biosecurity Strategy 2013-2021 and NSW Biosecurity Act 2015 (which repeals the Noxious Weeds Act 1993) provide a streamlined, clear framework for safeguarding primary industries, natural environments and communities from a range of pests, diseases and weeds. Community-wide shared responsibility for biosecurity and a tenure-neutral approach are crucial to realise the vision of a sustainable and prosperous future.

The Western Regional Strategic Weed Management Plan is a direct response to this strategic and legislative reform. It was prepared by the Western Regional Weed Committee on behalf of the Western Local Board, with guidance from the State Weeds Committee and Western Local Land Services staff.

Working together

The plan outlines how government, industry and the community will share responsibility and work together to identify, minimise, respond to, and manage weeds. It relates to all lands and waters in the Western region of NSW. It focuses on managing weeds that impact:

- animal and plant industries, including agriculture, horticulture, forestry, aquaculture and recreational and commercial fishing in freshwater systems
- ecological communities and biodiversity, including natural urban and peri-urban environments
- human health, livelihood, lifestyle, cultural values, recreation and landscape amenity
- infrastructure and service industries, including energy, transport and water supplies.

The plan sets the vision and goals for weed management in the Western region, and outlines strategies and actions to achieve outcomes based on principles of shared responsibility, sustainable landscapes, collaborative leadership and innovation.
Vision:
Government, industry and the people of the Western region working together to protect the environment, economy and community from the negative impacts of weeds.

Goal 1: Responsibility for weed biosecurity is shared by the Western region community
Actions focus on a whole of community approach to weed management, with an emphasis on:
• building community capacity
• building stronger partnerships
• fostering a shared responsibility
• promoting behavioural change.

Goal 2: Weed biosecurity supports profitable, productive and sustainable primary industries, and

Goal 3: Weed biosecurity supports healthy, diverse and connected natural environments
Actions focus on weed biosecurity to protect the environment and foster sustainable economic growth. The emphasis is on:
• preventing new weeds from entering the region
• eradicating or containing the spread of new weeds that do establish
• managing widespread weeds on priority sites.

Goal 4: Weed biosecurity is supported by coordinated, collaborative and innovative leadership
Actions focus on a consistent approach to implementing this plan, with emphasis on:
• providing good governance and leadership to support a collaborative approach
• supporting and delivering the weed biosecurity reforms for NSW
• implementing risk based systems across all tenures in a coordinated manner
• using information and mapping systems, current research and adaptive management to improve effectiveness of weed control.
Sharing responsibility

The plan provides a sound basis for a cooperative and coordinated approach to managing weeds in the Western region. It defines what “shared responsibility” means for the region’s communities and stakeholders, and how they might work together to identify, minimise, respond to and manage high risk weeds at a landscape scale, both now and into the future.

The Biosecurity Act 2015 is tenure neutral, as it applies equally to all land in the region, whether public or private. The Act contains a range of new regulatory tools and a General Biosecurity Duty that support this tenure neutral approach to managing weed biosecurity risk. These tools include Prohibited Matter, Biosecurity Zones, Mandatory Measures and Control Orders, and the plan outlines how they might be applied.

The plan outlines how land managers might meet requirements under the General Biosecurity Duty: the responsibility of any person who has any dealing with weeds (biosecurity matter), whether they have an infestation on their land, are selling a potentially invasive species, dumping garden rubbish, or supplying contaminated fodder or the like must prevent, minimise or eliminate the biosecurity risk (as far as is reasonably practicable). (http://www.austlii.edu.au/au/legis/nsw/consol_act/ba2015156/s22.html)

Weed Priorities

An expert panel used best available knowledge and an internationally-recognised risk-assessment process to identify the Western region’s high-priority weed species. Weed prioritisation is guided by the principle that managing weeds earlier rather than later is more cost effective. The Western region’s weed management objectives support this principle and prioritises outcomes which can be achieved early stages of the invasion process.

The plan identifies regional priority weeds, including management objectives and “outcomes to demonstrate compliance with the General Biosecurity Duty”, which for those weeds clearly define community expectations for land managers to meet their General Biosecurity Duty. The plan also identifies state level and other priority weeds to provide further focus to weed management in the region.
Building on the past

The Western Regional Weed Committee (RWC) was established as a local Community Advisory Group under the Local Land Services Act 2013. Development of this plan was its initial focus. The committee will now focus on overseeing the plan’s implementation.

The committee provides strategic planning and coordination of weed management activity at a regional level. It works closely with the State Weeds Committee (SWC), whose charter is to ensure a consistent, coordinated and strategic approach to weed management across the state of NSW.

A range of stakeholders have played an important role in the evolution of weed management planning in the region over many years. This plan has built on past planning efforts and has gained immeasurably from the accumulated experience and expert local knowledge of committee members and their networks. Much of this experience sits on the Western Regional Weed Committee, which includes representatives from local government, Macquarie Valley Weeds Advisory Committee, NSW Department of Primary Industries, NSW Office of Environment and Heritage (including the National Parks and Wildlife Service), Pastoralists Association of West Darling, NSW Farmers, Western Landcare, NSW Aboriginal Land Council, the Mallee Sustainable Farming group, Dried Fruits Australia, Department of Industry – Lands and Western Local Land Services.

Implementation

The plan will guide investment in weed management across the region and provide a consistent basis for regional weed planning and implementation. The Western Regional Weed Committee will play an important role in overseeing and coordinating implementation of the plan. Stakeholders will implement the plan’s objectives within a framework of:

- shared responsibility for weed management
- consistent tenure neutral and prioritised weed management planning, investment and control across the region
- strategic communication, capacity building and engaging partners, stakeholders and the broader community
- coordinated and integrated information management guiding adaptive management and research
- performance measurement that focuses on shared responsibility, sustainable landscapes and collaborative leadership and innovation
- robust monitoring, reporting, evaluation and improvement.

Identifying local stakeholder roles, responsibilities and partnerships is integral to developing these measures efficiently and effectively.
1. Intent of plan

1.1 Introduction

The Western Regional Strategic Weed Management Plan provides a framework for regional weed management. The plan supports regional implementation of the *NSW Biosecurity Act 2015* by articulating community expectations in relation to effective weed management and facilitating a coordinated approach to weed management in the region. The plan (and the legislation that underpins it) is based on the premise that biosecurity is everyone's responsibility. It supports development of this culture, guiding the community in effective and coordinated management of weeds and meeting relevant statutory obligations.

The plan relates to all lands and waters in the Western Local Land Services region of NSW (see Figure 3.1 on page 25 for map of region).

This plan has built on past planning efforts, and has gained immeasurably from the accumulated experience and expert local knowledge of regional weed committee members and their networks. It will guide resource allocation and investment in the region and provide a consistent basis for regional planning and delivery.

The Western Regional Strategic Weed Management Plan implements the NSW weed reforms, NSW Biosecurity Strategy 2013-2021 and Invasive Species Plan in relation to weeds for the Western region. It was prepared by the Western Regional Weed Committee on behalf of the Western Local Board, and covers weed risks that impact:

- animal and plant industries, including agriculture, horticulture, forestry, aquaculture, recreational and commercial fishing
- biodiversity of natural, urban and peri-urban environments (terrestrial and aquatic)
- human health, livelihood, lifestyle, recreation and landscape amenity
- infrastructure and service industries, including energy, transport and water supplies.

This plan sets the vision, goals and objectives for weed management in the Western region for the next five years and outlines the strategies and actions through which these goals will be achieved.

*Mother of millions - Bryophyllum spp. and hybrids. Photographer John Hosking.*
1.2 Vision, goals and objectives

This plan provides a sound basis for a cooperative and coordinated approach to weed management. The Vision for this plan is:

Government, industry and the people of the Western region working together to protect the environment, economy and community from the negative impacts of weeds.

The goals, objectives and outcomes for this plan align with those of the NSW Biosecurity Strategy 2013-2021 and the Western Local Land Services Local Strategic Plan 2016-2021, which provide the overarching policy framework. Our Goals are:

1. responsibility for weed biosecurity is shared by the Western region community
2. weed biosecurity supports profitable, productive and sustainable primary industries
3. weed biosecurity supports healthy, diverse and connected natural environments
4. weed biosecurity is supported by coordinated, collaborative and innovative leadership.

The objectives of this plan, outcomes we expect to see, and the strategies to achieve them, are shown in Table 1.1.
Table 1.1: Vision, goals, outcomes, objectives and strategies of the plan.

<table>
<thead>
<tr>
<th>Vision</th>
<th>Goals</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government, industry and the people of the Western region working together to protect the environment, economy and community from the negative impacts of weeds.</td>
<td>1. Responsibility for weed biosecurity is shared by all the Western region community.</td>
<td>• Community, industry and government are sharing responsibility for weed management and have a clear understanding of their roles and obligations.</td>
</tr>
<tr>
<td></td>
<td>2. Weed biosecurity supports profitable, productive and sustainable primary industries.</td>
<td>• People have the skills, knowledge, capacity and capability to deliver weed management activities.</td>
</tr>
<tr>
<td></td>
<td>3. Weed biosecurity supports healthy, diverse and connected natural environments.</td>
<td>• Strong, supportive partnerships have improved weed management for all partners.</td>
</tr>
<tr>
<td></td>
<td>4. Weed biosecurity is supported by coordinated, collaborative and innovative leadership.</td>
<td>• Awareness of weed management in the region has improved, with communication and engagement, proactive and inclusive.</td>
</tr>
<tr>
<td></td>
<td>5. Engagement, collaboration and involvement of local people in decision making is coordinated.</td>
<td>• Weed management is integrated and coordinated across all tenures.</td>
</tr>
<tr>
<td></td>
<td>6. Relevant and timely information supports decision making by the Western Regional Weed Committee and the State Weeds Committee.</td>
<td>• Weeds are monitored at landscape and industry scales and developing problems are proactively managed.</td>
</tr>
<tr>
<td></td>
<td>7. Information, monitoring, performance evaluation and reporting systems, provide for benchmarking, continuous improvement, stakeholder feedback and innovation.</td>
<td>• Weed management is supporting landscape health and key assets important to biodiversity.</td>
</tr>
<tr>
<td></td>
<td>8. A strong evidence and knowledge base is supporting innovation and strengthening research.</td>
<td>• Primary industries are using leading weed management practices that contribute to increases in productivity, sustainability and market access with minimal impacts on natural resources.</td>
</tr>
<tr>
<td></td>
<td>9. Changes in weed behavior under a changing climate are being understood and monitored.</td>
<td>• Sensitive Aboriginal cultural heritage areas are protected.</td>
</tr>
<tr>
<td></td>
<td>10. Weed biosecurity threats are continually identified, assessed and prioritised across Western region environments and primary industry sectors.</td>
<td>• Weed biosecurity emergencies and high risk pathways are well managed.</td>
</tr>
<tr>
<td></td>
<td>11. Weed biosecurity emergencies and high risk pathways are well managed.</td>
<td>• Impacts on high priority assets have been minimised through risk based weed management programs.</td>
</tr>
<tr>
<td>Objectives</td>
<td>Strategies</td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td></td>
</tr>
</tbody>
</table>
| • Communicate a clear strategic vision and build support for a strong and integrated biosecurity system for the region.  
• Provide the foundation for all customers and stakeholders to work together, and to fully utilise knowledge and expertise across all groups.  
• Foster accountability for weed management in the region at all levels. | 1.1 Promote weed management and behavioral change in the community.  
1.2 Build stronger partnerships that support weed management.  
1.3 Enhance community-wide capacity in sharing responsibility for weed management. |
| • Improve effectiveness in prevention and response to new weed incursions.  
• Prevent, eradicate, control and manage the impacts of weeds.  
• Understand and have regard for the impacts of a changing climate on weed biosecurity. | 2-3.1 Improve surveillance, reporting and tracing systems for weeds.  
2-3.2 Improve prevention, preparedness and response to weed emergencies.  
2-3.3 Eradicate or prevent the spread of new weeds.  
2-3.4 Contain and manage impacts of widespread weeds.  
2-3.5 Support and utilise developments in weed science and technology.  
2-3.6 Use results of research [for example, Weed Futures, Bioclim, ANUClim] to assess and respond to changing risks under a changing climate. |
| • Provide a framework for more detailed planning, monitoring and reporting of weed management programs.  
• Provide guidance for weed management prioritisation, decision making and actions at a regional level.  
• Support consistent and coordinated regional weed management planning and local delivery.  
• Support leading practice in weed management through ongoing creation and sharing of knowledge and spatial information. | 4.1 Provide governance and leadership that supports collaborative, effective and efficient weed management.  
4.2 Adopt adaptive, contemporary planning and processes.  
4.3 Develop a regional weed knowledge base and information system that supports state standards.  
4.4 Develop consistent systems for monitoring, evaluating and reporting on the effectiveness of weed management. |
1.3 A more strategic approach to weed management

1.3.1 Drivers

Weeds are a major threat to Australia’s natural environment. The impact of weeds on Australian agriculture alone, are estimated to be $2.5 billion in lost production and $1.8 billion in control activities every year (NSW DPI, 2015). Impacts on biodiversity and natural environments are harder to quantify, but equally significant.

As well as increasing costs of weed control, a range of developments are increasing the need to manage weeds more strategically and efficiently:

- NSW weed management reform, identified in a Review of Weeds Management in NSW (Natural Resources Commission in 2014). This followed reform of Commonwealth biosecurity measures in 2012, alignment of state legislation, and measures for better cross-jurisdictional biosecurity management around the country.
- Globalisation is integrating the world economy with rapid growth in trade, tourism, passenger and cargo movements. This is increasing the risk of pest, disease and weed incursions.
- The global climate is more variable and less predictable, with more extreme weather events, increasing average temperatures and other changes expected. These changes are likely to favour the establishment, spread or shift of some weeds and limit the distribution and impact of others.
- The demand for food is continually increasing, with modelling indicating global food production will have to double between now and 2050 to keep up with that demand. We need to do everything we can to protect our capacity to produce food, with weeds being a major impact on productivity.
- Herbicide resistance is a growing problem, particularly with the development of resistant crops. There is also a trend towards growing organic produce in western countries, and concern about the impact of pesticides on health.
- Pressure to maintain profitability and increase efficiency are ongoing in government, industry, and business sectors with an ageing population and an increasingly global economy. It is crucial that limited resources for weed biosecurity are used wisely, with constructive partnerships and clear decision-making processes established.

Technological developments are creating opportunities to improve the cost effectiveness of weed control and improve capacity to work more strategically at a landscape scale. Planning for weed management must consider the effectiveness and efficiency of control measures so that the cost is commensurate with the benefit.

The NSW Biosecurity Strategy 2013-2021 outlined the measures needed to align NSW with Commonwealth and other state biosecurity policies. This led to the development of the NSW Biosecurity Act 2015, which replaces 14 other pieces of legislation, and establishes a clear framework for safeguarding primary industries, natural environments and communities from biosecurity threats.

The emphasis in the NSW Invasive Species Strategy and biosecurity legislation is on prevention of invasive species and early intervention in the incursion process (see Figure 4.1). Early and strategic investment to prevent and eradicate invasive species provides more cost-effective and successful weed control outcomes.
1.3.2 Weed committees and development of this plan

The NSW weed reforms recommended that Local Land Services assume responsibility for forming a weed committee in each region, to act as a Community Advisory Group and provide appropriate support for weed management and planning.

The Western Regional Weed Committee includes representatives from local government, Macquarie Valley Weeds Advisory Committee, NSW Department of Primary Industries, NSW Office of Environment and Heritage (including the National Parks and Wildlife Service), Pastoralists Association of West Darling, NSW Farmers, Western Landcare, NSW Aboriginal Land Council, the Mallee Sustainable Farming group, Dried Fruits Australia, Department of Industry – Lands and Western Local Land Services. Through this representation, the committee provides tenure neutral strategic planning and coordination of weed management activities at a regional level and also provides a forum for community and stakeholders to raise issues and find solutions.

The State Weeds Committee was established to provide a statewide perspective in overseeing implementation of the weed management reforms: auditing, evaluating weed declarations, and providing state-level perspectives and governance. Their role includes developing service delivery standards for weed compliance, and commissioning audits. The Regional Weed Committee refers weed policy issues to the State Weeds Committee and will support the State Weeds Committee in the development and implementation of performance standards.

This plan represents a partnership between the Regional Weed Committee and its representative organisations, including state government agencies, local government, stakeholders, the community and Local Land Services. Working together, the committee developed this plan for the Western Local Board.

The relationship between Local Land Services, the Regional Weed Committee, the State Weeds Committee and other customers and stakeholders is shown in Figure 1.1. Government, industry, industry associations, research providers, universities, non-government organisations, individuals and the community as a whole all have a role to play in the management of weed biosecurity risks. Local Control Authorities play a particularly important role in weed management including enforcing the NSW Biosecurity Act 2015 with respect to weeds.

Figure 1.1: Roles in weed management.
Figure 1.2 shows the relationship between the Regional Weed Committee, the Western Local Board and other Community Advisory Groups. Western Local Land Services provides executive support to the committee.

Figure 1.2: Regional Weed Committee relationship to Western Local Board and other community advisory groups.

Hudson pear – *Cylindropuntia rosea*. Photographer Royce Holtkamp.
2. Policy framework

2.1 Overview of key plans and strategies

The Regional Weed Committee considered a range of relevant plans and strategies in development of this plan, at national, state and local levels. These are shown in Figure 2.1 below.

Figure 2.1: Overall planning framework for the Regional Strategic Weed Management Plan.
2.2 Guiding legislation

The NSW Biosecurity Act 2015, Local Land Services Act 2013 and Local Government Act 1993 are the key legislation directing implementation of this plan. The Biosecurity Act 2015 takes effect with publication of the regulations in the NSW Government Gazette. This Act is administered by NSW Department of Primary Industries.

