



Northern Inland Weed Advisory Committee REGIONAL PARTHENIUM MANAGEMENT PLAN

Plan Title: Parthenium Management Plan for the New England Tablelands and North West Plains.

1.1. Plan Proponents: Northern Inland Weeds Advisory Committee (NIWAC)

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Signature:  **Date:** 11 November 2008
(Chair – Northern Inland Weeds Advisory Committee)

Name: Maria Woods

1.2. Name of Plant: *Parthenium hysterophorus*

1.3. Common Name: Parthenium Weed

1.4. Plan Period: Starting date: 1st July 2008* Completion date: 30th June 2011

* Original Plan submitted 1st July 2003 – 30th June 2008

1.5. Area of Operation:

The Northern Inland Weeds Advisory Committee (NIWAC) covers approximately 100,000 km² in northern tablelands and slopes of NSW.

This Plan specifically relates to the following Local Control Authorities (LCA's) and RLPB's

- Glen Innes Severn Council (GISC)
- Gunnedah Shire Council (GSC)
- Gwydir Shire Council (GSC)
- Inverell Shire Council (ISC)
- Liverpool Plains Shire Council (LPSC)
- Moree Plains Shire Council (MPSC)
- Narrabri Shire Council (NSC)
- New England Weeds Authority (NEWA)
- Tamworth Regional Council (TRC)
- Tenterfield Shire Council (TSC)
- Upper Hunter Weeds Authority (UHWA)
- Armidale Rural Lands Protection Board
- Moree Rural Lands Protection Board
- Narrabri Rural Lands Protection Board
- Northern Slopes Rural Lands Protection Board
- Northern New England Rural Lands Protection Board
- Tamworth Rural Lands Protection Board



1.6. Aim: To prevent the establishment of Parthenium Weed in the Namoi, Gwydir and New England Tablelands of NSW.

1.7. Objectives:

- a) Detect all new outbreaks of Parthenium Weed no later than the second growth season.
- b) Contain all new outbreaks of Parthenium Weeds within 2 days of discovery.
- c) Minimise the entry of Parthenium Weed into NSW through cross border co-operation.
- d) Suppress all small outbreaks (less than 10 plants) within two years of discovery.
- e) Suppress all large outbreaks (more than 10 plants) within six years of discovery.

2. STAKEHOLDERS

2.1. Signatories or stakeholders involved in developing this plan

The main stakeholders consulted in preparing this plan include all Local Control Authorities (LCAs) and Rural Lands Protection Boards (RLPBs). Although not directly consulted in the development of this plan, many agri-business providers have been targeted in Parthenium work to date.

2.2. Stakeholders involved in implementing the plan

- The Northern Inland Weeds Advisory Committee together with all relevant affected LCAs and relevant RLPBs list (listed on page 2, under area of operation).
- Public land managers and organisation including State Forests, National Parks and Wildlife Service, and Rail Infrastructure Corporation are encouraged to use this plan, and participate in a regional approach.
- Local networks via Landcare, producer groups, NSW Farmers, and commercial groups e.g. Elders, are given access to our plan by keeping them informed of progress and changes through training, media outlets, public notices, e-mail and website
- Private land managers through networks, field days, seminars, and website support are cooperating with our weed officers to implement Best Management Practices.

The involvement of all of these stakeholders is important given that Parthenium Weed is normally found on roadsides, stock routes and private grazing land.

3. BACKGROUND AND JUSTIFICATION

3.1. Plan Justification and Description of the Problem.

Why is it important that Parthenium is controlled? Why is it a concern to the community who will be paying to control it?

Parthenium is reported to be the greatest weed threat to New South Wales¹. Contact with the plant and pollen can cause serious allergic reactions in people, and is dangerous to grazing animals and reduced crop and land values.

It is an annual Asteraceae (daisy and thistle family) and is a vigorous colonizer of bare and waste ground and over grazed pastures. It produces a large basal rosette and, once established, suppresses growth of weak or overgrazed pastures by both direct competition and allelopathy.

Parthenium is particularly aggressive. It reproduces by seed, and, in summer, can germinate, flower and set seed within 28 days. A single fully mature plant can produce at least 15,000 seeds and buried seed has a half-life greater than six years. It is unpalatable to stock and it will seriously taint the meat and milk of animals that eat it.

