Weed Management Plan for Bellyache Bush
(Jatropha gossypiifolia)

2018
Weed Management Plan for Bellyache Bush

Weed Management Branch
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Section 1 - Overview

Introduction

This plan is the Weed Management Plan for Bellyache Bush (*Jatropha gossypiifolia*) 2018 and is a statutory plan under the *Weeds Management Act* (the Act), administered by authorised Weed Management Officers in the Weed Management Branch, Department of Environment and Natural Resources (DENR).

Statutory Weed Management Plans are legal documents designated under section 10 of the *Weeds Management Act* (the Act) for high risk declared weeds in the Northern Territory. These plans establish the legal requirements and management actions to be undertaken by all owners and occupiers of land on which the declared weed is present in the Northern Territory.

Section 9(2) of the Act compels all owners and occupiers to comply with a statutory weed management plan relating to a weed. Non-compliance is an environmental offence level 3 under the *Environmental Offences and Penalties Act*. Non-compliance may include failure to undertake any of the required actions specified in this Plan.

Bellyache bush (*Jatropha gossypiifolia*) is a Weed of National Significance. It has been assessed as a very high risk weed in the Northern Territory through the Weed Risk Management System due to its invasiveness, potential for spread and economic and environmental impacts.

Bellyache bush is a multi-stemmed, perennial shrub that can grow up to 4 metres in height. It originates from Mexico down to southern Brazil. It is likely that bellyache bush was introduced, with other *Jatropha* species, into the Darwin Botanic Gardens approximately 100 years ago and some initial spread in the Northern Territory can be attributed to the use of bellyache bush as an ornamental garden plant. There are currently two distinct strains of bellyache bush present in the Northern Territory: the ‘Darwin Purple’ with predominantly purple/red foliage and the ‘Katherine Green’ with green foliage.

This plant is extremely adept at spreading into new areas either through prolific seed dispersal or distribution of vegetative parts. This ability to spread quickly threatens pastoral enterprises and other land managers by affecting mustering, taking over valuable grazing land, poisoning stock and requiring significant management costs. Dense core infestations require long term stock exclusion in affected areas.

The first statutory plan for bellyache bush was gazetted on 21 September 2010 for a period of ten years. In 2013 the plan was reviewed in accordance with the Act. It was amended following the review and gazetted on 24 December 2013. Consultation with stakeholders was undertaken in 2017. The 2018 plan is the result of the final review of the original plan and 2013 amended plan. This plan will commence on the date it is gazetted, that is 28 November 2018; and will remain in force until it is revoked.

Declaration

Bellyache bush is a declared weed throughout the Northern Territory under section 7 of the Act. This prohibits movement or transport of bellyache bush on a public road by itself or as a contaminant, its entry to the Northern Territory, or sale by itself or as a contaminant. Land owners and occupiers are required to destroy outlying plants and infestations and control and contain large infestations of bellyache bush growing on their land.

Declared weeds affect the entire Northern Territory community. Management of these weeds is an essential precursor to achieving outcomes related to improving the Northern Territory’s productivity, competitiveness, sustainability and natural environment.
Bellyache bush is declared as:

- **Class A (to be eradicated)** in all areas of the NT except where it is classified as Class B;
- **Class B (growth and spread to be controlled)** in the area shown in Figure 1 and described in Appendix A; and
- **Class C (not to be introduced)** in all areas of the Northern Territory (all declared weeds are also declared Class C).

The delineation of management zones (refer Figure 1) is directly associated with the declaration classes:

![Figure 1: Bellyache bush management zones](http://nrmmaps.nt.gov.au)
Definitions

**Eradication:** Relative to pest plants, is the total removal of a species and its propagules from an area so that it cannot recur unless introduced from external sources. For eradication to be achieved, no viable propagules (plant parts or seeds) can remain in the area or be allowed to return. This requires considerable investment over the long term (10 years).