A range of other relevant state and national legislation will also influence how the plan is implemented. Key NSW legislation relevant to weed management that will continue to operate in tandem with the NSW Biosecurity Act 2015 are the:

- Local Government Act 1993
- Local Land Services Act 2013
- National Parks and Wildlife Act 1974
- Biodiversity Conservation Act 2016
- Forestry and National Park Estate Act 1998
- Native Vegetation Act 2003
- Crown Lands Act 1989
- Crown Lands (Continued Tenures) Act 1989
- Commons Management Act 1989
- Western Lands Act 1901


Biodiversity management in NSW is also being reformed, with the NSW government implementing recommendations from the Independent Biodiversity Legislation Review Panel. This includes the new Biodiversity Conservation Act 2016, and Saving our Species (which will address the range of weeds in Schedule 4 of the Biodiversity Conservation Act 2016 listed as Key Threatening Processes). The State Weeds Committee will liaise with Regional Weed Committees on the effect of any changes flowing from these reforms.

2.3 Biosecurity Act

The NSW Biosecurity Act 2015 has repealed the Noxious Weeds Act 1993, which has provided regulatory controls and powers to manage noxious weeds in NSW. The NSW Biosecurity Act 2015 streamlines and modernises the way weeds are managed in NSW as it:

- embeds the principle of shared responsibility for biosecurity risks (including weeds) across government, community and industry
- applies equally to all land in the state, regardless of whether it is publicly or privately owned
- is premised on the concept of risk, so that weed management investment and response is appropriate to the risk
- supports regional planning and management for weeds, as recommended by the Review of Weeds Management in NSW.

In keeping with its premise that biosecurity is a shared community responsibility, the Act introduces the legally enforceable concept of a General Biosecurity Duty.
2.3.1 General Biosecurity Duty

For weeds, the 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).

“Dealing” has a broad definition in the Act and includes (but is not limited to) activities such as grazing, cropping, fodder production, horticulture, weed control, seed and other plant production, as well as carrying, sale and distribution of these products.

In general, if you deal with or carry plant matter as part of a commercial, professional, volunteer or recreational activity or lifestyle, it would be considered that you would know, or ought to know, the risks. Plant matter includes plants, parts of plants and seeds.

Weeds are not limited to plants listed in the Appendices of this plan or to schedules in the Regulations of the *NSW Biosecurity Act 2015*; any species that poses a biosecurity risk is subject to the General Biosecurity Duty. This provides the Act with more flexibility to deal with both agricultural and environmental weeds, plants that may pose risks in particular contexts, and invasive species which are not as yet present, but pose a risk.

2.3.2 Regulatory tools of the Act

The *NSW Biosecurity Act 2015* includes a number of mechanisms (regulatory tools) that can be used to manage weeds in NSW. These are outlined in Table 2.1 below. The *NSW Biosecurity Act 2015* and Regulations provide specific legal requirements for high risk activities and state level priority weeds. The State level priority weeds and associated legal requirements relevant to the region are included in Appendix 1 together with the high risk priority weeds from the regional prioritisation process.

Table 2.1: Tools of the *NSW Biosecurity Act 2015*.

<table>
<thead>
<tr>
<th>Tools of the <em>NSW Biosecurity Act 2015</em></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Prohibited Matter:</strong> Biosecurity matter listed in Schedule 2, Part 1 of the <em>NSW Biosecurity Act 2015</em></td>
</tr>
<tr>
<td>for the purpose of preventing entry of that matter into NSW or a part of NSW. Prohibited matter relevant</td>
</tr>
<tr>
<td>to the region is listed in Appendix A1.1 of this plan. Prohibited matter includes weeds nationally targeted</td>
</tr>
<tr>
<td>for eradication and presently not in NSW.</td>
</tr>
<tr>
<td><strong>Control Order:</strong> Establishes one or more control zones and related measures to prevent, eliminate,</td>
</tr>
<tr>
<td>minimise or manage a biosecurity risk or impact. Control orders are for managing weeds under approved</td>
</tr>
<tr>
<td>eradication programs and last for five years (or can be renewed for longer-term eradication programs).</td>
</tr>
<tr>
<td>Weed Control Order 2017 (Part 6 Division 1) under the <em>NSW Biosecurity Act 2015</em> will include weeds that</td>
</tr>
<tr>
<td>are subject to a Control Order for the purpose of eradication. Further Control Orders will be proposed as</td>
</tr>
<tr>
<td>needed to address subsequent eradication campaigns.</td>
</tr>
<tr>
<td><strong>Biosecurity Zone:</strong> Aims at containment of a species and provides for ongoing strategic management in a</td>
</tr>
<tr>
<td>defined area of the state. A Biosecurity Zone specifies the measures that must be taken in the defined</td>
</tr>
<tr>
<td>area to manage the weed. Outcomes to demonstrate compliance with the GBD may also apply to the species</td>
</tr>
<tr>
<td>either within the zone or outside it.</td>
</tr>
<tr>
<td><strong>Mandatory Measures Regulation:</strong> Requires parties to take specific actions with respect to weeds or</td>
</tr>
<tr>
<td>carriers of weeds. Mandatory Measures are defined in the regulations and include prohibition on certain</td>
</tr>
<tr>
<td>dealings - including Weeds of National Significance (WoNS) (Division 8 Clause 33), Parthenium weed carriers</td>
</tr>
<tr>
<td>- machinery and equipment (Division 8 Clause 35), and duty to notify of importation of plants into the</td>
</tr>
<tr>
<td>state (Division 8 Clause 34). Mandatory measures relevant to the region are listed in Appendix 1.</td>
</tr>
<tr>
<td><strong>General Biosecurity Duty (GBD):</strong> The purpose of the GBD is to manage the spread and/or impact of all</td>
</tr>
<tr>
<td>weeds that pose a biosecurity risk (2.3.1 above provides more detail). The GBD is in addition to any</td>
</tr>
<tr>
<td>requirements included in a Control Order, Biosecurity Zone or other instrument made under the *NSW</td>
</tr>
<tr>
<td>Biosecurity Act 2015*. For priority weeds, outcomes to demonstrate compliance with the GBD are detailed</td>
</tr>
<tr>
<td>in Appendix 1 of this plan.</td>
</tr>
</tbody>
</table>
2.3.3 Enforcing the Biosecurity Act

NSW Department of Primary Industries (DPI) administer the *NSW Biosecurity Act 2015* and determine the weed species covered by regulatory tools such as Prohibited Matter, Control Orders and Biosecurity Zones.

Local Control Authorities (Local Shires and Councils and, in the unincorporated areas of the region, the Department of Industry - Lands) are responsible for enforcing weed legislation. This includes such activities as:

- conducting weed inspections on public and private property
- inspecting and controlling weeds in high risk pathways and sites
- providing education, training and resources for both the public and staff in relation to weed management
- administering and ensuring compliance with any of the above regulatory tools
- responding to breaches of the Act
- notifying and reporting on weed activities to the Biosecurity Information System (BIS).

Authorised Officers under the *NSW Biosecurity Act 2015* are able to exercise all the functions specified in the Act, to enforce the act and its regulations, including the regulatory tools covered in Table 2.1. Authorised Officers are appointed by the Secretary of the Department of Industry or their delegate. Local Control Authority Weed Officers will be appointed as Authorised Officers under the *NSW Biosecurity Act 2015* by their Local Control Authority. That appointment will allow the officers to exercise the functions of an Authorised Officer for weeds within the area of operation of their Local Control Authority.

The primary focus of this plan is to encourage and work with the community and land managers to achieve weed management objectives. Education, extension and use of biosecurity undertakings reinforce the concept of the General Biosecurity Duty and establish a cooperative approach to local and regional weed management.

Monitoring and compliance for weed management in the region will focus primarily on weeds listed in Appendix 1 to this plan. For these high risk weeds, prompt and responsible action is essential to avoid significant impacts on other land managers, industry and the environment.
Box 1.1: Agreed standards for weed management.

In terms of regulation, the Regional Strategic Weed Management Plan plays an important role in articulating the shared responsibility principle of the NSW Biosecurity Act 2015 (the Act) and communicating weed control obligations. Although the plan is not a regulatory document in the traditional sense, it provides information to enable people to effectively discharge their obligations under the Act, including their General Biosecurity Duty.

The General Biosecurity Duty requires that all land managers and users ensure: as far as is reasonably practicable, that the biosecurity risk is prevented, eliminated or minimised. It does not prescribe how these outcomes are achieved. For this reason the plan does not include prescriptive measures for land managers and users to discharge their General Biosecurity Duty. The plan focuses on the outcomes to be achieved, allowing for different measures to achieve the same outcome.

While not technically a Regulation, the plan links the key elements of Knowledge, Risk, Practicality and Outcomes for discharging the General Biosecurity Duty.
3. Weed management in the region

3.1 Regional overview

Location and communities

The Western region is the largest Local Land Services region in NSW, covering 314,500km$^2$, or 40 per cent of the state.

It is larger than the areas of Victoria and Tasmania combined. It is bounded to the east by the North West, Central West, Riverina and Murray Local Land Service regions and shares a border with six other interstate natural resource management regions in three states (Queensland, South Australia and Victoria).

Figure 3.1: Western Local Land Services region.

The region is sparsely populated; out of a total population of approximately 43,000, only the mining communities of Broken Hill (18,800) and Cobar (3,800) have urban populations greater than 3,000. Aboriginal people make up approximately 13 per cent of the region’s population.

Distances between even the smaller communities are considerable; return road journeys of 400 – 600 km within the region are not uncommon. Nearly one-third of the area (94,000 km$^2$) is unincorporated, meaning that it has no formal local government.
Climate

The vast majority of the Western region is located in the Hot (persistently dry) Desert and Grassland climatic zones, according to the modified Köppen classification system used by the Bureau of Meteorology. Both of these zones are characterised by their low and unpredictable rainfall, hot to very hot summers (maximum daily temperatures averaging 35 – 38 °C and not infrequently reaching the low 40 °C’s) and very low minimum temperatures during mid-winter (frosts are a common occurrence).

The southernmost fringes of the region, in the areas adjacent to the Murray and Murrumbidgee rivers, are in the warm (persistently dry) grasslands climatic zone. This zone is characterised by low and somewhat unpredictable rainfall, and warm to hot summers.

Rainfall in the region is low and highly variable, tending to summer dominant in the north and winter dominant in the south. Annual rainfall is highest in the north-eastern parts of the region and lowest in the west; annual average totals ranging from 411 mm at Brewarrina, to 323 mm at Balranald to 260 mm at Broken Hill. Drought is a common part of the climatic cycle in the Western region.

Current predictions point to a number of significant changes in the region’s climate over the coming decades including:

• an increase in average daily minimum and maximum temperatures over most seasons
• an increase in evaporation rates in most seasons, particularly in the Far West of the region
• a shift from winter/spring rainfall to summer/autumn rainfall (see Figures 3.2 and 3.3)
• more extreme impacts of La Nina (i.e. bigger floods) and El Nino (i.e. longer droughts) events.

These changes are likely to see shifts in the density and distribution of certain existing weed populations in the region, increase the risk of certain weed species being introduced and establishing while decreasing the risks associated with other species.

Figure 3.2: Predicted change (%) in mean precipitation for spring period (September – November) in Western region, 1990 – 2009 (base) to 2020 - 2039.
Landscapes, vegetation and soils

Arid and semi-arid rangelands dominate the region. It is a predominantly flat landscape, with small areas of low, stony ranges in its westernmost and easternmost parts. The region is bisected by the Barwon-Darling River system, which runs for approx 1,400 km north-east to south-west via a mostly confined series of channels and wetlands.

The headwaters for this system (and a number of other smaller rivers) originate in Queensland, increasing the risk of new incursions. The region is also bounded by the Murray and Murrumbidgee rivers to the south and the Lachlan River to the south east. There are numerous other smaller, mostly ephemeral, rivers and creeks across the region.

A diversity of vegetation communities are present in the region (see Figure 3.4), varying from the mulga woodlands and chenopod shrublands of the west, the mallee and Murray pine woodlands of the south, the brigalow-gidgee woodlands of the north and riparian vegetation associated with the river systems and floodplains.

Approximately 95 per cent of the region remains uncleared; however much of the vegetation has been modified to some degree due to the impacts of total grazing pressure and changed fire regimes.

Soil profiles vary considerably within the region, with sandy soil types predominant in north western parts, trending towards loams the further one moves east. Clay soils are strongly associated with the rivers and floodplains of the region.
**Land tenure**

Nearly all the land in the Western region is held under Western Lands Leases, granted under the *Western Lands Act 1901*, with only a small area under freehold.

Most Western Lands Leases are perpetual (ongoing) and can only be used for a designated purpose. The Department of Industry — Lands administers more than 6,600 Western Lands Leases, including 4,300 for grazing, 505 for agriculture, 1,593 for residence and 179 for businesses.

Western Lands Leases granted for the purposes of residential, business, agriculture, mixed farming, cultivation or similar purposes are eligible to be converted to freehold. However, at this time leases held for grazing or pastoral purposes cannot be converted to freehold.

In addition, the Department administers 16 Crown Reserves leases, 104 Crown and Irrigation Area leases, and 816 licences to occupy Crown land. These include lands reserved for purposes such as public recreation, commons, urban services, showgrounds, public halls, cemeteries, schools and hospitals. They also include a substantial area (approximately 1.5 million hectares) of travelling stock reserves, which effectively overlay a Western Lands Lease and remain available as part of the lease, for the lessees exclusive use, subject to the lands remaining available for the *bona fide* passage of travelling stock.

![Figure 3.4: Vegetation communities of the Western region NSW.](image-url)
Land use and the regional economy

The Western region is estimated to generate in excess of $1 billion in earnings per annum, predominantly from agriculture, mining and tourism. The vast majority of the region is used for extensive grazing of domestic livestock (sheep, cattle and goats) on native pastures.

The size of these pastoral properties varies considerably; some properties in the far west of the region can be up to 200,000 hectares (2,000 km²) in size, while properties around Wentworth and Balranald are usually smaller (5,000 – 6,000 hectares). Organic production systems are being adopted on an increasing number of these properties.

In recent decades, the region has seen an increase in more intensive forms of agriculture, with dryland farming (i.e. cereals in the southern mallee areas) and irrigated agriculture (i.e. cotton, horticulture and viticulture) being significant, particularly along the eastern and southern margins. There are important irrigation centres along the Barwon-Darling, Murray, Murrumbidgee and Lachlan rivers.

A significant proportion of the region is under some form of protection for conservation and/or cultural purposes. These areas can be found in most districts and, in some cases, are far larger than nearby properties used for other purposes. They include Mungo NP (within the Willandra Lakes World Heritage Area), the Menindee lake system and Mutawintji National Park (also a declared Wilderness), three Ramsar wetlands - Narran Lakes, Paroo River Wetlands and Lake Pinaroo. A number of endangered ecological communities and threatened species are found in these and other areas of the region. The region contains significant Aboriginal cultural assets that need protection from a range of weed species. A large and growing tourism industry is strongly associated with these areas and is an important part of the regional economy.

While mining is a major contributor to the regional economy, it occupies a relatively insignificant area of land, being mostly restricted to small areas in or adjacent to Broken Hill and Cobar.
Key natural resource management issues

Given its history, size and diversity of land uses and natural environments, it is to be expected that the Western region has a number of natural resource management issues that are of concern to land managers and the general community. Many of the issues are inter-related. Issues considered to be of most significance are:

- **Uncontrolled total grazing pressure** – domestic livestock, native grazers (e.g. kangaroos) and other feral grazers (e.g. rabbits, goats etc.) all utilise the same native pasture base. Excessive grazing pressure at any given time reduces the number and biomass of desirable plant species, exposes the soil surface to wind and water erosion, compromises landscape function (i.e. the ability of land to capture and cycle moisture and nutrients) and can provide a niche for undesirable plants (i.e. invasive native species and exotic weeds) to establish. This negatively impacts on the productivity of grazing enterprises and reduces biodiversity.

- **Invasive native species** – total grazing pressure (see above) and changed fire regimes are held to be largely responsible for the increase in density of some species of native shrubs and trees (e.g. turpentine bush, punty bush etc.) in some parts of the region. Extensive, dense stands have established in many cases, which precludes the growth of useful native pasture species, restricts the movement of livestock and humans, compromises landscape function and reduces biodiversity. The management and control of invasive native species is subject to the provisions of the NSW Native Vegetation Regulation 2013; they are not subject to the provisions of the Biosecurity Act 2015 and thus are not covered by this plan. For a list of plants currently recognised as Invasive Native Species under the NSW Native Vegetation Regulation 2013, please refer to the Landholder Guide accessible via the following weblink. ([http://www.environment.nsw.gov.au/resources/vegetation/150010lhguide-ins.pdf](http://www.environment.nsw.gov.au/resources/vegetation/150010lhguide-ins.pdf))

- **Incursion of new weeds** – the region is fortunate to have relatively few examples of widespread species of weeds, thanks in part to its relatively intact native vegetation and low rainfall. However, a number of factors including the size and remoteness of the region, changing land uses, the presence of a number of important incursion pathways (i.e. rivers, road corridors, increased movement of stock, fodder and machinery) and a changing climate mean that the risk of new species of weeds being introduced and establishing is increasing. While agriculture is likely to be most affected by any new incursions, a significant threat is also posed to the region’s natural and cultural values and the enterprises (such as tourism) that rely on these areas being maintained.

- **Unmanaged Pest Animals** – Introduced exotic species that have established populations in the wider landscape such as rabbits, goats, pigs, foxes, wild dogs, donkeys, horses and deer, have various impacts on the agriculture and biodiversity of the region. These species not only contribute to the total grazing pressure (see above), but also impact on production and biodiversity either through predation of domestic livestock and endangered native fauna or destruction of their habitats. Some species (e.g. goats and pigs) also pose significant biosecurity, economic and social threats to the Western region as they can harbour and transmit both endemic and exotic diseases such as foot and mouth disease (FMD). Native species such as kangaroos can achieve unsustainable population spikes when seasonal conditions are favourable and place additional grazing pressure on the rangeland landscape. As discussed above, if not managed appropriately, an increase in the total grazing pressure provides the opportunity for invasive plant species to establish, dominate and displace more desirable species, which ultimately results in reduced productivity, and biodiversity.

