



Department of
Primary Industries

Invasive Species Biosecurity

NSW Parthenium Weed Strategic Plan

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More information

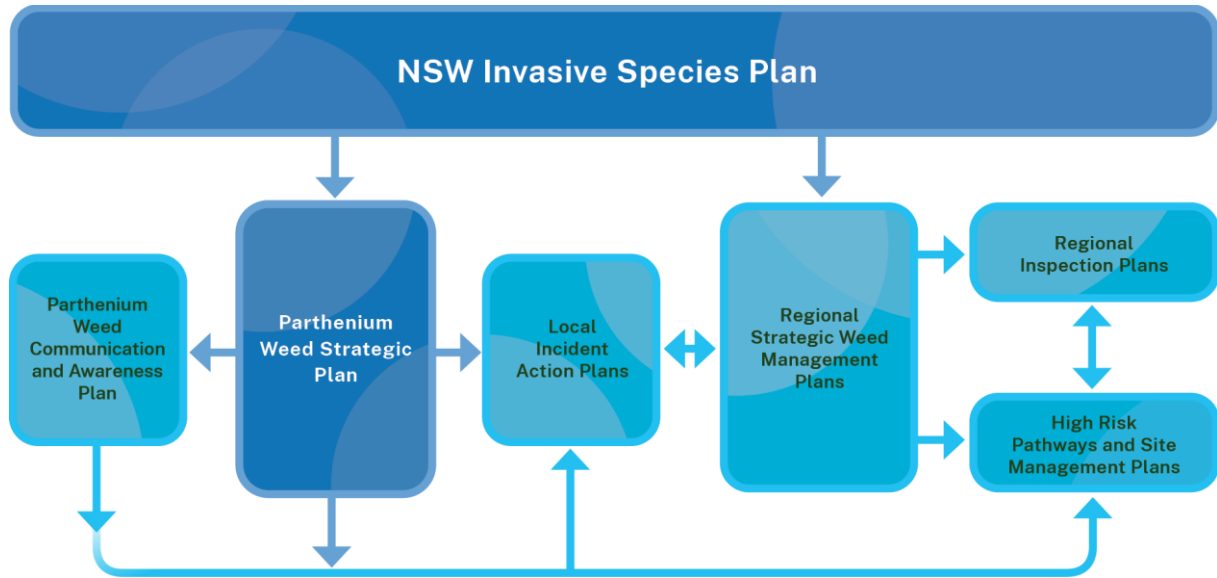
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Planning hierarchy



Mission

To keep New South Wales free from self-sustaining populations of parthenium weed.

This will be achieved by preventing new incursions in NSW and rapidly detecting and eradicating any populations from within NSW. This includes intercepting propagules traveling along high-risk pathways, improving awareness and identification skills, and treating all new infestations within 2 business days of detection.

Parthenium weed (*Parthenium hysterophorus*) will be managed in accordance with the requirements of the NSW *Biosecurity Act 2015*, with the aim to eradicate infestations in NSW, by preventing future seeding and removing all plants. Progress towards eradication and this plan will be reviewed annually.

Biosecurity duties

Section of Act	Statutory requirement
Schedule 2	Parthenium weed is prohibited matter throughout NSW.
s.28(1)	A person who deals with biosecurity matter that is prohibited matter throughout NSW is guilty of an offence.
s.30(1) s.31	A person who becomes aware of, or suspects, the presence or introduction of parthenium weed has a biosecurity duty to immediately notify an authorised officer.
36(1)	A person who becomes aware of, or suspects, the presence of parthenium weed in NSW has a biosecurity duty to ensure that, so far as is reasonably practicable, the biosecurity risk posed or likely to be posed by the prohibited matter is prevented, eliminated or minimised.

Risk and impact

Parthenium weed invades pastures and crops. It causes severe human health problems including respiratory problems and severe dermatitis. It can also cause health problems in livestock.