**Control and containment:** To reduce size and density of infestations and contain the presence of a species in a specific area. This requires ongoing investment in surveillance and control activities and mitigating the impact of the weed.

Containment requires that bellyache bush does not spread further on a property or along a corridor to adjoining clean areas or properties. This management technique involves actively managing the infestation in strategic areas or areas with a high risk of spread potential, and controlling the infestations from the outside towards the centre, gradually reducing the infestation over time.

**Maintenance period:** The period after which there is no longer any reproduction from the original infestation being controlled. During the maintenance period, there may be recruitment from outside the original infestation which requires control. Maintenance is ongoing following the eradication of the original infestation.

**Prevent:** To stop (something) from happening.

**Outlier (isolated) plants and infestations:** Any bellyache bush plant located outside of a core infestation area (Class B zone) and any bellyache bush in the Class A zone.

**Core infestation:** An established population of bellyache bush in the Class B zone from which outliers may arise.

**Human-assisted spread:** Spread of weeds into new areas through trade, transport, tourism and travel, usually on a person or vehicle.

**Sacred site:** A registered site that is sacred to Aboriginals or is otherwise of significance according to Aboriginal tradition, and includes any land that, under a law of the Northern Territory, is declared to be sacred to Aboriginals or of significance according to Aboriginal tradition (Aboriginal Land Rights (Northern Territory) Act 1976). The Northern Territory Aboriginal Sacred Sites Act applies.

**Aim**

To mitigate the damage caused by bellyache bush in relation to the natural environment, property and economy associated with its spread by defining the minimum management requirements applying to all owners and occupiers of land contaminated by bellyache bush in the Northern Territory.

**Goals**

1. Outlier bellyache bush plants and infestations are to be under comprehensive yearly control programs progressing towards eradication.
2. Core bellyache bush infestations are reduced in size in the Class B zone.
3. Density of core infestation areas are reduced in the Class B zone.
4. Bellyache bush in the Class A zone is eradicated.
Objectives

1. By 2023, plans for the protection of high value assets have been finalised with stakeholder input.
2. All bellyache bush infestations within the Class A and B zones are under active control programs.
3. No human-assisted spread of bellyache bush occurs.
4. By 2028, core infestations in the Class B zone have been reduced in size and density.
5. Compliance and enforcement plans for bellyache bush are aligned with agreed regional weed planning priorities.

Achieving the plan’s objectives

Achieving these objectives will require strategic and coordinated action and investment from land owners and occupiers with bellyache bush, the Northern Territory Weed Management Branch, other Northern Territory Government agencies and Landcare or natural resource groups.

Education and awareness

An important and effective tool in achieving results for any weed management program is education and awareness. Awareness of the damage a weed can impose on the environment, people and the economy is helpful for land owners and occupiers to better understand the effects of non-management.

Successful delivery and implementation of extension activities and programs will assist land owners and occupiers to understand their obligations and execute management actions to manage bellyache bush in the Northern Territory.

Education and awareness in bellyache bush management includes delivery of extension materials and activities focused on:

- Strategic planning.
- Data collection.
- Best practice control methods.
- Spread prevention and hygiene protocols.
- Risk management.

Stakeholder investment and long-term commitment to weed management as well as implementation of a targeted education and awareness program based on the elements above, will greatly assist with achieving the objectives of this Plan.

Strategic approaches

The Northern Territory Government expects owners and occupiers of land with bellyache bush present in the Class B zone, to strategically control and contain all infestations of bellyache bush.

Strategic approaches to weed management planning ensure more efficient use of resources to achieve the best on-ground outcomes. Regional and catchment weed management plans can significantly improve stakeholder awareness and ownership in weed management and provide for long-term goal-setting and agreed regional actions rather than one-off, reactive control.

Through strategic weed management planning on a regional basis, areas can be prioritised for control to reduce spread and infestation of other clean areas, or to protect assets whether they be
cultural, economic, production or environment-focused. Land owners and occupiers can also agree where effort needs to be focused to maximise the impact of resources applied.