- **Functioning aquatic environments** – the region includes some of the state’s major river systems, including the iconic Barwon-Darling system (and its tributaries), the Murrumbidgee, Murray and Lachlan rivers and a number of internationally recognised wetlands. The proper functioning of these rivers and wetlands is not only essential to the health of the associated natural ecosystems and the maintenance of the high cultural value that the region’s aboriginal people place on them, but also to the agricultural enterprises and communities that rely on these waterways for adequate supplies of good quality water for irrigation and domestic purposes.
**Key regional drivers**

Land manager, stakeholder, technical and scientific input has identified several key drivers which will continue to shape land use, social structures and natural resource management in the Western region. They are as follows:

- **Climate variability** – the Western region has a highly variable and unpredictable climate. As is the case in other arid and semi-arid regions of Australia, its native plants and animals have adapted to this. Coupled with the variability in soil types mentioned previously, the region’s agricultural systems have also had to adapt. The result is a patchwork of natural environments and agricultural systems, which vary considerably in their productivity over space and time. This variability is likely to increase (i.e. more extremes) under climate change.

- **Remoteness** – as noted previously, the region is a large area, characterised by a small population, mostly living in small communities or on isolated properties, with significant distances between them. The people of the region have generally adapted well to this. However, it does increase the level of difficulty in accessing many public and private services, modern communications and markets for agricultural produce. It also complicates their ability to engage in and influence political and business decision making processes. This can significantly affect their ability to identify and effectively respond to change.

- **Market and financial fluctuations** – the region’s economy is largely underpinned by agriculture and mining, and a growing tourism sector. Most business units are small to medium sized, family owned and operated and are reliant on one or two commodities for the majority of their income. Prices received for commodities produced can vary significantly over time. Costs of production, while generally increasing, can also vary significantly from year to year. These factors greatly affect the profitability of these businesses and thus their ability to invest back into improved land management and biosecurity practices. While land managers in all other regions are also subject to these factors, their impact in this region tends to be exacerbated by interplay with the ‘Climate Variability’ and ‘Remoteness’ drivers mentioned previously.

- **Technology** – technology is changing rapidly; particularly in the fields of communication, finance and marketing and to a lesser (but still significant) degree in the fields of agricultural production and land management. This creates some clear opportunities for the people and businesses of the Western region; information can be accessed more readily and some options to increase enterprise productivity and improve land management outcomes cost-effectively, that didn’t exist previously, are now available. However, the speed of change can often outpace the ability of the region’s (particularly communication) infrastructure to deliver such technology and/or the community’s capacity to understand and adopt it.
3.2 Recent strategic weed management in the region

Past planning efforts

Coordinated management of weeds in the Western region dates back to the 1980s, through the involvement of a number of local control authorities from the northern and eastern parts of the region in the Macquarie Valley Weeds Advisory Committee. While its membership was originally based on local control authorities, the Macquarie Valley Weeds Advisory Committee has since broadened its base to include many other organisations who play a role in the coordination, funding and implementation of weed management programs in the region. These include Local Land Services, NSW Department of Industry – Lands and the NSW Office of Environment and Heritage.

In a similar vein, the Western Riverina Noxious Weeds Advisory Group was formed in 1997; including all key stakeholders involved in what is now the south western portion of the Western Local Land Services region. Members included representatives from local control authorities, NSW Office of Environment and Heritage, Crown Lands, Murrumbidgee Irrigation, Murrumbidgee Private Irrigators Inc., and the then Livestock Health and Pest Authorities and Catchment Management Authorities.

A primary focus of both the Macquarie Valley Weeds Advisory Committee and the Western Riverina Noxious Weeds Advisory Group has been to develop a series of regional weed management plans, so that a more coordinated approach to the management of priority weed species could be taken across the whole, or parts, of the region. Most of these plans are still current.

Both organisations have also played a leading role in providing opportunities for the professional development of local weeds officers and the implementation of a number of community weed awareness initiatives. The groups took on a more formal coordinating role in 2010, with the advent of the NSW Weeds Action Program (WAP). A number of plans were required to be developed or updated as part of this program.

Thus, there has been a significant previous regional weed management planning effort that the Western Regional Strategic Weed Management Plan was able to draw upon. Plans of particular note include:

- Regional Weed Management Plans – Macquarie Valley for African boxthorn, athel pine, blackberry, chilean needle grass, coolatai grass, mimosa, parthenium weed, prickly pear and harrassia cactus, serrated tussock and silver-leaf nightshade
- Macquarie Valley High Risk Pathway Management Plan
- Macquarie Valley Incursion Plan 2012
- Regional Weed Strategy – Lower Murray Darling Catchment (2nd edition)
- Regional Weed Management Plans – Lower Murray Darling Catchment for alligator weed, chilean needle grass, coolatai grass, Sagittaria spp., serrated tussock, silver-leaf nightshade and spiny burrgrass.
Current situation and efforts

Strategic weed management in the Western region has been in a state of transition since the implementation of the NSW weed reforms commenced.

The Western Local Board has formal responsibility for the strategic management of weeds in the region and is currently in the process of taking over most of the planning and coordination functions previously provided by the Weed Advisory Committees. It is doing this via the Western Regional Weed Committee, which was formed in May 2016. Amongst its other roles, the Western Regional Weed Committee is responsible for developing this Regional Strategic Weed Management Plan, prioritising target weed species, promoting effective coordination of weed management and developing education and awareness programs based on local and/or regional priority weeds.

Members of the Western Regional Weed Committee currently are:

- Shane Wilson (Chairperson) – Carrathool Shire Council
- Trevor Joliffe and Roy Coburn – Balranald Shire Council
- Stephen Watts – Wentworth Shire Council
- Peter Maxwell and Melissa Gunn – Cobar Shire Council
- William Loughnan and Peter Hutchinson – Brewarrina Shire Council
- Kane Kreeck and Paul Everett - Central Darling Shire Council
- David Zhao and Libby Guest – Broken Hill City Council
- Carolyn Crain – Bourke Shire Council
- Roger Smith – Macquarie Valley Weeds Advisory Committee
- Ken Turner and Lachlan Gall - Pastoralists Association of West Darling
- Henry Gregory – Western Landcare
- Mark King – Dried Fruits Australia
- Ian Edson – NSW Farmers
- Chloe Bennett – NSW Aboriginal Lands Council (Far West)
- Win Scott – Mallee Sustainable Farming
- Mary Knowles – NSW Water
- TBA – Roads and Marine Services NSW
- TBA – John Holland Rail
- Joshua Higgins and Shaun Barker – Department of Industry – Lands
- Ben Matthias – NSW National Parks and Wildlife Service
- Michael Michelmore and Stephen Johnson – NSW Department of Primary Industries
- Hillary Cherry and Matt Sheehan – NSW Office of Environment and Heritage
- David Creeper and Jasmine Wells – Western Local Land Services

The Macquarie Valley Weeds Advisory Committee has continued its role as the lead group in the region for the coordination of projects under the 2015 – 2020 round of the NSW Weeds Action Program, with projects now being aligned to the new Local Land Services regional boundaries rather than the previous Weeds Advisory Committee boundaries.

A Regional Project Officer is employed to manage the WAP projects and to work with the new Regional Weed Committees in developing strategic documents. While many of its former roles are being transferred to the new Regional Weed Committees, the Macquarie Valley Weeds Advisory Committee has decided to remain active to assist in the transition. It is in the process of considering what its role may be in the longer term.

With a portion of its area being assigned to the Western Local Land Services region and given the impending transfer of most of its roles and responsibilities to the Regional Weed Committees, the Western Riverina Noxious Weeds Advisory Group decided to formally dissolve in October 2015.
3.3 Community involvement

Current capacity and involvement

Community involvement in, and capacity for, weed management in the region is variable.

Local control authorities, mostly based on local government (excepting the unincorporated areas where the Department of Industry – Lands acts as the local control authority), remain the mainstay of weed management in the Western region. Ten local government areas (see Figure 3.6 below) fall in whole or part within the boundaries of Western Local Land Services and all currently employ local weeds officers on a full or part time basis.

The primary roles of the local control authorities are to collect data on the presence and prevalence of weeds in their area, control weeds on council managed lands and ensure compliance with the legislation on all other lands (public and private).

Local weeds officers are also actively involved in a number of community awareness and extension activities. Most local control authorities in the region also maintain physical control capacity, in the form of spray equipment etc., which enable them to carry out weed control measures directly if required.

Figure 3.6: Local government areas in the Western region.

State government agencies are a significant part of the weed management capacity of the region. Approximately one third of the region (in the Far West) is outside the boundaries of local government. The Department of Industry – Lands is responsible for ensuring compliance with weeds legislation in these areas. Officers of the department carry out some weeds awareness, survey and enforcement activities as part of their broader role in working with the land managers of the area. Other units and individuals within NSW Department of Primary Industries have significant technical expertise in, or are carrying out research highly applicable to, the weed management issues of the region. They often play a key part in extension and community awareness activities. The NSW National Parks and Wildlife Service (a division of the NSW Office of Environment and Heritage) manage a large estate of parks and reserves in the region. They maintain a number of control assets to enable them to manage weed issues on these lands.
Individual land manager involvement in, and capacity for, weed management is highly variable. As noted previously, much of the region is used for the extensive grazing of domestic livestock on native pastures, mostly on large properties.

Land managers on these properties generally have limited knowledge of weed issues and little to no capacity to carry out weed control programs. In areas with more intensive farming systems, (i.e. irrigated agriculture, dryland farming), land managers tend to have better knowledge of weed risks relevant to their area, and have the capacity and willingness to actively control those weeds that they perceive as a threat to their enterprises. The capacity of agribusiness (i.e. rural suppliers, consultants etc.) in the region follows the same pattern; it is very limited in the pastoral areas and greater in areas where more intensive agriculture is practiced.

The prevalence of absentee landholders is also increasing markedly in some parts of the region and is having a significant impact on the ability of the community to monitor and manage weeds effectively. This is due to less people being “on the ground” in the first place and weeds being less of a priority for some new landholders, who often purchase a property for purposes other than production or active conservation.

**Other stakeholders**

A number of other organisations are seen as having the potential to play an important part in the management of weeds in the region. These include:

- Pastoralists Association of West Darling
- NSW Farmers
- NSW Aboriginal Land Council
- Mallee Sustainable Farming group
- Dried Fruits Australia local branches (Pomona and Coomealla)
- NSW Roads and Maritime Services
- NSW Water
- Australian Rail Track Corporation
- John Holland Group (manager of the Nyngan to Cobar rail line)

The nature of the involvement that these organisations could play in weed management in the region varies. The first five named are producer or indigenous landholder representative bodies, who could play a significant part in influencing regional weed priorities and programs, and through actively raising the awareness of weed issues amongst their membership.

The latter four named are significant managers of land in their own right, on which existing outbreaks of priority weeds are currently present and/or are important potential corridors for the spread of new weeds into the region. Efforts are being made to engage with these organisations, initially at the strategic level, through membership of the Western Regional Weed Committee and consultative processes.
4. Weed risk assessment and prioritisation

4.1 Weed management prioritisation

To ensure limited resources are used to best effect, and that management of weeds is commensurate with the risk posed by each species, an objective and repeatable weed risk assessment was undertaken across the region. This section outlines the principles and assessment processes used to prioritise weed management.

The generalised Weed Invasion Curve (Figure 4.1) illustrates the invasion process for weeds from arrival to widespread establishment (after Chippendale (1991); Hobbs and Humphries (1995); and Environmental Weeds Working Group (2007)) and shows that the effort and resources required to control a weed rise with time and area occupied. Managing weeds earlier rather than later is more effective.

This principle is a foundation of the process used to develop the regional weed priority list in this plan (Appendix 1). The asset protection phase shown in Figure 4.1 illustrates an important shift in the focus from controlling a weed species, to limiting the impact it may have on important assets.

Figure 4.1: Weed invasion curve illustrating area infested and resources required for control over time, and the basis of management objectives.
4.1.1 NSW weed risk management system
The NSW Weed Risk Management (WRM) system provides a standard, nationally accepted and transparent process to help make decisions about prioritising weed species and determining appropriate management responses. The Weed Risk Management system considers two components for prioritising weeds for management action:
1. a weed risk assessment
2. an assessment of the feasibility of coordinated control.

Weed risk is determined through scoring a series of parameters (invasiveness, impacts, potential distribution) and likewise for feasibility of coordinated control (control costs, persistence, and current distribution). An assessment of these components provides a management objective that reflects the principles of effective weed management, and links with the objectives of the *NSW Biosecurity Act 2015*.

4.2 Regional prioritisation process
A regional weed prioritisation process was undertaken using the NSW Weed Risk Management system. This was carried out using an expert regional panel on behalf of the Western Regional Weed Committee.

The panel brought together practitioners from organisations with long term on-ground experience with high priority species, including Local Control Authorities, Western Local Land Services, Department of Industry – Lands, National Parks and Wildlife Service, NSW Department of Primary Industries and the Macquarie Valley Weeds Advisory Committee.

Weed Risk Management system assessments were undertaken at the regional scale to ensure the outcomes reflected regional conditions. Where there was significant variation in weed risk or weed distribution in the region, the assessments were conducted at a sub-regional level, to determine containment zones or any other sub-regional response.

Quality assurance was undertaken by the Technical Subcommittee of the State Weeds Committee. The Technical Subcommittee reviewed the weed risk management assessments, management categorisation and objectives, and the outcomes to demonstrate compliance with the General Biosecurity Duty developed for the region.

This ensured consistency and alignment with the Weed Risk Management system and the *NSW Biosecurity Act 2015*. The Technical Subcommittee also provided guidance to regional weed committees on appropriate outcomes to demonstrate compliance with the General Biosecurity Duty. The management categories used in the assessment are summarised in Table 4.1.
Table 4.1: Regional weed management categories.

<table>
<thead>
<tr>
<th>Category</th>
<th>Objective</th>
<th>Characteristics of weeds in this category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prevention</td>
<td>To prevent the weed species arriving and establishing in the region.</td>
<td>These species are not known to be present in the region. They have a high to very high weed risk (highly invasive and high threat) and have a high likelihood of arriving in the region due to potential distribution and/or an existing high risk pathway.</td>
</tr>
<tr>
<td>Eradication</td>
<td>To permanently remove the species and its propagules from the region.</td>
<td>These species are present in the region to a limited extent only and the risk of re-invasion is either minimal or can be easily managed. They have a high to very high weed risk and high feasibility of coordinated control.</td>
</tr>
<tr>
<td>Containment</td>
<td>To prevent the ongoing spread of the species in all or part of the region.</td>
<td>These species have a limited distribution in the region. Regional containment strategies aim to prevent spread of the weed from an invaded part of the region (core infestation), and/or exclude the weed from an uninvaded part of the region (exclusion zone).</td>
</tr>
<tr>
<td>Asset Protection</td>
<td>To prevent the spread of weeds to key sites/assets of high economic, environmental and social value, or to reduce their impact on these sites if spread has already occurred.</td>
<td>These weed species are widespread and unlikely to be eradicated or contained within the wider regional context. Effort is focussed on reducing weed threats to protect priority high value assets.</td>
</tr>
</tbody>
</table>

4.2.1 Priority weed lists for the region

The regional prioritisation process culminated in the development of priority weed lists for the region. State level priority weeds were determined by the Department of Primary Industries and are listed in Appendix 1 (A1.1) of this plan.

Regional priority weeds are listed in Appendix 1 (A1.2) of this plan, which also identifies outcomes to demonstrate compliance with the General Biosecurity Duty for each species listed. Management requirements for weeds, whether that be specific regulatory measures (state level priorities) or outcomes to demonstrate compliance with the General Biosecurity Duty (regional priority weeds), are also detailed in Appendix 1.

The outcomes applied to a particular weed will depend on factors such as the biology and ecology of the weed, the land use(s) in which it occurs, the size of the infestation, potential pathways for infestation and others. These factors have been taken into account in determining the suite of outcomes to demonstrate compliance with the General Biosecurity Duty and strategic responses.

As with all components of this plan, these obligations apply to all private and public landholders in the region. Monitoring and compliance for weed management in the region will focus primarily on weeds listed in Appendix 1.
The Regional Weed Committee is aware of a number of differences between the Western region and adjoining regions (NSW and interstate) in relation to what weeds have been listed as a priority, or what outcomes and/or management requirements will be applied to particular weed species in each region (see Appendix 3 for a summary of these differences with adjoining NSW regions).

Some of these differences could negatively impact on control programs for some weed species, in one or more of the adjoining regions. A number of significant differences have been identified as a priority for further discussion with adjoining NSW regions, to develop a mutually agreed position wherever possible. This may result in some changes to what weeds are listed as regional priorities, or what outcomes and/or management requirements will be applied to particular weed species, in later editions of this plan. Significant differences with adjoining interstate regions will be raised if necessary with the relevant interstate authorities at a later date.

### 4.2.2 Additional regional weed lists

Appendix 2 outlines other weeds of concern identified by the Western Regional Weed Committee (in addition to the priority weed lists in Appendix 1) as a further focus for weed management and plan implementation in the region. This list is made up of species for which a consistent and/or collaborative approach to management will provide the best outcome across the region, consistent with the weed reforms. They include weeds such as:

- **Herbicide resistant weeds** – certain weed species in agricultural, horticultural and right-of-way (i.e. roads, railways etc.) situations have, as a result of repeated exposure to herbicides over a prolonged period, developed resistance to specific herbicide groups. This limits the options for control and makes management of these weed populations difficult.

- **Amenity weeds** – weeds, generally of urban environments, that have a high risk of causing injury or illness to human beings and/or detract from the enjoyment of public spaces (i.e. ovals, parks, playgrounds etc.)

- **Toxic plants** – some native and exotic plant species are known to be associated with livestock poisoning in certain seasons.

- **Other** – weeds of concern in pastoral extensive grazing situations, affecting enterprise productivity, ease of management and landscape function.

While all weeds identified within Appendix 2 are also subject to the General Biosecurity Duty and have been identified to highlight their importance and the risk they pose, any specific programs focusing on these weeds will place the emphasis on raising awareness, education, research and/or working with industries and communities affected by the plants.

The priority weed list for the region (Appendix 1) and the other regional weed lists (Appendix 2) may be amended as necessary in accordance with state level reviews and the regional review process outlined on page 54.
5. Actions

5.1 Overview

This section covers actions required to achieve our goals. In essence, Goal 1 addresses community capacity to discharge the General Biosecurity Duty; Goals 2 and 3 are focussed on weed management outcomes, while Goal 4 focuses on coordinating successful regional weed management.

Strategies, actions and associated regional measures of performance (see 5.3), are based on the best available information and science relevant to weed biosecurity. Strategies and actions for each goal are presented in Table 5.1 below.