¹ NSW DPI Press Release

Parthenium can cause severe allergic reactions in humans and some animals. Symptoms include rhinitis, asthma and severe contact dermatitis. Prolonged exposure tends to sensitise some individuals who did not initially react to the weed.

What has been achieved in earlier programs?

Parthenium was introduced into Queensland as a contaminant of pasture seed in the 1950s. It quickly became naturalised in the state's Central Highlands and its spread was exacerbated by widespread land clearing during the Brigalow Scheme. It is now endemic throughout the Central Highlands, with infestations over 18 million hectares. Isolated outbreaks occur in the Darling Downs, Maranoa and the Brisbane Valley.

Significant progress has been made in cross border co-operation between Queensland and New South Wales. This has led to: clear identification of roles, incorporation of the southern Queensland and NSW strategies into the National Parthenium Strategy, training opportunities for weed management staff, increased development of weed seed spread management frameworks, improved rapid response capability and expansion of best practice guidelines. NSW has had a limited number of outbreaks but has the real threat of some larger infestations in our region.

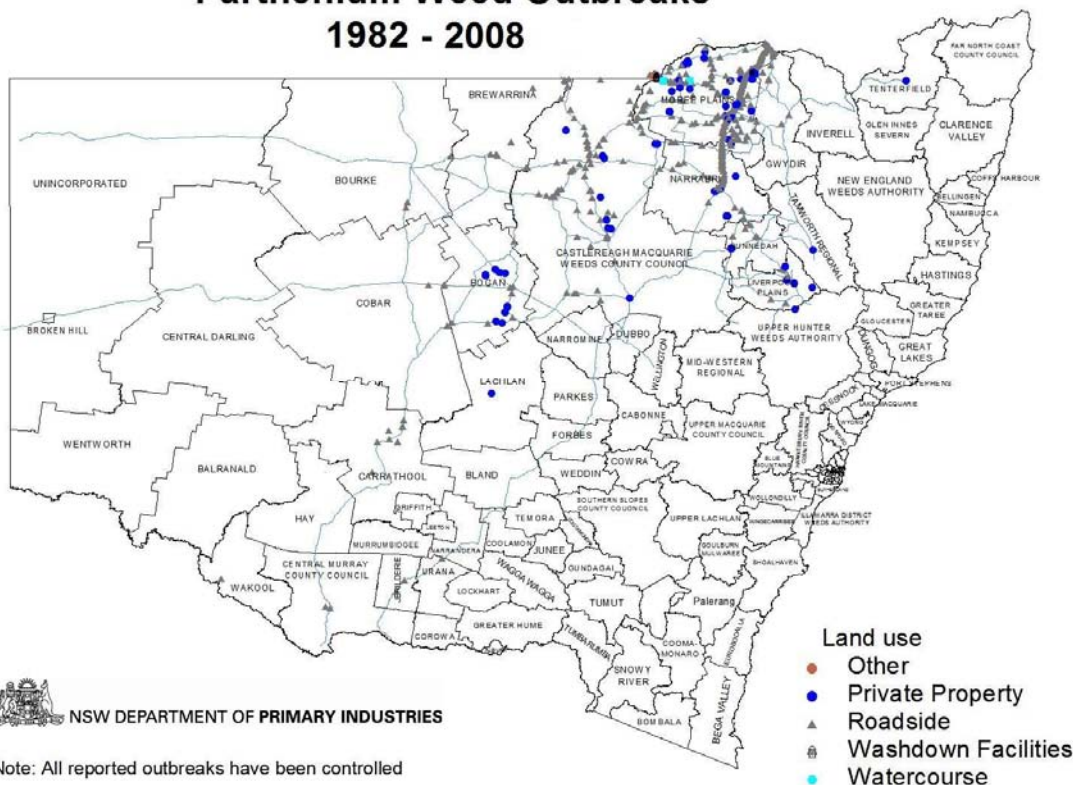


Parthenium Caravan – used at Shows and Field days

What will this program achieve that previous programs have not?

This program will build on existing efforts and continue to minimise the threat of Parthenium infestations across our region. It will bring a regional focus to the original State Management Plan.

Parthenium Weed Outbreaks 1982 - 2008



3.4 Weed Biology

Parthenium Weed is an erect aromatic annual herb with a deep tap root. Mature plants grow to a height of 1 to 1.5 metres. Leaves are pale green, deeply lobed, covered with fine hairs and are alternately branched.