Advice regarding this type of planning is available to land owners and occupiers from the Weed Management Branch.

Regional and catchment scale planning is explored further in Section 3, together with an outline of how property Management Plans should be developed.

**Compliance and enforcement**

Implementation of a compliance and enforcement framework includes providing management advice and, issuing work orders and Infringement Penalty Notices under the Act, to achieve the objectives of the plan.

Implementation of the management requirements in Section 2 of this plan will safeguard compliance with this plan. Compliance with this plan will subsequently impact the effect bellyache bush is having on the environment across the Northern Territory by reducing spread and bellyache bush infestation sizes in the Class B zone, and by eradicating bellyache bush from the Class A zone.
Section 2 – Your legal obligations

Roles and responsibilities

Everyone has a role to play in the management of declared weeds.

Land Owners and Land Occupiers: All land owners and land occupiers (public and private) are responsible for managing declared weeds on their land under the Act and relevant statutory weed management plans, including this plan, the Weed Management Plan for Bellyache bush (*Jatropha gossypiifolia*).

Northern Territory Government: The Department of Environment and Natural Resources is responsible for administrating Northern Territory’s primary legislation for declared weeds, the *Weeds Management Act*, setting Territory-wide strategic policy for declared weeds and enforcing the provisions of the Act.

The Northern Territory Government also has responsibilities for the management of declared weeds as a land manager under the Act and other relevant laws. The Northern Territory Government manages parks and reserves and sporting grounds through the Department of Tourism and Culture, manages Crown land and road reserves through the Department of Infrastructure, Planning and Logistics, residential properties through the Department of Housing and Community Development, land holdings used as research facilities by the Department of Primary Industries and Resources and easements through PowerWater.

Local Government: Local governments have responsibilities to manage declared weeds and protect land and water resources on land they manage.

Australian Government: The Australian Government’s role in managing weeds is mainly in relation to national pre-border and border biosecurity; with a co-ordination and leadership role for achieving national biosecurity outcomes, identifying key threatening processes and developing national level policies and strategies such as the Australian Weeds Strategy. It also manages Commonwealth lands, including defence land e.g. Tindal Air Base, Bradshaw and Mount Bundy in the plan area, and Kakadu National Park.

Legislation

Section 9 of the Act stipulates the General Duties of all owners and occupiers of land with regard to the management of weeds.

Under section 9(1) of the Act, all land owners and occupiers, including the Crown, public authorities and licensees of Crown lands, must, in relation to their land, take all reasonable measures to:

(a) prevent the land being infested with a declared weed;
(b) prevent a declared weed or potential weed on the land spreading to other land; and
(c) within 14 days after first becoming aware of a declared weed that has not previously been, or known to have been, present on the land, notify a Weed Management Officer of the presence of the declared weed.

In the case of non-compliance with section 9 of the Act, a Weed Management Officer can serve an order on a land owner or occupier outlining reasonable measures that must be taken for the control or eradication of a declared weed species on their land within a specified timeframe. Not complying with the conditions of an order is an offence and may involve financial penalty.
The Act also contains provisions to prevent the spread of declared weeds, through regulating the purchase, sale, possession for the purposes of sale, propagation or transport of these species into or within the Northern Territory.

In summary, it is an offence to:

- not comply with a weed management plan relating to a declared weed, including bellyache bush.
- dispose of a declared weed on the land other than that on which it is present (only for potential).
- sell or trade any declared weeds.

Except in accordance with a permit, a person must not do any of the following:

- bring a declared weed or take part in, or be responsible for, bringing a declared weed into the Northern Territory.
- propagate or scatter a declared weed.
- sell or offer to sell a declared weed or any thing that contains or carries a declared weed.
- hire any equipment, device or thing that contains or carries a declared weed or potential weed.
- purchase or offer to purchase a declared weed or any thing that contains or carries a declared weed.
- store, grow or use a declared weed or any thing that contains or carries a declared weed.
- transport or carry on his or her person a declared weed or anything that contains or carries a declared weed.