Table 5.1: Goals, strategies and actions of the plan

<table>
<thead>
<tr>
<th>Strategies</th>
<th>Actions</th>
</tr>
</thead>
</table>
| 1.1 Promote weed management and behavioral changes in the community. | 1.1.1 Develop and implement a strategic marketing and communication plan that promotes delivery of weed management in the Western region.  
1.1.2 Develop products promoting behavioral change and the profile of weed management in the Western region, including promotional campaigns and events, sponsorship, media releases, social media, web sites, e-newsletters, brochures and other publications. |
| 1.2. Build stronger partnerships that support weed management. | 1.2.1 Develop partnerships that support tenure neutral weed management.  
1.2.2 Foster networks, alliances and aboriginal engagement that support communities and stakeholders in weed management activities.  
1.2.3 Develop and implement mechanisms to protect biodiversity and support management of weeds on non-productive land. |
| 1.3 Enhance community-wide capacity in sharing responsibility for weed management. | 1.3.1 Develop, promote and assist with interpretation of information outlining stakeholder roles, obligations and implications in weed management.  
1.3.2 Enhance existing communication networks to increase effective dissemination of information and understanding of shared responsibility and a whole of community approach to weed management.  
1.3.3 Provide greater opportunities for education, training and community based programs that support behavioural change and increase community capacity to manage priority weeds. |
Goal 2: Weed biosecurity supports profitable, productive and sustainable primary industries  
and  
Goal 3: Weed biosecurity supports healthy, diverse and connected natural environments

<table>
<thead>
<tr>
<th>Strategies</th>
<th>Actions</th>
</tr>
</thead>
</table>
| 2-3.1 Improve surveillance, reporting and tracing systems for weeds. | 2-3.1.1 Improve surveillance, reporting and tracing for weeds:  
• Widen implementation of early detection by encouraging partners to become involved in the High Risk Pathways and Sites inspection program and report via the Biosecurity Information System.  
• Develop tools, systems and services (e.g. drones) to allow for efficient weed mapping.  
• Build community capacity to assist with surveillance and reporting.  
• Undertake coordinated surveillance activities for high risk species.  
2-3.1.2 Support statewide processes in development of more efficient ways of demonstrating proof of freedom from weeds. |
| 2-3.2 Improve prevention, preparedness and response to weed emergencies. | 2-3.2.1 Improve cross-jurisdictional collaboration on consistent and effective approaches to preventing establishment of new weed species.  
2-3.2.2 Manage high risk pathways, using strategic intentional surveillance, region-wide and consistent industry codes, education and enforcement mechanisms.  
2-3.2.3 Improve prevention and response to weed biosecurity emergencies through improved identification processes, improved communication and reporting networks, and rapid responses to management of new high priority weeds. |
| 2-3.3 Eradicate or prevent the spread of new weeds. | 2-3.3.1 Develop standardised and consistent planning for:  
• Weeds listed in Appendix 1 to this plan.  
• New weed incursions, including rapid response plans and associated cost sharing arrangements.  
2-3.3.2 Work with other jurisdictions to standardise weed biosecurity arrangements across regional and state borders.  
2-3.3.3 Ensure management occurs for high priority weeds in alignment with relevant State, Regional or Sub-regional objectives. |
| 2-3.4 Contain and manage impacts of widespread weeds. | 2-3.4.1 Develop and promote integrated land management practices and best practice weed management to minimise the spread and reduce the impacts of established weeds.  
2-3.4.2 Support the ongoing development and coordination of new and existing cooperative programs for reducing or controlling the current extent of widespread weeds in priority sites.  
2-3.4.3 Actively manage high priority and widespread weeds which threaten key sites/assets in alignment with State, Regional or Sub-regional objectives.  
2-3.4.4 Continue to contribute to new and existing state and national arrangements for managing established weeds. |
| 2-3.5 Support weed research and implement developments in weed science and technology. | 2-3.5.1 Document invasive weed species research priorities in collaboration with government, industry, research providers, the aboriginal community, and the wider community and report these to the State Weeds Committee.  
2-3.5.2 Strengthen research partnerships and actively participate in the development of new technologies and innovative approaches to weed management. |
| 2-3.6 Assess and respond to changing weed risks associated with climate change. | 2-3.6.1 Use predictive modelling (e.g. Weed Futures, BioClim, ANUclim) to identify the likely weed species and the environmental, social and economic values that will be vulnerable to invasive weeds under a changing climate.  
2-3.6.2 Implement actions that promote resilience and minimise the risk of high risk invasive weeds under a changing climate. |
## Goal 4: Weed biosecurity is supported by coordinated, collaborative and innovative leadership

<table>
<thead>
<tr>
<th>Strategies</th>
<th>Actions</th>
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</table>
| 4.1 Provide governance and leadership that supports collaborative, effective and efficient weed management. | 4.1.1 Work in a collaborative partnership with all stakeholders to implement this plan.  
4.1.2 Support the functions and business needs of the State Weeds Committee.  
4.1.3 Support a coordinated regional approach to strategic and investment planning; monitoring, performance evaluation and reporting; weed risk assessment review; and weed emergency management preparation, response and recovery processes. |
| 4.2 Adopt adaptive, effective and collaborative planning and processes. | 4.2.1 Develop the components of the Regional Business Planning Framework that underpins the implementation of this plan.  
4.2.2 Work with stakeholders to develop and update local implementation plans using best available standards, local knowledge, research and technology, as required.  
4.2.3 Review and update existing Regional and Sub-regional weed risk assessments where and when required.  
4.2.4 Share information with other jurisdictions and regions on approach, progress and innovation with weed management. |
| 4.3 Develop a regional invasive weed knowledge base and information system that supports state standards. | 4.3.1 Support the continuing development of the Biosecurity Information System to collect standardised regional data (including weed mapping) capture, storage, record keeping and retrieval processes.  
4.3.2 Encourage wider use of the Biosecurity Information System to improve weed distribution and impacts data and management information.  
4.3.3 Ensure that weed information and research data are readily available to stakeholders for use in weed management and planning. |
| 4.4 Develop consistent systems for monitoring, evaluating and reporting on the effectiveness of weed management. | 4.4.1 Develop and implement indicators that assess the performance of this plan and progress towards achieving strategic outcomes.  
4.4.2 Develop and implement standard local monitoring and reporting protocols that support region and statewide needs.  
4.4.3 Use the information collected from research, local MERI programs and the Biosecurity Information System to inform an adaptive management approach to Western region weed management projects, plans, programs, policies and reforms. |
6. Implementation

This chapter covers how the plan will be implemented, including governance. It includes guiding principles for weed management planning and implementation and roles and responsibilities for stakeholders and customers in implementing this plan.

6.1 Regional Weed Committee

Collaboration and building capacity of land managers is central to the successful implementation of this plan. By working collaboratively and engaging with all sectors – public, private, non-profit, individuals and community groups – effective and lasting solutions to shared problems can go beyond what any sector can achieve on its own. The Western Regional Weed Committee and its member organisations will facilitate implementation of this plan with executive support from Western Local Land Services and overarching guidance from the Western Local Board.

In implementing the plan the committee will work with Western Local Land Services to:

- advise the State Weeds Committee on weed priorities and other strategic matters in the region and seek their advice relating to weed listings, cross jurisdictional and other matters
- liaise with neighbouring Regional Weed Committees and adjoining interstate weed control authorities, especially with respect to:
  - any significant incursions and potential movement of priority weeds from one region to another
  - any inconsistencies relating to how particular species are managed on the boundaries of each region.
- promote weed policy, risk assessments, declarations, best practice and control outcomes to member organisations and the community
- oversee the implementation of the plan on a region-wide perspective, using committee expertise and best available knowledge, research and technology
- facilitate regional communication, education, training and awareness programs that promote plan outcomes
- promote effective coordination of weed management across agencies and tenure, including appropriate resource and information sharing between member organisations
- identify synergies from collaboration and opportunities for funding and priority project delivery
- identify information and research needs and appropriate collaborative actions
- oversee measurement and evaluation of weed control activities in the region to inform management actions and planning
- monitor, evaluate and report on outcomes of collaborative planning and delivery processes.
6.2 Guiding principles for implementation

The following principles will be used to guide weed management planning and implementation and are consistent with the weed reforms and leading practice:

- effective stakeholder collaboration and shared responsibility are essential to effective weed management
- behavioural change and increasing community capacity are important to effective weed management
- prevention and early intervention are the most effective weed management tools
- causes of weed invasion and spread are managed wherever possible, not just the symptoms
- the biology and ecological requirements of weeds, including mechanisms and pathways for spread are considered in weed management
- innovation in weed control and management is encouraged
- regular monitoring, evaluation and improvement are incorporated in weed management programs
- weed management is an integral part of land management. Land management practices and their timing are critical to the prevention and reduction in the spread and impact of weeds
- weeds are managed in a strategic and coordinated manner across the landscape. Assessing and managing weed risk at a landscape and multi species scale (where appropriate) can lead to significant efficiencies in use of resources and achievement of strategic outcomes
- the best available science, expertise and tools are utilised in weed management decision making.

Mesquite - *Prosopis spp.*
6.3 Processes supporting implementation

A range of plans and processes will support implementation of this plan as outlined in Box 6.1. Western Local Land Services will work with the committee in the development of these processes in the region.

A key element of this plan is collaborative and coordinated weed management across tenures. This will require policies, processes and procedures for collaborative planning and action to enable member organisations and key stakeholders to translate this plan into local area priorities, actions, collaboration and partnerships that integrate weed management across both tenures and stakeholders.

Box 6.1 Business plans and processes that support delivery of the plan.

- Western Regional Weed Committee coordination - to ensure clear stakeholder roles and responsibilities and good governance. May also cover delivery of business planning components, including the review and update of weed risk assessments as required.
- Local implementation roles and responsibilities - to ensure clear roles and responsibilities and consistency in the delivery of local weed management.
- Processes for integrating regional delivery and projects - to ensure efficient and effective delivery.
- Compliance planning - to support an integrated and consistent approach to meeting regulatory obligations across the region.
- High risk weed incursion planning - to address surveillance and identification of new weed incursions and coordination of regional responses.
- Rapid response planning - to address procedures, responsibilities and actions for response to a new incursion.
- Local Control Authority planning - to ensure that compliance strategies, standards and service agreements are consistent with this plan and to provide a consistent policy and procedural framework for inspections and enforcement under the NSW Biosecurity Act 2015.
- State Guidelines and best practice codes - to support consistency in approach and the capacity to inform statewide reporting.
- Communication and marketing - to develop a strategic approach to communicating key messages and engaging partners, stakeholders and the broader community.
- Key performance indicator development - to support assessment of this plan’s performance measures.
- Monitoring, evaluation, reporting and improvement coordination - to support consistent approaches that allow for reporting at local, regional and state scales.
- Research and development collaboration – to support a collaborative approach to addressing research needs in the region.
- Investment planning – to support an integrated approach to investment in priorities for weed management in the region.
- Procedures for review of weed listings in the plan - responsibility for amendments to state determined priorities rest with NSW Department of Primary Industries and the State Weeds Committee. The committee will raise any identified issues with changes to listings for state determined priorities via the State Weeds Committee to ensure consistency and alignment.

Many of these plans and processes are already underway, but require Regional Weed Committee endorsement or further collaboration between partners.
6.4 Delivery partners

Delivery partners have an interest in delivery of priority actions. This interest spans from being involved in refining priority actions, to further developing processes to address actions, through to participating in the delivery and enforcement of the plan. Broad roles and responsibilities are determined, and responsibilities for specific actions will be agreed upon. As implementation progresses and opportunities for new partnerships emerge, new partners may also become involved.

Resourcing of weed management is unpredictable and will fluctuate, and partners also differ in their capacity to deliver weed management resources. Commitments from partners improve community confidence in action implementation. It is recognised that commitments and capacity may be contingent upon availability of resources at a given point in time.

6.4.1 Lead organisations

Lead organisations will take responsibility for the delivery of actions and performance measures within this plan and will manage and coordinate implementation of components of the plan and associated programs. This will ensure clear responsibilities for plan implementation and will be agreed upon in the development of relevant business plans and policies. Partners will take primary responsibility within their respective areas in the delivery of actions and performance measures. Other government agencies, industry and community will also play a role in implementing this plan to varying degrees.

6.4.2 Roles and responsibilities

A wide range of stakeholders and customers are involved in weed management in the region. This plan recognises the roles of all levels of government, industry, community, community organisations and individuals. This plan aims to consolidate these efforts through better coordination and communication between organisations and individuals in the region.

**Australian government**

The Australian government has a role in preventing new weed incursions at national borders, in research and development, funding and national legislation. National agreements also outline the roles and responsibilities of government and industry, in responding to emergency plant, pest and disease incidents and detail how those responses will be funded. These agreements include the Intergovernmental Agreement on Biosecurity, Emergency Plant Pest Response Deed and the National Environmental Biosecurity Response Agreement.

**State government**

The NSW government leads the development of policies and strategies that encourage a comprehensive and responsive weed biosecurity system. They also ensure that there is a strong legislative and regulatory framework underpinning the system. The Department of Primary Industries is the lead agency for weed management within the NSW Government, with support from the Office of Environment and Heritage in relation to environmental weed management across NSW.

Key roles and responsibilities for these two agencies include:

- administration of key legislation relating to priority weeds (*NSW Biosecurity Act 2015* – Department of Primary Industries and *Biodiversity Conservation Act 2016* – Office of Environment and Heritage)
- increasing awareness of weeds amongst industry, key stakeholders and the community
- leading and coordinating prevention, preparedness, response and recovery for weed emergencies
- developing non-regulatory approaches and incentives to underpin weed management
- coordinating diagnostic, surveillance, tracing and monitoring systems for priority species
- conducting weed species research in priority areas and collaborating with universities and research providers on priority research initiatives and pest and weed identification
- coordinating the delivery of leading practice solutions for weed managers across the state.
NSW Department of Primary Industries leads and coordinates the prevention, preparedness, response and recovery for weed emergencies. This agency also develops and maintains regulatory mechanisms that support weed programs. It also leads the statewide Weeds Action Program 2015-2020, a NSW Government initiative to reduce the impact of weeds and is guided by the NSW Biosecurity Strategy 2013-2021.

The Office of Environment and Heritage is responsible for managing more than 850 national parks and reserves (see further below). OEH also leads statewide initiatives to reduce the impacts of invasive species on biodiversity. The “Saving our Species” program provides for the conservation of threatened taxa across all land tenures under the Biodiversity Conservation Act 2016.

**Department of Industry — Lands**

The Department of Industry - Lands is a business unit of the NSW Department of Industry and administers and manages Crown land, which makes up approximately half the state. The Department develops, funds and implements invasive species management strategies on land under its direct control. It also supports activities undertaken by community groups and other stakeholders that manage land on its behalf, including community trusts and local government.

The Department of Industry — Lands incorporates a multi-pronged risk-based approach to managing invasive species on Crown land, including education, extension, project implementation, audit and compliance activities. Nearly all land in the Western region is Crown land, primarily held under Western Lands Leases, administered by the Department. While the responsibility for control of weeds on Western Lands Leases rests with the lessees, the Department is always keen to work in partnership with other stakeholders and agencies to ensure optimal outcomes in the management of invasive species on Crown land. On behalf of the Western Lands Commissioner, the Department acts as the local control authority for the unincorporated area (i.e. not within a local government area) of the Western region.

**Office of Environment and Heritage and National Parks and Wildlife Service**

The National Parks and Wildlife Service (NPWS – part of OEH) is responsible for managing over seven million hectares of land in NSW. As a public land manager, NPWS works with a range of stakeholders to proactively and strategically manage weeds. NPWS is guided by Regional Pest Management Strategies that identify weed management priorities and programs for implementation on all lands managed by NPWS.

The strategies aim to minimise the adverse impacts of pests and weeds on biodiversity, protected areas and the community by identifying the highest priority programs and focusing on these, ensuring that actions are achievable, and delivering measurable outcomes. The strategies also demonstrate NPWS responsibilities in delivering the NSW Biosecurity Strategy 2013-2021.

**Local government**

Local government will continue to play a significant role in biosecurity, and particularly in the management of weeds. It has an important role to play in engaging local communities, managing public lands and assisting with emergency management.

Other than for the unincorporated areas of the region (see Department of Industry – Lands above) the local control authorities are the local shires and councils within the region. Local control authorities are responsible for the implementation of priority weed control including:

- delivering components of the Weeds Action Program in their area
- enforcing weed management obligations
- conducting inspections
- controlling weeds on lands managed by the local control authority
- input into weed strategy and policy
- providing education, training and resources for both the public and for staff.
Other managers of Crown land and linear reserves

A number of organisations and government agencies manage crown land allocated for specific purposes. These include lands reserved for harvesting timber (Forestry Corporation of NSW, a state owned corporation), for environmental and heritage protection, or transport infrastructure such as road and rail corridors (Roads and Maritime Services, Australian Rail Track Corporation and John Holland Rail Pty Ltd) and corridors for energy infrastructure. All land managers have an important role in the management of weeds in the region and their role includes the development and implementation of management strategies and the education of the community and other stakeholders.

Unlike other parts of NSW, the management (including management of weeds) of travelling stock reserves is not the responsibility of Western Local Land Services. In the Western Division of NSW, travelling stock reserves effectively “overlay” a Western Lands Lease and remain available as part of the lease, for the lessees exclusive use, subject to the lands remaining available for the bona fide passage of travelling stock. Lessees are also responsible for the management of any Travelling Stock Reserves present on their lease, including weed management.

Aboriginal land managers

The role of Aboriginal communities in weed management is consistent with that for other community organisations and the general community, but with cultural factors influencing that management. Aboriginal traditional owners have obligations under traditional law and custom to care for Country, as well as obligations as land owners and managers. This may result in Aboriginal people having priorities for weed management to address threats to cultural sites or threats to an important cultural resource (Office of Environment and Heritage, 2016).

Throughout the region there are a number of different types of land ownership and management by Aboriginal people. Several Indigenous Land Use Agreements (ILUA’s) are currently being, or are likely to be negotiated in the Western region, which will help clarify obligations of public and private land managers where Native Title is recognised over the land they manage (Office of Environment and Heritage, 2016).