Large numbers of small (5mm diameter) cream coloured flowers occur on the tips of the numerous stems. The upper stems are much branched. A mature plant may produce at least 15,000 seeds.

The main identification features of the weed are that the stems appear to be striped due to grooves on ridges and the flowers have five distinct lobes.

In NSW Parthenium Weed grows mainly in spring and summer. If stressed it can germinate, grow, mature and set seed in 28 days.

3.5 Method and rate of Spread

Parthenium weed spreads only by seed. Local spread can occur by willy-willies, the movement of domestic, wild and feral animals and by water. The seed is not particularly well adapted to spread by wind but can spread considerable distances in floodwaters.

Unintentional movement of the seed by human activity is the main source of long distance spread. Headers and grain harvesting operations have been linked with more than half the Parthenium outbreaks on privately owned land. Other sources of spread on private land are

contaminated stock food and contaminated pasture seed.

Motor vehicles are one of the main methods of long distance spread, as demonstrated by the majority of outbreaks in NSW occurring on roadsides.



Parthenium Weed - reported as the greatest weed threat to NSW.

3.6 Species Management

As Parthenium weed is not established in NSW, the main method of species management is rapid discovery of new outbreaks and effective farm and vehicle hygiene.

Simple prevention measures include being aware when purchasing stock, feed and crop or pasture seed and being aware of the origin of machinery vehicles and stock. Effective machinery cleaning procedures should be adopted and other measures taken to minimise the introduction of infested stock, feed and/or seed.

A protocol has been developed for weeds officers to manage Parthenium weed outbreaks.

3.7 Key Land Managers

Glen Innes Severn Council (GISC), Gunnedah Shire Council (GSC), Gwydir Shire Council (GSC), Inverell Shire Council (ISC), Liverpool Plains Shire Council (LPSC), Moree Plains Shire Council (MPSC), Narrabri Shire Council (NSC), New England Weeds Authority (NEWA), Tamworth Regional Council (TRC), Tenterfield Shire Council (TSC), Upper Hunter Weeds Authority (UHWA), Armidale Rural Lands Protection Board, Moree Rural Lands Protection Board, Narrabri Rural Lands Protection Board, Northern Slopes Rural Lands Protection Board, Northern New England Rural Lands Protection Board & Tamworth Rural Lands Protection Board.

Private land managers are critical to the success of this plan. They must notify the presence of Parthenium Weed on the land to their Local Control Authority. They also have the responsibility to fully and continuously suppress and destroy any Parthenium plants.

Private landholders must also embrace the adoption of Best Management Practices and be willing to take on new information, change traditional practices and, in most cases, outlay significant dollars.

RLPBs have an important role in ensuring that traveling stock do not bring in Parthenium Weed.

4.0 LEGISLATIVE AND REGULATORY SITUATION

4.1 Current Declaration

Noxious weeds are those plants declared by order of the Minister for Department of Primary Industries to be noxious weeds under the Noxious Weeds Act 1993. Weeds are classified into five main categories with differing control measures required for each classification.

Parthenium Weed is declared as a Class 1 State Prohibited noxious weed (a weed that is of limited distribution or does not occur in the state, but poses a severe threat to Agriculture, the environment or the community) ² throughout NSW. The occupier of land on which an outbreak of Parthenium weed occurs must notify the Local Control Authority within three days of discovery of the infestation.

The Noxious Weeds Act 1993 requires grain harvesting and handling machinery entering NSW from Queensland to be thoroughly cleaned before entry and to be presented for inspection at the state border. Penalties apply for failing to meet these requirements.

4.2 Declaration Changes

No change to the current declarations are anticipated at this time.

² Noxious Weeds Act, 1993

5.0 CONSIDERATIONS AND OPPORTUNITIES

5.1 Opportunities to be exploited

A Parthenium Project Officer was employed during 2000-2004 in Narrabri. The Officer made major progresses in promoting Parthenium, its identification and impacts. A cross-border approach with the Queensland counterpart has helped to break barriers to effective Parthenium management.

This regional plan will be the basis for applications to various funding sources including NSW DPI Noxious weed grants and other relevant federal and state funding sources.

5.2 Links to other Strategies

This Regional Strategy is based on the original State Management Parthenium Plan, which expired on 30th June 2003.