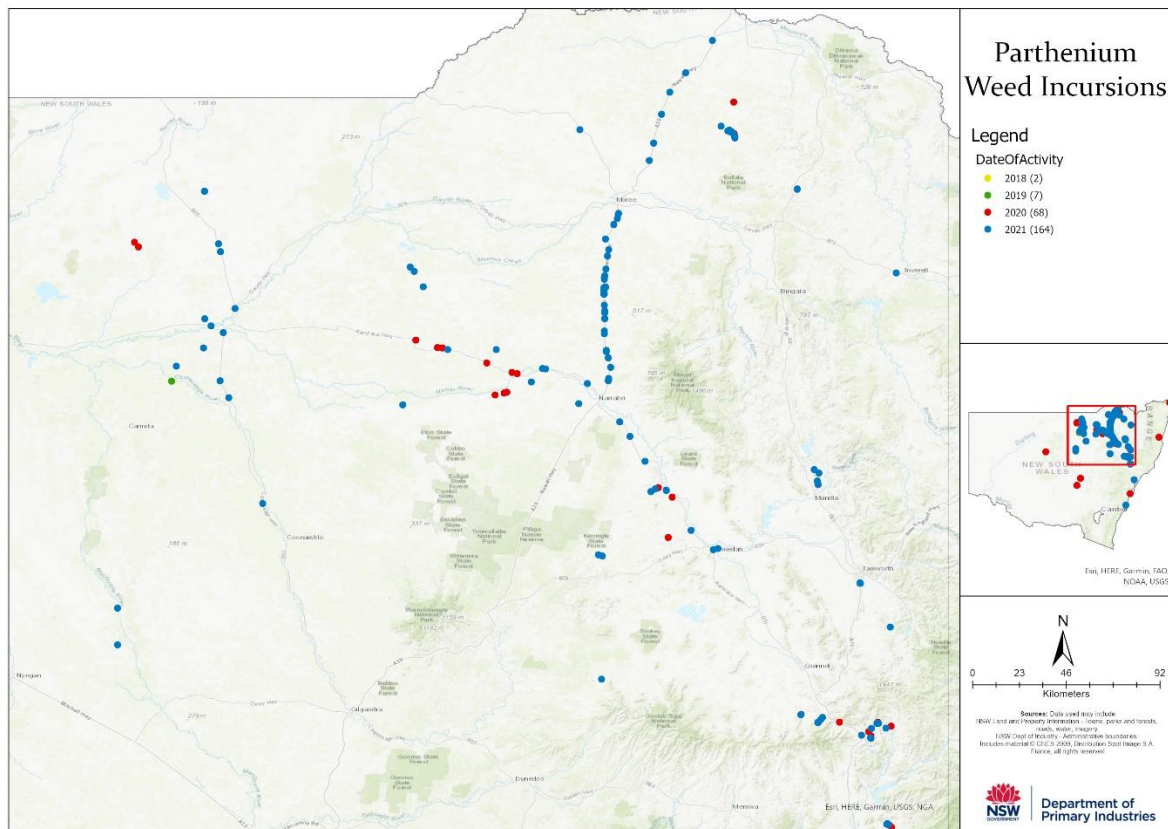
Conditions are ideal for parthenium weed in most areas of NSW except for very arid or wet areas. This is a significant threat because parthenium weed:

- is unpalatable to livestock
- outcompetes pastures
- contaminates grain
- reduces crop yield
- is a host plant for crop viruses
- can taint meat or milk
- releases a chemical that prevents other plants from growing.

Parthenium weed occurs across 18 million hectares of prime grazing land in central Queensland. 60 million hectares of Queensland are affected in total, costing the pasture industry \$68 million each year, and incurring an extra \$20 per person in health services costs in infested areas. Plants have been detected as far south as Goondiwindi, on the NSW border.