Industry

Industry roles in weed management include:

- implementing and developing industry standards, guidelines and codes of practice
- contributing to research programs in priority areas
- participation in biosecurity response agreements and cost-sharing arrangements
- managing weeds on land and water used for production
- managing risks when trading in potential or known weed species used for, or held by, nurseries, pet shops (water weeds), collectors, agriculture, horticulture, aquaculture and biofuels etc
- preventing the establishment of weeds, through movement of goods, produce and equipment or related activities such as the extraction and transport of road building materials.
**Community groups, volunteers and individuals**

Community groups and volunteers play an important role in the management of weeds in the region. This includes Western Landcare, a community based organisation that encourages and coordinates over 15 Landcare and other producer groups in the region.

Community groups and volunteers support community engagement and assist in hands on weed management. This includes leading volunteer groups that undertake weed removal and monitoring activities, bush regeneration, biodiversity conservation projects and rehabilitation of aquatic habitats on private and public lands. Building on this foundation to share in responsibilities for weed management, is essential.

Individual community members have an important role to play in helping to minimise the impacts of weeds in the region. The community provides much needed “eyes and ears” on the ground to detect and report new incursions and support eradication. The community also provides crucial support to the actions of responsible authorities, land managers and external funding programs. Likewise programs that build resilience in the natural environment and help reduce the risks from pests, diseases and weeds rely on community participation.

Private land owners and occupiers have roles to play in the ongoing management of established weeds on their own land and in collaboration with their neighbours and the surrounding community. Along with others they have a general biosecurity duty under the *Biosecurity Act 2015*.

### 6.5 Investment

Currently the most significant investors in weed management in the Western region are:

- **NSW government** – through its funding of the Weeds Action Program 2015-2020, funds spent controlling weeds on its own lands and state border biosecurity arrangements.
- **local government** – through co-investment in local control authorities and through funds spent controlling weeds on its own lands.
- **land managers** – through control of weeds on their properties deemed by them to be of economic and/or environmental importance and/or to fulfil obligations under the *NSW Biosecurity Act 2015*.
- **Australian government** – through investing in the planning for and management of a number of weeds of national significance (WoNS) present in the region and national border biosecurity arrangements.

While each of the above (and other less significant) investors has their own set of drivers, aims and preferences, recent efforts to coordinate weed management planning and programs in the region have seen these aims and preferences become better aligned over time. Through its identification of shared priorities, this Regional Strategic Weed Management Plan will assist this process of alignment to continue and thereby enable the plan’s goals to be met.

Clear definition of partner roles and responsibilities will be critical to ensuring that stakeholders can continue to satisfy their individual investors, whilst also delivering results that complement and value add to a greater set of outcomes (e.g. coordinated local control authority compliance, high risk incursion and rapid response planning will contribute to broader regional weed biosecurity). The Western Regional Weed Committee has a critical role in this regard.

It can be seen from the above investment profile that government plays a prominent role in the funding of weed management in this region, due to the region’s size and remoteness and the strong “market failure” case associated with many of the weed species being managed. However, there is continuing downward pressure on the availability of government funding generally and current State funding models for weed management appear to place the Western region at a disadvantage. The achievement of this plan’s goals will not be possible unless adequate resources to implement it are available. The Western Regional Weed Committee will continually work with the NSW government to ensure funding for weed management in the region is both sufficient and equitable.

It is also recognised however that there are opportunities to leverage existing funding sources through a coordinated approach and access any new streams of funding as they arise. The Western Regional Weed Committee will play a critical role in sourcing investment, brokering partnerships, and facilitation coordination of stakeholder investment to ensure that the region’s weed biosecurity needs are met.
The committee will provide advice on options for tailoring both new and existing streams of investment so that they best fit the region's new management approaches. The committee will also facilitate exploration of opportunities for integrating the existing efforts of stakeholders, along with options for stakeholders to work in collaboration on new initiatives.

While investment and regulation will continue to be key drivers for change in how weeds are managed in the Western region, it is recognised that there are a number of other drivers, at the personal and community level, that can be very important in either facilitating or hindering change. These include:

- the personal economic incentive
- financial position of individual businesses
- the “Landcare”/environmental ethic (i.e. taking action to benefit the environment, for its own sake)
- community ethic (i.e. “community pride”, doing what is “right” for the community)
- personal knowledge and beliefs.

### 6.6 Community engagement

This plan recognises that, for positive change to the way we manage weeds in this region to be implemented and sustained over the longer term, the region’s communities needs to become aware of the plan and its implications, have input into its ongoing development and the capacity to play its part in its implementation.

Significant effort will be put into letting all stakeholders, land managers and other community members know about the plan, how weed management in the region has changed under the new *NSW Biosecurity Act 2015*, and the implications for how they manage weeds.

A communication and marketing strategy will be developed to identify community and stakeholder engagement needs, their sphere of influence, their roles in weed management, and the best ways to approach and involve them in weed management. Clear and concise information products will be developed for specific sections of the community (e.g. pastoral landholders, aboriginal land managers, horticulturists etc.), and at local and sub-regional scales, to assist the community to understand their obligations. These information products will be developed after the plan is approved.

Stakeholders will no doubt continue to engage and work with communities on their weed management programs. Stakeholder approaches to engaging community will need to accommodate the changes in the approach to weed management outlined in this plan.

The Western Regional Weed Committee will also support stakeholder networks to understand and promote changes in weed management, including the requirements of the General Biosecurity Duty, the tenure neutral approach, and the implications for their customers.

The plan supports targeted capacity building programs that focus on priority species. Communities differ in their capacity to be involved in weed management, and so programs will be tailored to meet local knowledge, skills, networks and resourcing needs. The Western Regional Weed Committee will also assist with the identification of need for and coordination of capacity building programs in priority areas.
7. Measuring success and continuous improvement

Measuring and reporting on progress against key performance indicators is particularly important, as are practices that promote reflection and learning to inform decision making. This section covers how we intend to address and document to what extent goals have been achieved, as well as evaluating performance, and reviewing our activity and focus.

7.1 Measuring performance

In common with other agencies and businesses, Western Local Land Services has a responsibility to demonstrate to its customers, investors and stakeholders that its strategies are sound and effective. Underpinning all strategies, programs and systems will be a requirement to monitor, evaluate and report on performance.

The committee will work with Western Local Land Services to establish a monitoring, reporting, evaluation and improvement process (MERI) that is consistent with the Local Land Services and Natural Resource Commission standards. This MERI framework will facilitate the review of results against planned immediate, intermediate and long-term outcomes. It will also enable a systematic and objective assessment of the effectiveness and efficiency of actions, policies, projects and programs.

This plan depends on collaboration and sound partnerships for strategic weed planning, implementation and reporting. The development of measures to track the establishment of a workable collaborative approach is important to support tenure neutral implementation. The committee will also track resources secured and aligned for implementing the plan.

Giant reed - *Arundo donax*. 
7.1.1 Performance indicators and reporting

Standardised MERI systems will be used to compile and report on the efforts and achievements of stakeholders in contributing to this plan. Achieving consistency will require the use of:

- key performance indicators
- standard local monitoring and reporting protocols that support region and statewide needs
- evaluation by partners and the committee to guide improvement in weed management projects, programs and policies.

Performance indicators will be developed to enable tracking of the progressive impacts of interventions and investment in priorities and will relate to the goals for this plan as outlined below.

**Shared responsibility (Goal 1)**

- adoption of leading practice (by sector)
- awareness and education programs delivered with uptake indicated by community involvement in weed control
- community capacity and capability to undertake weed biosecurity (knowledge, skills, barriers addressed, networks, resources) increased.

**Sustainable landscapes (Goals 2 and 3)**

- new incursions of high priority weeds avoided
- new incursions of high priority weeds eradicated or destroyed
- spread of high priority weeds prevented
- impacts of widespread weeds on high priority assets reduced
- sources of weed invasion identified and managed
- weed impacts on natural ecosystems reduced or avoided
- weed risks or impacts to production / industries reduced (economic goal).

**Collaborative leadership and innovation (Goal 4)**

- percentage of supporting plans and processes completed (see section 6.3).

Available metrics can be used in the short term based on existing knowledge, while we refine metrics to provide more accurate measures of progress. A wide range of metrics are in use by committee member organisations, stakeholders and through the Weeds Action Program 2015-2020 and other programs. These will take time to collate and assess. Agreed metrics will be considered by the committee in consultation with the State Weeds Committee.

Review and reporting on performance against this plan will occur annually. A component of this review will be an evaluation of our regional contribution to the new biosecurity reforms and their influence on weed management in the Western region.

The approach to MERI must meet the needs of customers, investors and stakeholders and facilitate reporting on investment outcomes at a range of scales – local, sub-regional, and regional. Standardised reporting should support:

- individual stakeholder needs for local level reporting
- state level reporting and reporting to investors
- annual reporting on implementation and progress of this plan.
7.1.2 Information management

Data collection and management is crucial to the adoption of standardised approaches for the region, and for the implementation of MERI procedures.

The committee will work with Western Local Land Services to oversee the coordinated development of systems for:

- adopting standard regional data (including weed mapping) capture, storage, record keeping and retrieval protocols
- collecting, synthesising and storing data in a form useful for multiple stakeholders
- contributing weed data and management information to the Biosecurity Information System
- contributing to local, regional and statewide weed information and knowledge platforms that support research capacity and capability
- ensuring that weed information and data are readily available to stakeholders for use in research, updating management plans and reporting.

The data and information collected will be integrated into statewide data sets and be accessible through open government wherever possible. It will contribute to whole-of-NSW reporting on the state and trend of asset conditions including the State of the Environment report and reporting against objectives for the Invasive Species Plan.

7.1.3 Strengthening science and research capacity

Research plays an important role in evaluating and informing practice, supporting innovation and informing future directions. Engaging proactively with the research community is fundamental to improving the region’s weed management planning and practice. Through links with the State Weeds Committee, the Western Regional Weed Committee will contribute to and facilitate:

- engagement with weed science researchers, community, the aboriginal community, government, and industry to identify current knowledge gaps and to document weed species research priorities
- stronger partnerships and active participation in industry, government and university collaboration for weeds research
- new and updated regional and sub-regional weed risk assessments
- development of new technologies and innovative approaches to the management of weed risks
- investigation of biological control programs for priority weeds
- a better understanding in the region of the impacts of a changing climate on weed behaviour and the interplay between natural systems and weeds
- incorporation of research findings into weed management decision-making (this is part of adaptive management).
7.2 Adaptive management and continuous improvement

The Western Regional Weed Committee will foster adaptive management and continual improvement in weed management. Adaptive management is used in changing environments, where optimal management procedures have not been determined. It is based on a continuous improvement cycle: “plan–do-learn”. This is underpinned by monitoring, reporting and evaluation processes, and the subsequent improvement of planning and delivery based on lessons learned.

Western Local Land Services applies learning at the following scales to drive continuous improvement:

- project (where learning focuses on improving project design and practices)
- program (where learning focuses on improving strategies, targets and assumptions)
- organisational (where learning focuses on improving governance and systems).

This approach is outlined in the Western Local Strategic Plan and will provide the basis of MERI for this plan.

7.3 Plan review

A mid-term review of this plan will be undertaken at year three (2020) and a full review will be undertaken nearing the end of the five-year term for this plan (2022).

Weed risk assessments will be updated as needed from time to time and a particular focus at year three will be on evaluation and review of weed lists in this plan (Appendix 1 and 2).
8. List of Abbreviations

- BIS  Biosecurity Information System
- DPI  NSW Department of Primary Industries
- GBD  General Biosecurity Duty
- km   kilometre
- LCA  Local Control Authority
- LLS  Local Land Services
- MERI Monitoring, evaluation, reporting and improvement
- OEH  The NSW Office of Environment and Heritage
- NPWS NSW National Parks and Wildlife Service
- NRC  Natural Resources Commission
- RSWMP Regional Strategic Weed Management Plan
- RWC  Regional Weed Committee
- SWC  State Weeds Committee
- TSR  Travelling Stock Reserve
- WAP  NSW Weed Action Program
- WoNS Weed of National Significance

9. Glossary

**Aboriginal cultural heritage:** Aboriginal cultural heritage consists of places and items that are of significance to Aboriginal people because of their traditions, observances, lore, customs, beliefs and history. It provides evidence of the lives and existence of Aboriginal people before European settlement through to the present. Aboriginal cultural heritage is dynamic and may comprise physical (tangible) or non-physical (intangible) elements.

**Adaptive management:** A management approach based on the science of learning by doing. It involves testing the response of a system then applying this understanding to future decisions.

**Asset protection:** Preventing the spread of weed species to high value assets of economic, environmental and/or social value or reducing the impact on the high value asset for weeds already present.

**Best practice:** A technique or methodology that, through experience and research, has proven to reliably lead to a desired result. Also see leading practice.

**Biodiversity:** The variety of all life forms: the different species of plants, animals, fungi, bacteria and other microorganisms, the genes they contain and the ecosystems (the variety of habitats, biotic communities and ecological processes) of which they form a part.

**Biosecurity:** Protecting the economy, environment and community from the negative impacts of pests, diseases and weeds.

**Collaboration:** Working together to develop an understanding of all issues and interests to work out alternatives and identify preferred solutions for joint decision making.

**Containment:** Preventing the spread of weed species beyond a predefined area and reducing the impact where it occurs.

**Country:** A term used by Aboriginal people to refer to the land to which they have a traditional attachment to.
Customer: Any land manager within the state or region, irrespective of whether they are private or public land managers, ratepayers or non-ratepayers.

Emergency Management: Management related to preparedness, response and recovery for actual or imminent animal pest and disease and plant pest and disease emergencies, natural disasters and other emergencies impacting on primary production or animal health and safety.

Eradication: To permanently remove a weed species and its propagules from an area such that there is little or no likelihood of re-invasion occurring.

Governance: The framework of rules, structures, interactions and practices by which the Western Local Board exercises power, responsibility and decision making to ensure accountability, fairness, and transparency in relationship to the Western region’s customers, stakeholders and investors.

General Biosecurity Duty: Under the NSW Biosecurity Act 2015 a General Biosecurity Duty (GBD) applies to all weed species that present a biosecurity risk. For weeds, the General Biosecurity Duty means that any person dealing with plant matter who knows or ought reasonably to know the biosecurity risk posed by that dealing, must take measures to prevent, minimise or eliminate the biosecurity risk (as far as is reasonably practicable). ‘Dealing’ has a broad definition in the act. Plant matter includes plants, parts of plants and seeds.

Habitat: A place suitable for survival and/or reproduction of a particular plant or animal.

Investor: Organisations and individuals who invest in Local Land Services and leverage outcomes from this investment.

Landscape: Any section of land or coast and its natural features, including rivers and other water bodies. Represents the overlay of the variety and arrangement of physical landforms (e.g. rivers, escarpment, rocky reefs), communities of people (e.g. Aboriginal, rural) and land uses (e.g. urban, conservation, agricultural).

Leading practice: Currently accepted best practice.

Prevention: To prevent a weed species arriving and establishing in an area.

Stakeholder: Organisations that collaborate and partner with Local Land Services directly to support customer service delivery.

Travelling Stock Reserve: Any:

- route or camping place reserved for travelling stock route or camping place under the Crown Lands Act 1989
- reserve for travelling stock, water reserve, reserve for access or crossing (where the reserve is for the purpose of providing travelling stock with access to or a crossing of water, whether expressly notified for that purpose or not).

In the Western Division of NSW, Travelling Stock Reserves effectively “overlay” a Western Lands Lease and remain available as part of the lease, for the lessees exclusive use, subject to the lands remaining available for the bona fide passage of travelling stock. They are rarely fenced or physically distinguishable on the ground from the surrounding natural environment.

Weed: Plants (foreign to the region) that are unwanted in a given situation and which usually have detectable negative economic, environmental or social impacts.

Weed Action Program (WAP): NSW Government funding program supporting delivery of priority weed investment to local government, Local Land Services and local control authorities.
10. References

- Department of Environment, Climate Change and Water NSW (2010). NSW Climate Impact Profile
- Macquarie Valley Weeds Advisory Committee (2016) pers comm. Arundell, L.
- Western Local Land Services (2016). Western Local Strategic Plan.
Appendix 1: Priority weeds for the Western region

This appendix covers State level determined priority weed species (A1.1) as determined by NSW Department of Primary Industries and regionally determined priorities (A1.2) as determined by the regional weed prioritisation process outlined in Section 4.2.

The *NSW Biosecurity Act 2015* and regulations provide for specific legal requirements for state level priority weeds (A1.1) and high risk activities. For each state level priority weed, the management objective, and specific requirements for its management (as stated in the Act and regulations) is included. These specific requirements include Prohibited Matter, Biosecurity Zones, Control Orders and Mandatory Measures.

Outcomes to demonstrate compliance with the General Biosecurity Duty are identified for each regional priority weed species (A1.2). Recommended measures that will assist in the achievement of these outcomes for each regional priority weed species can be found in the NSW Department of Primary Industries web and mobile based application WeedWise (http://weeds.dpi.nsw.gov.au/).

*Silver-leaf nightshade - Solanum elaeagnifolium.*
### A1.1 State level determined priority weeds

**State priority weed objective – PREVENTION:**
The following weeds are currently not found in the state, pose significant biosecurity risk and prevention of the biosecurity risk posed by these weeds is a reasonably practical objective.