6. BARRIERS TO OVERCOME

- B1. Method of Spread** – Parthenium is spread by seed from QLD on vehicles and in machinery & grain. This is a major factor in our area because we share a border with QLD.
- B2. Poor identification skills** – despite improved identification skills many primary producers and the general public still do not recognize Parthenium.
- B3. Failure of some land managers to notify Local Control Authorities of outbreaks** - early notification is critical given the potential rate of spread.
- B4. Rate of Spread** – Parthenium Weed can set seed within 28 days of germination and produce a large number of seeds.
- B5. Difficult to control** – Infestations are difficult to eradicate if the seed becomes buried.
- B6. Failure of some LCA's to keep adequate records of outbreaks** – this makes ongoing monitoring and management difficult.

OBJECTIVE A: DETECT ALL NEW OUTBREAKS OF PARTHENIUM WEED NO LATER THAN THE SECOND GROWTH SEASON

BARRIER ONE – METHOD OF SPREAD			
Action	Who	Completion date	Performance Indicator
1. Train Council outdoor & professional staff in Parthenium Weed identification	LCA's	June 2009	10 Councils with staff trained and able to identify Parthenium
2. Inspect all roads and highways during Summer and Autumn	All LCA's in region	February & May annually	All roads surveyed twice.
3. Inspect all farmland where crops have been harvested by agricultural machinery known to have worked in Central Queensland in the same season.	All LCA's	April + 12 months	Properties inspected within 16 months of machinery having harvested crops.
4. Inspect all machinery yards, stock food mills & grain elevators.	LCA's	February & May annually	All sites inspected twice each season.

BARRIER TWO – POOR IDENTIFICATION SKILLS			
Action	Who	Completion date	Performance Indicator
1. Use NSW DPI television advertisement and other extension material to emphasise identification and the need to keep NSW Parthenium free.	NIWAC	Summer/Autumn annually.	Advertisement shown on regional television stations.
2. Conduct extension activities on site, when small roadside infestations are found.	LCA's and NSW DPI	Ongoing	Radio, television and newspaper coverage every time an infestation is found.
3. Display weatherproof ID posters at permanent (eg Council offices) and temporary locations (field days, trade fairs) to promote the need to keep NSW Parthenium free.	LCA's & RLPBs	Ongoing	Posters displayed at every Council, RLPB and NSW DPI in the region.

OBJECTIVE A: DETECT ALL NEW OUTBREAKS OF PARTHENIUM WEED NO LATER THAN THE 2nd GROWTH SEASON (contd)

BARRIER THREE – FAILURE OF SOME LAND MANAGERS TO NOTIFY LOCAL CONTROL AUTHORITIES OF OUTBREAKS			
Action	Who	Completion date	Performance Indicator
1. Implement ongoing publicity program using the carrot & stick - legal consequences of not reporting and/or controlling Parthenium and the need for effective control.	NSW DPI & LCA's	Ongoing	One press release.
2. Access NSW DPI funding for initial control of new outbreaks.	Individual LCA's through Group funding applications.	As necessary	Adequate funding for effective control.
3. Display weatherproof ID posters at permanent (eg Council offices) and temporary locations (field days, trade fairs) to promote the need to keep NSW Parthenium free.	LCA's & RLPBs	Ongoing	Posters displayed at every Council, RLPB and NSW DPI in the region.

OBJECTIVE B: CONTAIN ALL NEW OUTBREAKS OF PARTHENIUM WEED WITHIN 2 DAYS OF DISCOVERY

BARRIER ONE – METHOD OF SPREAD			
Action	Who	Completion date	Performance Indicator
1. Train Council outdoor and professional staff in Parthenium Weed (Agfact – Appendix One, Poster Appendix Two)	NSW DPI & LCA's	June 2009	10 LCAs will have staff trained and able to identify Parthenium,
2. Co-ordinate extension in Northern NSW and Southern Queensland	NIWAC, NSW DPI and LCA's.	Annually	Display exhibited at 10 regional shows/field days and saleyards

OBJECTIVE C: – MINIMISE THE ENTRY OF PARTHENIUM WEED INTO NSW THROUGH CROSS BORDER

BARRIER ONE – METHOD OF SPREAD			
Action	Who	Completion date	Performance Indicator
1. Investigate reports of illegal entry of Agricultural machinery into NSW	NSW DPI in conjunction with LCA's	Ongoing	Reports investigated as per NSW DPI Standard Operating Procedure.
2. Discourage NSW grain users from buying grain from Central Queensland	NSW DPI and LCA's.	September annually	At least 1 press release.
3. Work with the QDPI to develop cross border communication and co-operation.	LCA's and NSW DPI	Ongoing	Joint projects between QLD and NSW, PW Taskforce members attend meetings.