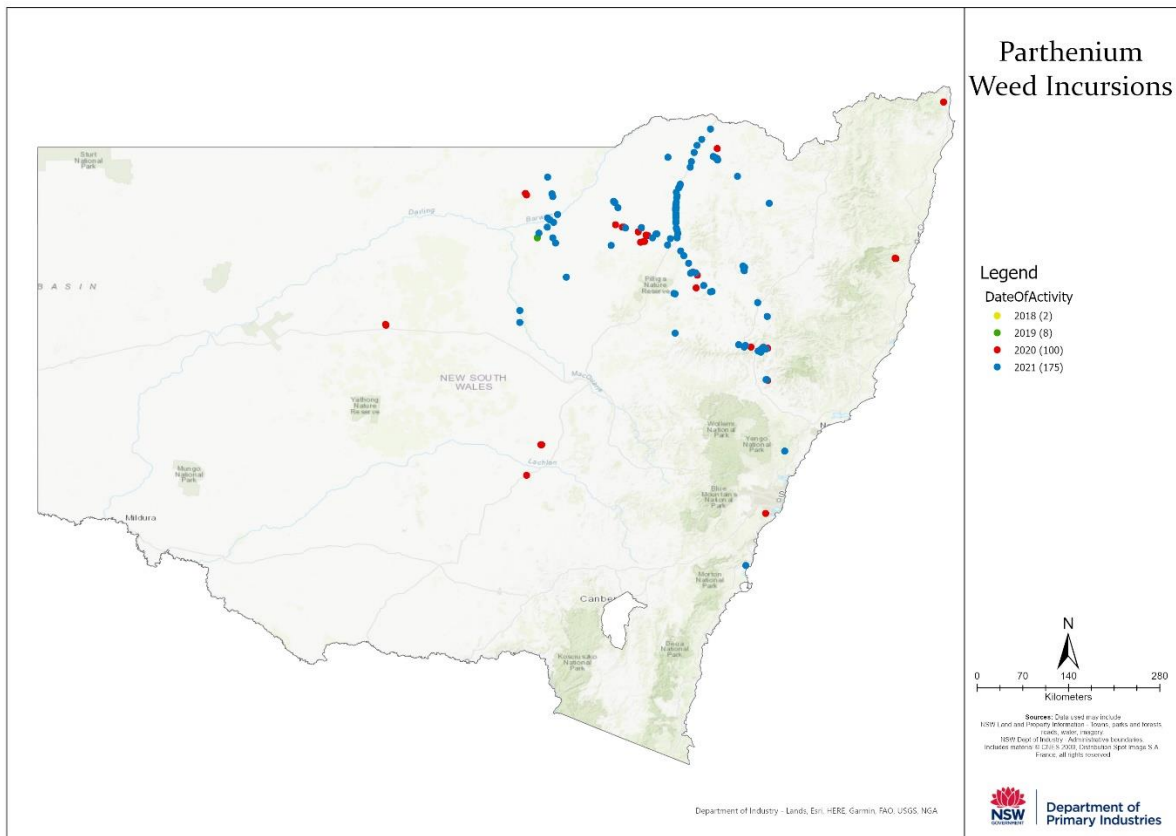
Current extent in NSW

The majority of parthenium weed detections occur along roadsides in the North West LLS region, particularly along the Newell Highway (Map 1). The suspected source for roadside incursions is unidentifiable vehicles, machinery or equipment that have picked up parthenium weed seed in Queensland.



Map 1: Parthenium weed infestations detected in the North West LLS region between 2017 and 2021, showing the prevalence of infestations along the Newell Highway and other roads.

Of the many hundreds of infestations detected in NSW since 1982, 95 occurred on non-roadside private and public property. This weed continues to re-invade, with 27 of these non-roadside incursions detected since 1 April 2020. The suspected source for the majority of these recent infestations is contaminated hay and grain from Queensland. Parthenium weed has now been found across the Central West, Greater Sydney, North Coast, Northern Tablelands, North West and South East Local Land Services regions (Map 2).



Map 2: Parthenium weed infestations detected across NSW between 2017 and 2021

Management Objectives

1. Coordinated governance
2. Prevent the introduction of new propagules
3. Early detection of new incursions
4. Timely response to new incursions
5. Biosecurity duties are met

Objective 1 Coordinated governance

Key Performance Indicators

Success	Performance indicator	Basis for comparison
<i>The multi-agency taskforce operates effectively</i>	Parthenium Weed Strategic Plan is implemented and reviewed annually	No self-sustaining populations of Parthenium weed in NSW

Strategies and Deliverables

	How	By when	Who	Output/Activity
1.1	Convene a multi-agency taskforce (the Parthenium Weed Taskforce) to implement this plan	Two meetings held per annum	DPI Taskforce	A minimum of 80% of Taskforce members attend meetings. Members complete all agreed actions identified at meetings Taskforce members endorse Terms of Reference
1.2	Maintain a parthenium weed database with detailed records and reports about all infestations	Ongoing as new incursions are detected and existing sites reinspected	DPI LCAs	Quarterly Situation Reports provided to the Taskforce and the State Weeds Committee BIS record entered for all inspections and control activities relating to parthenium weed Voucher specimen provided to herbarium for all new non-roadside property infestation sites
1.3	Review this plan annually within the scope of the NSW Invasive Species Plan	Annually in October	DPI Taskforce	Parthenium Weed Strategic Plan is reviewed annually and updated as required

Objective 2 Prevent the introduction of propagules

Key Performance Indicators

Success	Performance indicator	Basis for comparison
<i>Preventing the introduction of propagules stops incursions</i>	Not more than 1 new incursion annually from known pathways*	Improvement over time

*Does not include roadside infestations from unidentifiable vehicles

Strategies and Deliverables

	How	By when	Who	Output/Activity
2.1	Identify and assess new invasion pathways	Each Taskforce meeting	DPI Taskforce	New invasion pathways identified and risk assessed
2.2	Intercept high-risk pathways where practicable	Ongoing	DPI LCAs	Invasion pathways intercepted
2.3	Inspect parthenium weed carriers entering NSW from QLD at a DPI inspection facility	October – December (peak) and as requested	DPI	100% of grain harvesting machinery operators that seek an inspection are inspected at 1 of 4 DPI facilities
2.4	Review existing invasion pathways	Annually	DPI Taskforce	Existing pathways reviewed annually

Objective 3 Early detection of incursions

Key Performance Indicators

Success	Performance indicator	Basis for comparison
<i>Early detection of incursions reduces time until eradication</i>	Incursions are detected in first generation and before seeding	Improvement over time