<table>
<thead>
<tr>
<th>Species</th>
<th>Biosecurity Act requirements and strategic response in the region</th>
</tr>
</thead>
</table>
| All species of vascular plant (*Tracheophyta* spp.)                     | **Mandatory measure (Division 8, Clause 34, Biosecurity Regulation, 2017)** Duty to notify of importation of plants into the state:  
(1) A person must not import into the state a species of vascular plant (*Tracheophyta*) into the state if the species is not currently present in the state unless the person has, at least 20 working days before the plant is imported into the state, notified the species of plant and its proposed location within the state.  
(2) The notification is to be given to the Secretary and is to be given in accordance with Part 6.  
(3) A species of plant is taken not to be present in the state if the National Herbarium of New South Wales does not show it as being present in the state. Note. See [http://plantnet.rbgsyd.nsw.gov.au/](http://plantnet.rbgsyd.nsw.gov.au/).  
**Regional strategic response:** Increased priority placed on the identification and mapping of unrecorded weed species, including the collection and submission of specimens to the Plant Information Network System of the Royal Botanic Gardens. |
| Anchored water hyacinth — *Eichhornia azurea*                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Black knapweed — *Centaurea xmoncktonii*                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Bridal veil creeper — *Asparagus declinatus*                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Broomrape — *Orobanche* spp. (all species except the native *O. cernua* var. *Australiana* and *O. minor*) |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Gamba grass — *Andropogon gayanus*                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Hawkweed — *Hieracium* spp (all species)                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Hydrocotyl/Water pennywort — *Hydrocotyle ranunculoides*                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Frogbit/spongeplant — *Limnobium* spp. (all species)                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Karoo acacia — *Vachellia karroo* (syn. *Acacia karroo*)                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
**State priority weed objective – PREVENTION:**
The following weeds are currently not found in the state, pose significant biosecurity risk and prevention of the biosecurity risk posed by these weeds is a reasonably practical objective.

<table>
<thead>
<tr>
<th>Species</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Kochia — Bassia scoparia (excluding subsp. trichophylla)</td>
<td><strong>Prohibited matter (Part 4, Biosecurity Act, 2015):</strong> A person who deals with any biosecurity matter that is Prohibited Matter throughout the state is guilty of an offence.</td>
</tr>
</tbody>
</table>
| Koster's curse — Clidemia hirta | **Regional strategic response:**  
  - implement quarantine and/or hygiene protocols  
  - undertake high risk sites and pathways analysis to identify potential introduction areas and preventative options  
  - trigger rapid response protocol. |
| Lagarosiphon — Lagarosiphon major |  |
| Mexican feather grass — Nassella tenuissima (syn. Stipa tenuissima) |  |
| Miconia — Miconia spp. (all species) |  |
| Mikania vine — Mikania micrantha |  |
| Mimosa — Mimosa pigra |  |
| Parthenium weed — Parthenium hysterophorus | **Prohibited matter (Part 4, Biosecurity Act, 2015):** A person who deals with any biosecurity matter that is Prohibited Matter throughout the state is guilty of an offence.  
**Mandatory measure (Division 8, Clause 35, Biosecurity Regulation, 2017) - parthenium weed carriers — machinery and equipment**  
(1) This clause applies to the following equipment:  
  (a) grain harvesters (including the comb or front)  
  (b) comb trailers (including the comb or front)  
  (c) bins used for holding grain during harvest operations  
  (d) augers or similar equipment used for moving grain  
  (e) vehicles used for transporting grain harvesters  
  (f) vehicles used as support vehicles with grain harvesters and that have been driven in paddocks during harvest operations  
  (g) mineral exploration drilling rigs and vehicles used for transporting those rigs.  
(2) A person must not import into the state from Queensland any equipment to which this clause applies. |
**State priority weed objective – PREVENTION:**
The following weeds are currently not found in the state, pose significant biosecurity risk and prevention of the biosecurity risk posed by these weeds is a reasonably practical objective.

<table>
<thead>
<tr>
<th>Species</th>
<th>Biosecurity Act requirements and strategic response in the region</th>
</tr>
</thead>
</table>
| Pond apple — *Annona glabra* | Prohibited matter (*Part 4, Biosecurity Act, 2015*): A person who deals with any biosecurity matter that is Prohibited Matter throughout the state is guilty of an offence. Regional strategic response:  
  • implement quarantine and/or hygiene protocols  
  • undertake high risk sites and pathways analysis to identify potential introduction areas and preventative options  
  • trigger rapid response protocol.                                                     |
| Prickly acacia — *Vachellia nilotica* (syn. *Acacia nilotica*)                      |                                                                                                                                 |
| Rubber vine — *Cryptostegia grandiflora*                                            |                                                                                                                                 |
| Siam weed — *Chromolaena odorata*                                                   |                                                                                                                                 |
| Spotted knapweed — *Centaurea stoebe subsp. micranthos*                             |                                                                                                                                 |
| Water caltrop — *Trapa spp. (all species)*                                           |                                                                                                                                 |
| Water milfoil — *Myriophyllum spicatum*                                             |                                                                                                                                 |
| Water soldier — *Stratiotes aloides*                                                |                                                                                                                                 |
| Witchweed — *Striga spp. (except the native S. parviflora)*                         |                                                                                                                                 |
| Yellow burrhead — *Limnocharis flava*                                               |                                                                                                                                 |
State priority weed objective – ERADICATION:

The following weeds are present in limited distribution and abundance in some parts of the state. Elimination of the biosecurity risk posed by these weeds is a reasonably practical objective.

<table>
<thead>
<tr>
<th>Species</th>
<th>Biosecurity Act requirements and strategic response in the region</th>
</tr>
</thead>
</table>
| Boneseed — *Chrysanthemoides monilifera* subspecies *monilifera* | **6. Control measures for owners and occupiers of land**
(Pursuant to section 62(1)(b) of the Act, an owner or occupier of land in the Boneseed Control Zone on which there is Boneseed must:
(a) notify the local control authority for the area if the Boneseed is part of a new infestation on the land:
   i) as soon as practicable after becoming aware of the new infestation;
   ii) verbally or in writing;
   iii) giving the following:
     (1) the person’s full name and contact number;
     (2) the location of the Boneseed, including the property identification code for the land (if this is known); and
     (3) any other information reasonably requested by the local control authority; and
(b) immediately destroy all Boneseed on the land;
(c) ensure that subsequent generations of Boneseed are destroyed; and
(d) the land is kept free of Boneseed.
(e) The owner or occupier does not need to comply with (a) above if they know that notification of the infestation on the land has already been given to the local control authority for the area.

**7. Control measures for persons dealing with carriers**
Pursuant to section 62(1)(b) of the Act, a person who deals with a carrier of Boneseed in the Boneseed Control Zone, in circumstances where the person knows or ought reasonably to know of the presence of Boneseed on the land or in or on the carrier, must:
(a) ensure that Boneseed (including any seed and propagules) is not moved from the land; and
(b) immediately notify the local control authority for the area:
   i) as soon as practicable after becoming aware of the presence of Boneseed;
   ii) verbally or in writing;
   iii) giving the following:
     (1) the person’s full name and contact number;
     (2) the location of the Boneseed, including the property identification code for the land (if this is known); and
     (3) any other information reasonably requested by the local control authority.
(c) The person who deals with a carrier of Boneseed does not need to comply with (b) above if they know that notification of the infestation on the land has already been given to the local control authority for the area.

*Mandatory Measure (Division 8, Clause 33, Biosecurity Regulation 2017)*: A person must not move, import into the state or sell.
State priority weed objective – ERADICATION:
The following weeds are present in limited distribution and abundance in some parts of the state. Elimination of the biosecurity risk posed by these weeds is a reasonably practical objective.

<table>
<thead>
<tr>
<th>Species</th>
<th>Biosecurity Act requirements and strategic response in the region</th>
</tr>
</thead>
</table>
| Parkinsonia — *Parkinsonia aculeata* | 6. **Control measures for owners and occupiers of land**  
Pursuant to section 62(1)(b) of the Act, an owner or occupier of land in the Parkinsonia Control Zone on which there is Parkinsonia must:  
(a) notify the local control authority for the area if the Parkinsonia is part of a new infestation of Parkinsonia on the land:  
i) as soon as practicable after becoming aware of the new infestation;  
ii) verbally or in writing;  
iii) giving the following:  
(1) the person’s full name and contact number;  
(2) the location of the Parkinsonia, including the property identification code for the land (if this is known); and  
(3) any other information reasonably requested by the local control authority; and  
(b) immediately destroy all Parkinsonia on the land; and  
(c) ensure that subsequent generations of Parkinsonia are destroyed; and  
(d) the land is kept free of Parkinsonia.  
(e) The owner or occupier does not need to comply with (a) above if they know that notification of the infestation on the land has already been given to the local control authority for the area.  
7. **Control measures for persons dealing with carriers**  
Pursuant to section 62(1)(b) of the Act, a person who deals with a carrier of Parkinsonia in the Parkinsonia Control Zone, in circumstances where the person knows or ought reasonably to know of the presence of Parkinsonia on the land or in or on the carrier, must:  
(a) ensure that Parkinsonia (including any seed and propagules) is not moved from the land; and  
(b) immediately notify the local control authority:  
i) as soon as practicable after becoming aware of the presence of Parkinsonia;  
ii) verbally or in writing;  
iii) giving the following:  
(1) the person’s full name and contact number;  
(2) the location of the Parkinsonia, including the property identification code for the land (if this is known); and  
(iv) any other information reasonably requested by the local control authority.  
(c) The person who deals with a carrier of Parkinsonia does not need to comply with (b) above if they know that notification of the infestation on the land has already been given to the local control authority for the area.  
**Mandatory measure (Division 8, Clause 33, Biosecurity Regulation 2017):** A person must not move, import into the state or sell.  
**Regional strategic response:**  
• high level analysis of pathways to identify potential introduction areas and preventative options  
• implement quarantine and/or hygiene protocols.
State priority weed objective – PREVENTION:
The following weeds are currently not found in the state, pose significant biosecurity risk and prevention of the biosecurity risk posed by these weeds is a reasonably practical objective.

<table>
<thead>
<tr>
<th>Species</th>
<th>Biosecurity Act requirements and strategic response in the region</th>
</tr>
</thead>
</table>
| Tropical soda apple — *Solanum viarum* | **6. Control measures for owners and occupiers of land**  
Pursuant to section 62(1)(b) of the Act, an owner or occupier of land in the Tropical Soda Apple Control Zone on which there is Tropical Soda Apple must:  
(a) notify the local control authority for the area if the Tropical Soda Apple is part of a new infestation of Tropical Soda Apple on the land:  
i) as soon as practicable after becoming aware of the new infestation;  
ii) verbally or in writing;  
iii) giving the following:  
(1) the person’s full name and contact number;  
(2) the location of the Tropical Soda Apple, including the property identification code for the land (if this is known); and  
(3) any other information reasonably requested by the local control authority; and  
(b) destroy all Tropical Soda Apple on the land, including fruit; and  
(c) ensure that subsequent generations of Tropical Soda Apple are destroyed; and  
(d) that the land is kept free of Tropical Soda Apple.  
(e) The owner or occupier does not need to comply with (a) above if they know that notification of the infestation on the land has already been given to the local control authority for the area. |

**7. Control measures for persons dealing with carriers**  
Pursuant to section 62(1)(b) of the Act, a person who deals with a carrier of Tropical Soda Apple in the Tropical Soda Apple Control Zone, in circumstances where the person knows or ought reasonably to know of the presence of Tropical Soda Apple on the land or in or on the carrier, must:  
(a) ensure that Tropical Soda Apple (including any seed and propagules) is not moved from the land; and  
(b) immediately notify the local control authority for the area:  
i) as soon as practicable after becoming aware of the presence of Tropical Soda Apple;  
ii) verbally or in writing;  
iii) giving the following:  
(1) the person’s full name and contact number;  
(2) the location of the Tropical Soda Apple, including the property identification code for the land (if this is known); and  
iv) any other information reasonably requested by the local control authority.  
(c) The person who deals with a carrier of Tropical Soda Apple does not need to comply with (b) above if they know that notification of the infestation on the land has already been given to the local control authority for the area.
State priority weed objective – CONTAINMENT:

*These weeds are widely distributed in some parts of the state. While broad scale elimination is not practicable, minimisation of the biosecurity risk posed by these weeds is reasonably practicable.*

<table>
<thead>
<tr>
<th>Land area where requirements apply</th>
<th>Biosecurity Act requirements and strategic response in the region</th>
</tr>
</thead>
</table>
| Alligator weed — *Alternanthera philoxeroides* | **Biosecurity Regulation 2017 — Part 5, Division 2 (alligator weed biosecurity zone)**
An owner or occupier of land in the alligator weed biosecurity zone on which there is the weed *Alternanthera philoxeroides* (alligator weed) must:
(a) if the weed is part of a new infestation of the weed on the land, notify the local control authority for the land as soon as practicable in accordance with Part 6
(b) eradicate the weed or, if that is not practicable, destroy as much of the weed as is practicable and suppress the spread of any remaining weed.

**Mandatory measure (Division 8, Clause 33, Biosecurity Regulation 2017):** A person must not move, import into the state or sell.

| Bitou bush — *Chrysanthemoides monilifera subsp. rotundata* | **Biosecurity Regulation 2017 — Part 5, Division 3 (bitou bush biosecurity zone)**
An owner or occupier of land in the bitou bush biosecurity zone on which there is the weed *Chrysanthemoides monilifera subsp. rotundata* (bitou bush) must:
(a) if the weed is part of a new infestation of the weed on the land, notify the local control authority for the land as soon as practicable in accordance with Part 6
(b) eradicate the weed or, if that is not practicable, destroy as much of the weed as is practicable and suppress the spread of any remaining weed.

**Mandatory measure (Division 8, Clause 33, Biosecurity Regulation 2017):** A person must not move, import into the state or sell.

**Regional strategic response:**
Regional Strategic Response:
- high level analysis of pathways to identify potential introduction areas and preventative options
- implement quarantine and/or hygiene protocols
- monitor progress towards eradication.

**IMPORTANT NOTE:** The regional objective for bitou bush is ERADICATE in the Western Local Land Services region.
**State priority weed objective – CONTAINMENT:**

*These weeds are widely distributed in some parts of the state. While broad scale elimination is not practicable, minimisation of the biosecurity risk posed by these weeds is reasonably practicable.*

<table>
<thead>
<tr>
<th>Land area where requirements apply</th>
<th>Biosecurity Act requirements and strategic response in the region</th>
</tr>
</thead>
</table>
| Water hyacinth — *Eichhornia crassipes* | **Biosecurity Regulation 2017 — Part 5, Division 4 (water hyacinth biosecurity zone)**  
An owner or occupier of land in the water hyacinth biosecurity zone on which there is the weed *Eichhornia crassipes* (water hyacinth) must:  
(a) if the weed is part of a new infestation of the weed on the land, notify the Local Control Authority for the land as soon as practicable in accordance with Part 6  
(b) eradicate the weed or if that is not practicable destroy as much of the weed as is practicable and suppress the spread of any remaining weed.  
**Mandatory measure (Division 8, Clause 33, Biosecurity Regulation 2017):** A person must not move, import into the state or sell.  
**Regional strategic response:**  
- implement quarantine and/or hygiene protocols  
- undertake high risk sites and pathways analysis to identify potential introduction areas and preventative options  
- trigger rapid response protocol.  
**IMPORTANT NOTE:** The regional objective for water hyacinth is **PREVENT** in the Western Local Land Services region.  

A biosecurity zone, to be known as the water hyacinth biosecurity zone, is established for all land within the state except land in the following regions:  
(a) Greater Sydney or North Coast  
(b) North West (but only land in those regions that is in the local government area of Moree Plains)  
(c) Hunter (but only land in that region that is in the local government area of City of Cessnock, City of Lake Macquarie, Mid-Coast, City of Maitland or Port Stephens)  
(d) South East (but only land in that region that is in the local government area of Eurobodalla, Kiama, City of Shellharbour, City of Shoalhaven or City of Wollongong).
State priority weed objective – ASSET PROTECTION:

These weeds are widely distributed in some areas of the state. As Weeds of National Significance, their spread should be minimised to protect priority assets.

<table>
<thead>
<tr>
<th>Species</th>
<th>Biosecurity Act requirements and strategic response in the region</th>
</tr>
</thead>
<tbody>
<tr>
<td>African boxthorn — <em>Lycium ferocissimum</em></td>
<td><strong>Mandatory measure (Division 8, Clause 33, Biosecurity Regulation 2017):</strong> A person must not move, import into the state or sell.</td>
</tr>
</tbody>
</table>
| Asparagus weeds — *Asparagus aethiopicus*, *A. africanus*, *A. asparagoides* including the Western Cape form, *A. plumosus*, *A. scandens* | **Regional strategic response:**  
  * develop region-wide coordinated campaigns for collaborative management  
  * identification of regional containment zones where required  
  * identification of key sites/assets in the geographic area  
  * species managed in accordance with published weed management plans. |
| Athel pine — *Tamarix aphylla*                                         |                                                                                                                                   |
| Bellyache bush — *Jatropha gossypiifolia*                              |                                                                                                                                   |
| Blackberry — *Rubus fruticosus* agg. (Blackberry except the varietals *Chester Thornless*, *Dirksen Thornless*, *Loch Ness*, *Silvan*, *Black Satin*, *Murrindindi*, *Smooth Stem*, *Thornfree* and *Chehalem*) |                                                                                                                                   |
| Cabomba — *Cabomba caroliniana* #                                     |                                                                                                                                   |
| Cape/Montpellier broom — *Genista monspessulana*                        |                                                                                                                                   |
| Cat’s claw creeper — *Dolichandra unguis-cati*                         |                                                                                                                                   |
| Chilean needle grass — *Nassella neesiana*                             |                                                                                                                                   |
| Fireweed — *Senecio madagascariensis*                                  |                                                                                                                                   |
| Gorse — *Ulex europaeus*                                               |                                                                                                                                   |
| Lantana — *Lantana camara*                                             |                                                                                                                                   |
| Madeira vine - *Anredera cordifolia*                                   |                                                                                                                                   |
| Mesquite — *Prosopis* spp                                              |                                                                                                                                   |
| Olive hymenachne — *Hymenachne amplexicaulis*                          |                                                                                                                                   |
| Opuntioid cacti — *Opuntia* spp., *Cylindropuntia* spp., *Austrocylindropuntia* spp. (Excludes *O. ficus-indica*) |                                                                                                                                   |

**IMPORTANT NOTE:** Additional requirements apply to the following species in the Western Local Land Services region; refer to A1.2 Regional Priority Weeds.  
- African boxthorn — *Lycium ferocissimum*  
- bridal creeper — *Asparagus asparagoides*  
- mesquite — *Prosopis* spp.  
- opuntia — *Opuntia* spp., *Cylindropuntia* spp., *Austrocylindropuntia* spp.  
- sagittaria — *Sagittaria platyphylla*  
- silver-leaf nightshade — *Solanum elaeagnifolium*.  