BARRIER SIX – FAILURE OF SOME LCA'S TO KEEP ADEQUATE RECORDS OF OUTBREAKS			
Action	Who	Completion date	Performance Indicator
1. Stress the need for record keeping and reporting by all LCA's	NIWAC, NSW DPI & LCA's	Ongoing	All LCA's reporting regularly and ASAP when new infestations are found.

OBJECTIVE D: SUPPRESS ALL SMALL OUTBREAKS (LESS THAN 10 PLANTS) WITHIN TWO YEARS OF DETECTION & OBJECTIVE E: SUPPRESS ALL LARGE OUTBREAKS (MORE THAN 10 PLANTS) WITHIN SIX YEARS OF DETECTION

BARRIER FOUR - RATE OF SPREAD			
Action	Who	Completion date	Performance Indicator
1. Treat all outbreaks promptly	LCA's	Ongoing	<ol style="list-style-type: none"> 1. All outbreaks contained within 2 days of discovery. 2. Small outbreaks treated within 1 day of discovery; and 3. Large outbreaks treated within 3 days of discovery.
2. Ensure outbreaks on private property are re-inspected regularly & that occupiers meet their control responsibilities	LCA'S & affected occupiers.	Ongoing as necessary	<ol style="list-style-type: none"> 1. Suspect area re-inspected at least every 21 days from Oct – May; 2. Section 18 notices served if necessary 3. Section 20 entries made if necessary; and 4. Legal action used if necessary.

BARRIER FIVE – DIFFICULTY TO CONTROL ONCE SEED IS BURIED			
Action	Who	Completion date	Performance Indicator
1. Ensure outbreaks are not ploughed during control period unless necessary for containment of seed.	LCA's	As necessary	<ol style="list-style-type: none"> 1. Undertaking from occupier to control; 2. Section 18 notices served if necessary; and 3. Legal action used if necessary

BARRIER EIGHT – FAILURE OF SOME LCA’S TO KEEP ADEQUATE RECORDS OF PARTHENIUM WEED OUTBREAKS			
Action	Who	Completion date	Performance Indicator
1. Maintain detailed records of all Parthenium Weed outbreaks	LCA's	Ongoing	Records updated every time a new infestation is found and then maintained for at least 10 years.
2. Report all outbreaks to NSW DPI for inclusion on the Parthenium Weed database	LCA's	Ongoing	Reports submitted to NSW DPI within three days of discovering a new infestation.

7.0 MONITOR & REVIEW PROCESS

The performance of each stakeholder will be monitored at least once on an annual basis by reviewing reports which is mandatory for the participants of this plan to submit. These reports will be sent to the NIWAC Planning Coordinator who will compile them and will be reviewed with the Technical Officer of the plan.

If a committed stakeholder failed to meet a key performance indicator or objective the following process would occur; After being brought to the attention of the technical officer and the chair of NIWAC a meeting would be arranged with the appropriate personal to discuss the situation to determine what course of action would be taken.

8.0 BENEFITS

Parthenium weed costs Queensland at least \$25 million annually in lost and forgone production and costs of control. The health costs to Queensland have never been quantified but would be significant. The cost to NSW of preventing Parthenium weed from becoming established is less than \$200,000 annually.

This plan clearly demonstrates the significant benefits to agriculture, the environment, livestock and human health by preventing the outbreak of Parthenium weed in the Northern Inland area of NSW.

9.0 RESOURCES

Agfacts – P7.6.15 (Fifth Edition 2004) (Parthenium Weed) – Appendix One
NSW Department of Primary Industries

Parthenium Weed Poster - Appendix Two
NSW Department of Primary Industries

All the LCA's involved in the plan have reference material that is distributed to the public by means of Noxious Weeds Displays, Field Days, Office Displays and News Letters. Media releases by way of television, radio and newspapers are also resources used to get the required information into the public arena.

The Northern Inland Noxious Weeds Advisory Committee has a very professional and informative website where the public can source valuable information on Parthenium Weed and a host of other weeds in our region.

□ Our website www.niwac.org