Strategies and Deliverables

	How	By when	Who	Output/Activity
3.1	Include parthenium weed high risk sites and pathways in regional inspection plans	First Friday in May each year	LLS	11 regional inspection plans include parthenium weed high risk sites and pathways
3.2	Exchange information and collaborate with cross border contacts on high-risk pathway inspections	Prior to each taskforce meeting	DPI	Cross border contacts exchange information and collaborate on high-risk pathway inspections
3.3	Follow up all information and intelligence reports relating to parthenium weed carriers	Within two weeks of receiving reports	DPI LCAs Police	100% of parthenium weed carrier movements traced through reports and Records of Movement
3.4	Develop and implement an awareness and communications plan	June 2022	DPI Taskforce	A parthenium weed awareness and communications plan campaign is developed and implemented
3.5	Develop tools and training to assist weeds professionals to recognise parthenium weed and inspect high risk sites and pathways	June 2022	DPI	Virtual 3D model available Prohibited matter training course available 3D printed model available NSW WeedWise profile current

3.6	Detector dogs augment surveillance of high-risk sites and pathways	Ongoing	DPI	Detector dogs' find parthenium weed plants that humans miss at all sites where they are deployed
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Objective 4 Timely response to detections

Key Performance Indicators

Success	Performance indicator	Basis for comparison
<i>Timely response to incursions reduces time until eradication</i>	Incursions responded to in the specified timeframe	Improvement over time

Strategies and Deliverables

	How	By when	Who	Output/Activity
4.1	Report suspected new infestations to DPI within 1 working day of discovery	Within 1 working day of discovery	LCA	100% of new infestations reported to DPI within 1 working days of discovery
4.2	Treat all new small incursions (< 101 plants within 100 m ²)	Within 2 working days of discovery	LCA	100% of new incursions are treated within 2 working days of discovery
4.3	Commence treatment of all new large infestations (> 100 plants or > 100 m ²)	Within 2 working days of discovery	LCA	100% of new incursions have treatment commenced within 2 working days of discovery
4.4	Undertake delimiting surveys within 3 weeks of discovery of small and large non-roadside infestations	Within 3 weeks of DPI/herbarium verification	DPI LCA LLS	100% of delimitation surveys are completed within 3 weeks of DPI/herbarium verification
4.5	Re-inspect incursion sites at least every 21 days	Ongoing until eradication	LCA	100% of incursion sites inspected each 21 days

4.6	Use NSW Biosecurity Act management tools to aid containment of incursions	Within 4 weeks of discovery	LCA	Management tool applied to 100% of incursion sites
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Objective 5 Biosecurity duties are met

Key Performance Indicators

Success	Performance indicator	Basis for comparison
<i>Stakeholders discharge prohibited matter biosecurity duties</i>	Proportion of stakeholders meeting prohibited matter biosecurity duties: <ul style="list-style-type: none"> - voluntarily - after receiving a direction - after receiving a penalty infringement notice or prosecution 	Voluntary compliance reaches or maintained at 100%

Strategies and Deliverables

	How	By When	Who	Output/Activity
5.1	Support stakeholders with infestations and whose activities spread parthenium weed to understand and discharge their biosecurity duties	As required.	LCA DPI LLS	Stakeholders are adequately supported to discharge their biosecurity duties
5.2	Develop Incident Action Plan for each large incursion (as defined at 4.3)	As required	LCA LLS DPI	An Incident Action Plan is developed and implemented for each large incursion

Monitoring, evaluation and reporting

The Parthenium Weed Taskforce will evaluate stakeholder progress against this strategy by each September. This strategy will be reviewed annually in October and revised on a needs basis.

Acronyms and definitions

BIS – Biosecurity Information System

DPI – New South Wales Department of Primary Industries

LCA – Local Control Authority

LLS – Local Land Services

Taskforce – Parthenium Weed Taskforce

Additional information

BIS-Weeds Dashboard for parthenium weed:

Link to come

NSW Invasive Species Plan:

www.dpi.nsw.gov.au/biosecurity/weeds/strategy/strategies/nsw-invasive-species-plan-2018-2021

Local Land Services:

<https://www.lls.nsw.gov.au/>

NSW Biosecurity Act 2015:

www.dpi.nsw.gov.au/about-us/legislation/list/biosecurity-act-2015

NSW WeedWise profile:

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

Parthenium weed situation reports

<https://extranet.dpi.nsw.gov.au/weeds/state-priority-weeds> (internal -for weeds professionals only)

Parthenium Weed Taskforce Terms of Reference

<https://extranet.dpi.nsw.gov.au/weeds/state-priority-weeds> (internal -for weeds professionals only)

Weed risk assessments and Biosecurity Information System records in WIDX:

widx.nsw.gov.au