Other species that are not covered in this table but are important to note include:  
- *African mistletoe* — *Viscum africanum*  
- *Dolichandra unguis-cati*  
- *Mesquite* — *Prosopis* spp.  
- *Olive hymenachne* — *Hymenachne amplexicaulis*  
- *Opuntioid cacti* — *Opuntia* spp., *Cylindropuntia* spp., *Austrocylindropuntia* spp. (Excludes *O. ficus-indica*)
State priority weed objective – ASSET PROTECTION:
These weeds are widely distributed in some areas of the state. As Weeds of National Significance, their spread should be minimised to protect priority assets.

<table>
<thead>
<tr>
<th>Species</th>
<th>Biosecurity Act requirements and strategic response in the region</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sagittaria — Sagittaria platyphylla</td>
<td><strong>Mandatory measure (Division 8, Clause 33, Biosecurity Regulation 2017):</strong> A person must not import into the state or sell.</td>
</tr>
<tr>
<td>Salvinia — Salvinia molesta</td>
<td><strong>Regional strategic response:</strong></td>
</tr>
<tr>
<td>Scotch/English broom — Cytisus scoparius subsp. scoparius</td>
<td>- develop region-wide coordinated campaigns for collaborative management</td>
</tr>
<tr>
<td>Serrated tussock — Nassella trichotoma</td>
<td>- identification of regional containment zones where required</td>
</tr>
<tr>
<td>Silver-leaf nightshade — Solanum elaeagnifolium</td>
<td>- identification of key sites/assets in the geographic area</td>
</tr>
<tr>
<td>Willows — Salix spp. (excludes S.babylonica, S.x calodendron &amp; S. x reichardtii)</td>
<td>- species managed in accordance with published weed management plans.</td>
</tr>
</tbody>
</table>

**IMPORTANT NOTE:** Additional requirements apply to the following species in the Western Local Land Services region; refer to A1.2 Regional Priority Weeds.
- African boxthorn - Lycium ferocissimum
- bridal creeper – Asparagus asparagoides
- mesquite - Prosopis spp.
- opuntia - Opuntia spp., Cylindropuntia spp., Austrocylindropuntia spp.
- sagittaria - Sagittaria platyphylla
- silver-leaf nightshade - Solanum elaeagnifolium.
### A1.2 Regional priority weeds

**Regional priority weed objective – PREVENTION:**

The following weeds are currently not found in the region, pose significant biosecurity risk and prevention of the biosecurity risk posed by these weeds is a reasonably practical objective.

<table>
<thead>
<tr>
<th>Outcomes to demonstrate compliance with the GBD</th>
<th>Strategic response in the region</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Coolatai grass — <em>Hyparrhenia hirta</em></strong></td>
<td></td>
</tr>
<tr>
<td>- The plant is eradicated from the land and the land is kept free of the plant.</td>
<td></td>
</tr>
<tr>
<td>- Land managers mitigate the risk of the plant being introduced to their land.</td>
<td></td>
</tr>
<tr>
<td>- The plant or parts of the plant are not traded, carried, grown or released into the environment.</td>
<td></td>
</tr>
<tr>
<td>- Local Control Authority is notified if the plant is found on the land.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Implement quarantine and/or hygiene protocols.</td>
</tr>
<tr>
<td></td>
<td>- Undertake high risk sites and pathways analysis to identify potential introduction areas and preventative options.</td>
</tr>
<tr>
<td></td>
<td>- Trigger rapid response protocol.</td>
</tr>
<tr>
<td><strong>Supporting documents:</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Coolatai Grass Management Plan*.</td>
</tr>
<tr>
<td></td>
<td>* As currently published for the Macquarie Valley Weeds Advisory Committee area; to be updated for the Western Local Land Services region.</td>
</tr>
</tbody>
</table>

| **Hudson pear — *Cylindropuntia rosea*** | |
| - The plant is eradicated from the land and the land is kept free of the plant. |
| - Land managers mitigate the risk of the plant being introduced to their land. |
| - The plant or parts of the plant are not traded, carried, grown or released into the environment. |
| - Local Control Authority is notified if the plant is found on the land. |
| | - Implement quarantine and/or hygiene protocols. |
| | - Undertake high risk sites and pathways analysis to identify potential introduction areas and preventative options. |
| | - Conduct awareness and extension programs targeted at managers of high risk sites. |
| | - Trigger regional Rapid Response Protocol* and implement regional Incursion Plan* including resource allocation. |
| **Supporting documents:** | |
| | - Hudson Pear Management Plan (to be developed) |
| | * As currently published for the Macquarie Valley Weeds Advisory Committee area; to be updated for the Western Local Land Services region. |
**Regional priority weed objective – PREVENTION:**

The following weeds are currently not found in the region, pose significant biosecurity risk and prevention of the biosecurity risk posed by these weeds is a reasonably practical objective.

<table>
<thead>
<tr>
<th>Outcomes to demonstrate compliance with the GBD</th>
<th>Strategic response in the region</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arrowhead — <em>Sagittaria calycina</em> \ Sagittaria — <em>Sagittaria platyphylla</em></td>
<td></td>
</tr>
</tbody>
</table>

- The plant is eradicated from the land and the land is kept free of the plant.
- Land managers mitigate the risk of the plant being introduced to their land.
- The plant or parts of the plant are not traded, carried, grown or released into the environment.
- Local Control Authority is notified if the plant is found on the land.

**IMPORTANT NOTE:** The following legislative requirement also applies to *Sagittaria platyphylla* across the State of NSW:

**Mandatory measure (Division 8, Clause 33, Biosecurity Regulation 2017):** A person must not import into the state or sell.

**Recommended measures:**

- Undertake high risk sites and pathways analysis to identify potential introduction areas and preventative options.
- Conduct awareness and extension programs targeted at managers of high risk sites.
- Implement quarantine and/or hygiene protocols.
- Trigger regional Rapid Response Protocol* and implement regional Incursion Plan* including resource allocation.

**Supporting documents:**

- Riverina Sagittaria Management Plan®

* As currently published for the Macquarie Valley Weeds Advisory Committee area; to be updated for the Western Local Land Services region.
® As currently published for the former Western Riverina Noxious Weeds Advisory Group area; to be updated for the Western Local Land Services region.
Regional priority weed objective – PREVENTION:
The following weeds are currently not found in the region, pose significant biosecurity risk and prevention of the biosecurity risk posed by these weeds is a reasonably practical objective.

Outcomes to demonstrate compliance with the GBD | Strategic response in the region
--- | ---
Water hyacinth — Eichhornia crassipes | * Undertake high risk sites and pathways analysis to identify potential introduction areas and preventative options.
| * Conduct awareness and extension programs targeted at managers of high risk sites.
| * Implement quarantine and/or hygiene protocols.
| * Trigger regional Rapid Response Protocol* and implement regional Incursion Plan* including resource allocation.

**IMPORTANT NOTE:** The following legislative requirements also apply to *Eichhornia crassipes* across the State of NSW:

**Biosecurity Regulation 2017 - Part 5, Division 4 (water hyacinth biosecurity zone)** An owner or occupier of land in the water hyacinth biosecurity zone on which there is the weed *Eichhornia crassipes* (water hyacinth) must:

(a) if the weed is part of a new infestation of the weed on the land, notify the local control authority for the land as soon as practicable in accordance with Part 6

(b) eradicate the weed or if that is not practicable destroy as much of the weed as is practicable and suppress the spread of any remaining weed.

**Mandatory measure (Division 8, Clause 33, Biosecurity Regulation 2017):** A person must not import into the state or sell.
Regional priority weed objective – ERADICATION:
The following weeds are present in limited distribution and abundance. Elimination of the biosecurity risk posed by these weeds is a reasonably practical objective.

<table>
<thead>
<tr>
<th>Outcomes to demonstrate compliance with the GBD</th>
<th>Strategic response in the region</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Boxing glove/coral cactus — Cylindropuntia fulgida</strong></td>
<td></td>
</tr>
<tr>
<td>• The plant is eradicated from the land and the land is kept free of the plant.</td>
<td></td>
</tr>
<tr>
<td>• Land managers mitigate the risk of the plant being introduced to their land.</td>
<td></td>
</tr>
<tr>
<td>• The plant or parts of the plant are not traded, carried, grown or released into the environment.</td>
<td></td>
</tr>
<tr>
<td>• Local Control Authority is notified if the plant is found on the land.</td>
<td></td>
</tr>
<tr>
<td>• Detailed surveillance and mapping to locate all infestations.</td>
<td></td>
</tr>
<tr>
<td>• High level pathways analysis to identify potential introduction areas and preventative options.</td>
<td></td>
</tr>
<tr>
<td>• Conduct awareness and extension programs targeted at managers of high risk sites.</td>
<td></td>
</tr>
<tr>
<td>• Implement quarantine and/or hygiene protocols.</td>
<td></td>
</tr>
<tr>
<td>• Monitor progress towards eradication.</td>
<td></td>
</tr>
</tbody>
</table>

| **Burr ragweed — Ambrosia confertiflora** |
| • The plant is eradicated from the land and the land is kept free of the plant. |
| • Land managers mitigate the risk of the plant being introduced to their land. |
| • The plant or parts of the plant are not traded, carried, grown or released into the environment. |
| • Local Control Authority is notified if the plant is found on the land. |
| • Detailed surveillance and mapping to locate all infestations. |
| • High level pathways analysis to identify potential introduction areas and preventative options. |
| • Conduct awareness and extension programs targeted at managers of high risk sites. |
| • Implement quarantine and/or hygiene protocols. |
| • Monitor progress towards eradication. |

| **Clock weed — Oenothera curtiflora** |
| • The plant is eradicated from the land and the land is kept free of the plant. |
| • Land managers mitigate the risk of the plant being introduced to their land. |
| • The plant or parts of the plant are not traded, carried, grown or released into the environment. |
| • Local Control Authority is notified if the plant is found on the land. |
| • Detailed surveillance and mapping to locate all infestations. |
| • High level pathways analysis to identify potential introduction areas and preventative options. |
| • Conduct awareness and extension programs targeted at managers of high risk sites. |
| • Implement quarantine and/or hygiene protocols. |
| • Monitor progress towards eradication. |
Regional priority weed objective – ERADICATION:
The following weeds are present in limited distribution and abundance. Elimination of the biosecurity risk posed by these weeds is a reasonably practical objective.

<table>
<thead>
<tr>
<th>Outcomes to demonstrate compliance with the GBD</th>
<th>Strategic response in the region</th>
</tr>
</thead>
<tbody>
<tr>
<td>Willow rhus — <em>Searsia lancea</em></td>
<td></td>
</tr>
<tr>
<td>• The plant is eradicated from the land and the land is kept free of the plant.</td>
<td>• Detailed surveillance and mapping to locate all infestations.</td>
</tr>
<tr>
<td>• Land managers mitigate the risk of the plant being introduced to their land.</td>
<td>• High level pathways analysis to identify potential introduction areas and preventative options.</td>
</tr>
<tr>
<td>• The plant or parts of the plant are not traded, carried, grown or released into the environment.</td>
<td>• Conduct awareness and extension programs targeted at managers of high risk sites.</td>
</tr>
<tr>
<td>• Local Control Authority is notified if the plant is found on the land.</td>
<td>• Implement quarantine and/or hygiene protocols.</td>
</tr>
<tr>
<td></td>
<td>• Monitor progress towards eradication.</td>
</tr>
</tbody>
</table>
Regional priority weeds objective – CONTAINMENT:
These weeds are widely distributed in the region. While broad scale elimination is not practicable, minimisation of the biosecurity risk posed these weeds is reasonably practicable.

<table>
<thead>
<tr>
<th>Land area where requirements apply</th>
<th>Outcomes to demonstrate compliance with the GBD</th>
<th>Strategic response in the region</th>
</tr>
</thead>
<tbody>
<tr>
<td>Giant reed — Arundo donax</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

An **exclusion zone** is established for all lands in the Western Local Land Services region, except the **core infestation area**, which comprises all lands within the Wentworth Shire Council.

**For the whole of the Western Local Land Services region:**
- Land managers mitigate the risk of the plant being introduced to their land.
- The plant or parts of the plant are not traded, carried, grown or released into the environment.

**Within the exclusion zone:**
- The plant is eradicated from the land and the land is kept free of the plant.

**Within the core infestation area:**
- Land managers reduce the impact of the plant on priority assets (rivers and natural watercourses).
- Land managers prevent spread from their land.

- Surveillance and mapping to locate all infested properties and maintain currency of exclusion zone and objectives.
- Identify key sites / assets for targeted management.
- Monitor change in current distribution to ensure containment of spread.
- High level pathways analysis to identify potential introduction areas and preventative options.
- Conduct awareness and extension programs targeted at managers of high risk sites.
**Regional priority weeds objective – CONTAINMENT:**

These weeds are widely distributed in the region. While broad scale elimination is not practicable, minimisation of the biosecurity risk posed these weeds is reasonably practicable.

<table>
<thead>
<tr>
<th>Land area where requirements apply</th>
<th>Outcomes to demonstrate compliance with the GBD</th>
<th>Strategic response in the region</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mesquite — <em>Prosopis spp.</em></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

An **exclusion zone** is established for all lands in the Western Local Land Services region, except the **core infestation area**, which comprises all lands within the counties of Evelyn, Yantara, Mootwingee, Yancowinna, Menindee, Tandora, Livingstone and Windeyer.

For the whole of the Western Local Land Services region:
- Land managers mitigate the risk of the plant being introduced to their land.
- The plant or parts of the plant are not traded, carried, grown or released into the environment.

**Within the exclusion zone:**
- The plant is eradicated from the land and the land is kept free of the plant.

**Within the core infestation area:**
- Land managers reduce the impact of the plant on priority assets (grazing areas, native vegetation).
- Land managers prevent spread from their land.

**IMPORTANT NOTE:** The following legislative requirement also applies across the State of NSW:

**Mandatory measure (Division 8, Clause 33, Biosecurity Regulation 2017):** A person must not import into the state or sell.

- Surveillance and mapping to locate all infested properties.
- Identify key production sites / assets for targeted management.
- Monitor change in current distribution to ensure containment of spread.
- High level pathways analysis to identify potential introduction areas and preventative options.
- Conduct awareness and extension programs targeted at managers of high risk sites.
- Facilitate strategic release of bio control agents.
Regional priority weeds objective – CONTAINMENT:
These weeds are widely distributed in the region. While broad scale elimination is not practicable, minimisation of the biosecurity risk posed these weeds is reasonably practicable.

<table>
<thead>
<tr>
<th>Land area where requirements apply</th>
<th>Outcomes to demonstrate compliance with the GBD</th>
<th>Strategic response in the region</th>
</tr>
</thead>
</table>
| Mother of millions — *Bryophyllum spp.* and hybrids | the whole of the Western Local Land Services region:  
- The plant or parts of the plant are not traded, carried, grown or released into the environment (except plants grown in maintained gardens, existing at the time of publication of this plan).  
Within the exclusion zone:  
- The plant is eradicated from the land and the land is kept free of the plant.  
- Land managers mitigate the risk of the plant being introduced to their land.  
Within the core infestation area:  
- Land managers mitigate the risk of the plant spreading from their land. | • Surveillance and mapping to locate all infested properties and maintain currency of exclusion zone and objectives.  
• Monitor change in current distribution to ensure containment of spread.  
• High level pathways analysis to identify potential introduction areas and preventative options.  
• Conduct awareness and extension programs targeted at managers of high risk sites.  
• Implement quarantine and/or hygiene protocols. |

An exclusion zone is established for the Western Local Land Services region, not including the core infestation area, which is defined as maintained gardens in the Western Local Land Services region.
**Regional priority weeds objective – ASSET PROTECTION:**
*These weeds are widely distributed in some areas of the region. Their spread should be minimised to protect priority assets.*

<table>
<thead>
<tr>
<th>Land area where requirements apply</th>
<th>Outcomes to demonstrate compliance with the GBD</th>
<th>Strategic response in the region</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>African boxthorn — <em>Lycium ferocissimum</em></strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All of the Western Local Land Services region.</td>
<td>• Land managers mitigate the risk of the plant spreading from their land.</td>
<td>• Surveillance and mapping to locate all infested properties.</td>
</tr>
<tr>
<td></td>
<td>• Land managers reduce impact of plant on priority assets (riparian areas and floodplains).</td>
<td>• Identify priority assets for targeted management.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Monitor change in current distribution to ensure containment of spread.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• High level pathways analysis to identify potential introduction areas and preventative options.</td>
</tr>
<tr>
<td></td>
<td><strong>IMPORTANT NOTE:</strong> The following legislative requirement also applies across the State of NSW:</td>
<td>• Conduct awareness and extension programs targeted at managers of high risk sites.</td>
</tr>
<tr>
<td></td>
<td><em>Mandatory measure (Division 8, Clause 33, Biosecurity Regulation 2017):</em> A person must not import into the state or sell.</td>
<td></td>
</tr>
<tr>
<td><strong>Bridal creeper — <em>Asparagus asparagoides</em></strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All of the Western Local Land Services region.</td>
<td>• Land managers mitigate the risk of the plant spreading from their land.</td>
<td>• Surveillance and mapping to locate all infested properties.</td>
</tr>
<tr>
<td></td>
<td>• Land managers reduce impact of plant on priority assets (riparian areas and commercial horticultural areas).</td>
<td>• Identify priority assets for targeted management.</td>
</tr>
<tr>
<td></td>
<td><strong>IMPORTANT NOTE:</strong> The following legislative requirement also applies across the State of NSW:</td>
<td>• Monitor change in current distribution to ensure containment of spread.</td>
</tr>
<tr>
<td></td>
<td><em>Mandatory measure (Division 8, Clause 33, Biosecurity Regulation 2017):</em> A person must not import into the state or sell.</td>
<td>• High level pathways analysis to identify potential introduction areas and preventative options.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Conduct awareness and extension programs targeted at managers of high risk sites.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Facilitate strategic release of bio control agents.</td>
</tr>
</tbody>
</table>
Regional priority weeds objective – ASSET PROTECTION:
These weeds are widely distributed in some areas of the region. Their spread should be minimised to protect priority assets.

<table>
<thead>
<tr>
<th>Land area where requirements apply</th>
<th>Outcomes to demonstrate compliance with the GBD</th>
<th>Strategic response in the region</th>
</tr>
</thead>
<tbody>
<tr>
<td>Devil’s rope — <em>Cylindropuntia imbricata</em> &lt;br&gt; Harrisia cactus — <em>Harrisia martini</em></td>
<td>• Land managers mitigate the risk of the plant spreading from their land.  &lt;br&gt; • Land managers reduce impact of plant on priority assets (grazing conservation and urban areas).  &lt;br&gt; • The plant or parts of the plant are not traded, carried, grown or released into the environment.</td>
<td>• Identify key production sites / assets for targeted management.  &lt;br&gt; • Monitor change in current distribution to ensure containment of spread.  &lt;br&gt; • Facilitate strategic release of bio control agents.</td>
</tr>
<tr>
<td>All of the Western Local Land Services region.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Prickly pears (*Opuntia spp.*) — *Opuntia robusta* (Wheel cactus), *Opuntia stricta* (Prickly pear), *Opuntia tomentosa* (Velvet tree pear), *Opuntia aurantiaca* (Tiger pear), *Opuntia paraguayensis* (Riverina pear), *Opuntia monocantha* (Smooth tree pear) (Note: excludes *Opuntia ficus-indica* (Indian fig) – see Appendix 2 on pages 79–80).

<table>
<thead>
<tr>
<th>Land area where requirements apply</th>
<th>Outcomes to demonstrate compliance with the GBD</th>
<th>Strategic response in the region</th>
</tr>
</thead>
<tbody>
<tr>
<td>All of the Western Local Land Services region.</td>
<td>• Land managers mitigate the risk of the plant spreading from their land.  &lt;br&gt; • Land managers mitigate the risk of the plant being introduced to their land.  &lt;br&gt; • The plant or parts of the plant are not traded, carried, grown or released into the environment  &lt;br&gt; • Land managers reduced impact of the plant on priority assets (grazing, conservation and urban areas).</td>
<td>• Surveillance and mapping to locate all infested properties.  &lt;br&gt; • Identify key production sites / assets for targeted management.  &lt;br&gt; • Monitor change in current distribution to ensure containment of spread.  &lt;br&gt; • Facilitate strategic release of bio control agents.  &lt;br&gt; • High level pathways analysis to identify potential introduction areas and preventative options.  &lt;br&gt; • Conduct awareness and extension programs targeted at managers of high risk sites.</td>
</tr>
<tr>
<td>IMPORTANT NOTE: The following legislative requirement also applies across the State of NSW:  &lt;br&gt; Mandatory measure (Division 8, Clause 33, Biosecurity Regulation 2017): A person must not import into the state or sell.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Regional priority weeds objective – ASSET PROTECTION:
*These weeds are widely distributed in some areas of the region. Their spread should be minimised to protect priority assets.*

<table>
<thead>
<tr>
<th>Land area where requirements apply</th>
<th>Outcomes to demonstrate compliance with the GBD</th>
<th>Strategic response in the region</th>
</tr>
</thead>
</table>
| **Silver-leaf nightshade — *Solanum elaeagnifolium*** | • Land managers mitigate the risk of the plant spreading from their land.  
• Land managers reduce impact of plant on priority assets (dryland farming areas). | • Surveillance and mapping to locate all infested properties.  
• Identify priority assets for targeted management.  
• Monitor change in current distribution to ensure containment of spread.  
• High level pathways analysis to identify potential introduction areas and preventative options.  
• Conduct awareness and extension programs targeted at managers of high risk sites. |
| All of the Western Local Land Services region. | • Surveilllance and mapping to locate all infested properties.  
• Identify priority assets for targeted management.  
• Monitor change in current distribution to ensure containment of spread.  
• High level pathways analysis to identify potential introduction areas and preventative options.  
• Conduct awareness and extension programs targeted at managers of high risk sites. |  

**IMPORTANT NOTE:** The following legislative requirement also applies across the State of NSW:  
*Mandatory measure (Division 8, Clause 33, Biosecurity Regulation 2017):* A person must not import into the state or sell

| **Spiny burrgrass — *Cenchrus longispinus, Cenchrus spinifex (syn. C. incertus)*** | • Land managers mitigate the risk of the plant spreading from their land.  
• The plant or parts of the plant are not traded, carried, grown or released into the environment.  
• Land managers reduce impact of plant on priority assets (commercial horticultural areas, grazing lands and conservation areas). | • Surveilllance and mapping to locate all infested properties.  
• Identify priority assets for targeted management.  
• Monitor change in current distribution to ensure containment of spread.  
• High level pathways analysis to identify potential introduction areas and preventative options.  
• Conduct awareness and extension programs targeted at managers of high risk sites.  
• Implement quarantine and/or hygiene protocols. |
| All of the Western Local Land Services region. | • Surveilllance and mapping to locate all infested properties.  
• Identify priority assets for targeted management.  
• Monitor change in current distribution to ensure containment of spread.  
• High level pathways analysis to identify potential introduction areas and preventative options.  
• Conduct awareness and extension programs targeted at managers of high risk sites.  
• Implement quarantine and/or hygiene protocols. |  

• Surveilllance and mapping to locate all infested properties.  
• Identify priority assets for targeted management.  
• Monitor change in current distribution to ensure containment of spread.  
• High level pathways analysis to identify potential introduction areas and preventative options.  
• Conduct awareness and extension programs targeted at managers of high risk sites.  
• Implement quarantine and/or hygiene protocols. |
Appendix 2: Other regional weed lists

A2.1 Additional species of concern

Species that are high risk, high priority for a number of current regional weed programs, though not feasible to contain or eradicate from the region.

Regional strategic responses:

- work within existing widespread weed programs for strategic asset protection
- facilitate targeted extension/awareness raising activities where appropriate, focussing on the agronomic cultural and plant hygiene aspects of management.
- facilitate targeted research and development activities where appropriate
- facilitate bio control release programs in the region
- prioritise the application of the General Biosecurity Duty, where considered necessary to assist with management of these species.

<table>
<thead>
<tr>
<th>Common name</th>
<th>Scientific name</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Herbicide resistant weeds</strong></td>
<td></td>
</tr>
<tr>
<td>Annual ryegrass</td>
<td>Lolium rigidum</td>
</tr>
<tr>
<td>Barley grass</td>
<td>Hordeum spp.</td>
</tr>
<tr>
<td>Blackberry nightshade</td>
<td>Solanum nigrum</td>
</tr>
<tr>
<td>Brome grass</td>
<td>Bromus spp.</td>
</tr>
<tr>
<td>Common wow thistle</td>
<td>Sonchus oleraceus</td>
</tr>
<tr>
<td>Flax-leaf fleabane</td>
<td>Conyza bonariensis</td>
</tr>
<tr>
<td>Indian hedge mustard</td>
<td>Sisymbrium oriental</td>
</tr>
<tr>
<td>Lincoln weed / Sand rocket</td>
<td>Diplotaxis tenuifolia</td>
</tr>
<tr>
<td>Silver grass / Squirrel-tailed fescue</td>
<td>Vulpia bromoides</td>
</tr>
<tr>
<td>Wild oat</td>
<td>Avena spp.</td>
</tr>
<tr>
<td>Wild radish</td>
<td>Raphanus raphanistrum</td>
</tr>
<tr>
<td>Wild turnip / Mediterranean turnip</td>
<td>Brassica tournefortii</td>
</tr>
<tr>
<td>Windmill grass</td>
<td>Chloris truncata</td>
</tr>
<tr>
<td><strong>Amenity weeds</strong></td>
<td></td>
</tr>
<tr>
<td>Castor oil plant</td>
<td>Ricinus communis</td>
</tr>
<tr>
<td>Cat-head</td>
<td>Tribulus terrestris</td>
</tr>
<tr>
<td>Khaki weed</td>
<td>Alternanthera pungens</td>
</tr>
<tr>
<td>Poison ivy</td>
<td>Toxicodendron radicans</td>
</tr>
<tr>
<td>Rhus tree</td>
<td>Toxicodendron succedaneum</td>
</tr>
<tr>
<td><strong>Common name</strong></td>
<td><strong>Scientific name</strong></td>
</tr>
<tr>
<td>------------------------------</td>
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</tr>
<tr>
<td><strong>Toxic pasture plants</strong></td>
<td></td>
</tr>
<tr>
<td>Cat-head</td>
<td><em>Tribulus terrestris</em></td>
</tr>
<tr>
<td>Common heliotrope</td>
<td><em>Heliotropium europaeum</em></td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td></td>
</tr>
<tr>
<td>Indian fig</td>
<td><em>Opuntia ficus-indica</em></td>
</tr>
<tr>
<td>Onion weed</td>
<td><em>Asphodelus fistulosus</em></td>
</tr>
<tr>
<td>Pepper tree</td>
<td><em>Schinus molle</em></td>
</tr>
<tr>
<td>Statice</td>
<td><em>Limonium sinuatum</em></td>
</tr>
<tr>
<td>Ward’s weed</td>
<td><em>Carrichtera annua</em></td>
</tr>
<tr>
<td>Winged sea lavender</td>
<td><em>Limonium lobatum</em></td>
</tr>
</tbody>
</table>

*Spiny burrgrass* - *Cenchrus longispinus, Cenchrus spinifex* (syn. *C. incertus*).
Appendix 3: Cross regional comparison of regional priority weeds

The following table lists the species and the management objectives assigned to them, for all regional priority weeds listed in this plan and those of the four Local Land Services regions that adjoin the Western region.

Taking into account factors such as differences in management objectives between regions, current distribution information, potential to establish in the region and knowledge of likely pathways of spread, a number of species have been identified as priorities for further discussion and potential collaborative approaches with adjoining regions.

<table>
<thead>
<tr>
<th>Species</th>
<th>Regional Management Objective</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>African boxthorn (<em>Lycium ferocissimum</em>)</td>
<td>Western</td>
<td></td>
</tr>
<tr>
<td>African olive (<em>Olea europaea subsp. cuspidate</em>)</td>
<td>North West</td>
<td></td>
</tr>
<tr>
<td>Aleman grass (<em>Echinochloa polystachya</em>)</td>
<td>Central West</td>
<td></td>
</tr>
<tr>
<td>Alligator weed (<em>Alternanthera philoxeroides</em>)</td>
<td>Riverina</td>
<td></td>
</tr>
<tr>
<td>Arrowhead (<em>Sagittaria calycina</em>)</td>
<td>Murray</td>
<td></td>
</tr>
<tr>
<td>Athel pine (<em>Tamarix aphylla</em>)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bellyache bush (<em>Jatropha gossypifoli</em>)</td>
<td></td>
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</tr>
<tr>
<td>Bitou bush (<em>Chrysanthemoides monilifera subsp. rotundata</em>)</td>
<td></td>
<td>Proposed Biosecurity Regulation makes this effectively “Prevention” in Western region.</td>
</tr>
<tr>
<td>Black willow (<em>Salix nigra</em>)</td>
<td></td>
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<tr>
<td>Blackberry (<em>Rubus fruticosus agg</em>)</td>
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<tr>
<td>Blue heliotrope (<em>Heliotropium amplexicaule</em>)</td>
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<tr>
<td>Blue hounds tongue (<em>Cynoglossum creticum</em>)</td>
<td></td>
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<tr>
<td>Boxing glove/Coral cactus (<em>Cylindropuntia fulgida</em>)</td>
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</tbody>
</table>

**KEY**

<table>
<thead>
<tr>
<th>Prevent</th>
<th>Eradicate</th>
<th>Contain</th>
<th>Asset Protection</th>
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</thead>
<tbody>
<tr>
<td>![]( Prevent Icon )</td>
<td>![]( Eradicate Icon )</td>
<td>![]( Contain Icon )</td>
<td>![]( Asset Protection Icon )</td>
</tr>
<tr>
<td>Species</td>
<td>Western</td>
<td>North West</td>
<td>Central West</td>
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<tr>
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<tr>
<td>Bridal creeper (<em>Asparagus asparagoides</em>)</td>
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<tr>
<td>Browntop bent (<em>Agrostis capillaris</em>)</td>
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<tr>
<td>Burr ragweed (<em>Ambrosia conferiflora</em>)</td>
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<tr>
<td>Cabomba (<em>Cabomba (all species except C. furcata]</em>)</td>
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<tr>
<td>Camel thorn (<em>Alhagi maurorum</em>)</td>
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<tr>
<td>Cane needlegrass (<em>Nassella hyaline</em>)</td>
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<tr>
<td>Cape broom (<em>Genista monspessulana</em>)</td>
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<tr>
<td>Cape tulips (<em>Moraea miniata and M flaccida</em>)</td>
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<tr>
<td>Carrion flower (<em>Orbea variegata</em>)</td>
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<tr>
<td>Cats claw creeper (<em>Dolichandra unguis-cati</em>)</td>
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<tr>
<td>Chilean needlegrass (<em>Nassella neesiana</em>)</td>
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<tr>
<td>Chinese violet (<em>Asystasis gangentica subsp. micrantha</em>)</td>
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<tr>
<td>Clockweed (<em>Oenothera curtiflora</em>)</td>
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<tr>
<td>Coolatai grass (<em>Hyparrhenia hirta</em>)</td>
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<tr>
<td>Devil’s rope (<em>Cylindropuntia imbricata</em>)</td>
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<tr>
<td>East Indian hygrophilia (<em>Hygrophila polysperma</em>)</td>
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<tr>
<td>Fireweed (<em>Senecio madagascariensis</em>)</td>
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<tr>
<td>Flax-leaf broom (<em>Genista linifolia</em>)</td>
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<tr>
<td>Giant reed (<em>Arundo donax</em>)</td>
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<tr>
<td>Gorse (<em>Ulex europaeus</em>)</td>
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<tr>
<td>Green cestrum (<em>Cestrum parqui</em>)</td>
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<tr>
<td>Grey sallow (<em>Salix cinerea</em>)</td>
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<tr>
<td>Hardhead thistle (<em>Rhaponticum repens</em>)</td>
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</tr>
</tbody>
</table>

**KEY**

- Prevent
- Eradicate
- Contain
- Asset Protection
<table>
<thead>
<tr>
<th>Species</th>
<th>Regional Management Objective</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harrisia cactus (<em>Harrisia martini</em>)</td>
<td>Western</td>
<td>North West</td>
</tr>
<tr>
<td>Hawkweeds (<em>Hieracium spp.</em>)</td>
<td></td>
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</tr>
<tr>
<td>Heteranthera (<em>Heteranthea reniformis</em>)</td>
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<tr>
<td>Horsetail (<em>Equisetum spp.</em>)</td>
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<tr>
<td>Honey locust (<em>Gleditsia triacanthos</em>)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hudsons pear (<em>Cylindropuntia rosea</em>)</td>
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<td></td>
</tr>
<tr>
<td>Hygrophila (<em>Hygrophila costata</em>)</td>
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<td></td>
</tr>
<tr>
<td>Hymenanche (<em>Hymenache amplexicaulus and hybrids</em>)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kidneyleaf mud plantain (<em>Heteranthera reniformis</em>)</td>
<td></td>
<td></td>
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<tr>
<td>Leafy elodea, dense waterweed, egeria (<em>Egeria densa</em>)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Long-leaf willow primrose, long-leaf water primrose (<em>Ludwigia longifolia</em>)</td>
<td></td>
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</tr>
<tr>
<td>Madeira vine (<em>Anredera cordifolia</em>)</td>
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<tr>
<td>Mesquite (<em>Prosopis spp.</em>)</td>
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<tr>
<td>Mexican waterlily (<em>Nymphaea mexicana</em>)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mother of millions (<em>Bryophyllum spp. and hybrids</em>)</td>
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</tr>
<tr>
<td>Ox-eye daisy (<em>Leucanthemum vulgare</em>)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parkinsonia (<em>Parkinsonia aculeata</em>)</td>
<td></td>
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</tr>
<tr>
<td>Perennial ground cherry (<em>Physalis longifolia</em>)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peruvian primrose (<em>Ludwigia peruviana</em>)</td>
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</tr>
</tbody>
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<tr>
<th>Species</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Prairie ground cherry (Physalis hederifolia)</td>
<td></td>
<td>Discuss with Riverina and Murray</td>
</tr>
<tr>
<td>Prickly pears (Opuntia spp. excl Opuntia ficus-indica)</td>
<td></td>
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</tr>
<tr>
<td>Ragwort (Senecio jacobaea)</td>
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</tr>
<tr>
<td>Rhus tree - toxicondendron succedaneum (syn. Toxicodendron succedanea, Rhus succedanea)</td>
<td></td>
<td>Discuss with North West and Riverina</td>
</tr>
<tr>
<td>Sagittaria (Sagittaria platyphylla)</td>
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<td>Priority for discussion with Murray</td>
</tr>
<tr>
<td>Salvinia (Salvinia molesta)</td>
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<td>State objective of “Asset Protection” adequate</td>
</tr>
<tr>
<td>Scotch broom (Cytisus scoparius)</td>
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</tr>
<tr>
<td>Senegal tea plant (Gymnocalycium spilanthoides)</td>
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<td>State objective of “Asset Protection” adequate</td>
</tr>
<tr>
<td>Serrated tussock (Nassella trichotoma)</td>
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</tr>
<tr>
<td>Silverleaf nightshade (Solanum elaeagnifolium)</td>
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<tr>
<td>Spiny burrgrass (Cenchrus longispinus, Cenchrus spinifex (syn. C. incertus))</td>
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</tr>
<tr>
<td>St John’s wort (Hypericum perforatum)</td>
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<tr>
<td>Sweet briar (Rosa rubiginosa)</td>
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</tr>
<tr>
<td>Tropical soda apple (Solanum viarum)</td>
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<td>State objective of “Eradication” adequate</td>
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<tr>
<td>Water hyacinth (Eichhornia crassipes)</td>
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<td>Proposed Biosecurity Regulation makes this effectively “Prevent” on borders of Western region.</td>
</tr>
<tr>
<td>Water lettuce (Pistia stratiotes)</td>
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<tr>
<td>Water poppy (Hydrocleys nymphoides)</td>
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<tr>
<td>Willow rhus (Searsia lancea)</td>
<td></td>
<td></td>
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<tr>
<td>Yellow bells (Tecoma stans)</td>
<td></td>
<td></td>
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<tr>
<td>Yellow water lily (Nymphaea Mexicana)</td>
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</tr>
</tbody>
</table>

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