**Penalties for offences under the Act**

The Northern Territory Government has the capacity to prosecute for non-compliance with the Act or this weed management plan. A land owner or occupier must also comply with a Weed Management Officer’s order in relation to any of these requirements.

Land owners and occupiers should be aware that non-compliance with section 9 of the Act can incur a range of penalties from 77 to 770 penalty units\(^1\) for an individual and up to 385 to 3850 penalty units for a body corporate.

Non-compliance with an order can incur a penalty of 100 penalty units. At 1 July 2018, a penalty unit was $155.

\(^1\) Click on the link for current [penalty unit value](#).
Required actions by all persons with bellyache bush on their land

The actions detailed in Table 1 have been identified as the minimum acceptable requirements needed to achieve compliance with this plan by all persons and organisations with bellyache bush on land they own, manage or occupy\(^2\). All required actions with timeframes based upon commencement of the plan are to be implemented from the gazettal date found on page 4.

Actions are described for land located in the Class A (Part 1) or Class B zones (Parts 2 - 4) with specific actions described based on specific land use. Parts 3 and 4 are additional to Part 2.

Table 1: Required bellyache bush management actions

<table>
<thead>
<tr>
<th>Part</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Class A zone – eradication target</td>
</tr>
<tr>
<td>2</td>
<td>Class B zone – All land outside Part 1</td>
</tr>
<tr>
<td>3</td>
<td>Class B zone - Transport and service corridors and easements</td>
</tr>
<tr>
<td>4</td>
<td>Class B zone - Mining and extractive industries (leases and licence areas)</td>
</tr>
</tbody>
</table>

Class A zone – eradication target

<table>
<thead>
<tr>
<th>Part</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>Undertake an annual control program to work towards eradication of bellyache bush.</td>
</tr>
</tbody>
</table>
| 1.2  | Survey land for bellyache bush and submit to the Weed Management Branch the following information:  
| | • survey area covered: GPS track log or area shown on map; and  
| | • location of bellyache bush areas found with the density, diameter (area), and date observed  
| | within one year of implementation of this plan, and again in May 2020 and 2026\(^3\). |
| 1.3  | Destroy all outlier bellyache bush plants and infestations as a priority. |
| 1.4  | Prevent bellyache bush spreading into clean (bellyache bush free) areas or adjoining land. |
| 1.5  | Minimise seed production by controlling bellyache bush prior to flowering and seeding. |
| 1.6  | Actively monitor and destroy any bellyache bush plants during the maintenance period. |
| 1.7  | Notify the Weed Management Branch of the presence of bellyache bush within 14 days when identified in areas which it has not been observed previously\(^4\). |

\(^2\) All land includes privately owned land, vacant Crown land and other publically owned land parcels (such as parks and reserves, future development land, Land Corporation land, Defence and Commonwealth owned and leased land), Aboriginal Land and all unzoned land, privately owned or leased (e.g. pastoral or Land Use Agreement parcels) or land under development.

\(^3\) All weed data collection must be in accordance with the NT Weed Data Collection Manual and DENR Procedure for Aerial Survey – Data Logger set-up 2018053_V1.2.

\(^4\) For all required submissions and Department contact information, refer Appendix E.
Class B zone – control and contain target

<p>| | |</p>
<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td><strong>PART 2 – Class B zone – All land outside Part 1</strong></td>
<td></td>
</tr>
<tr>
<td><strong>All land owners and occupiers with bellyache bush on their land in the Class B zone must:</strong></td>
<td></td>
</tr>
<tr>
<td>2.1</td>
<td>Destroy all outlier bellyache bush plants and infestations as a priority.</td>
</tr>
<tr>
<td>2.2</td>
<td>Control, contain and demonstrably reduce all core bellyache bush infestations within 10 years of commencement of this plan.</td>
</tr>
<tr>
<td>2.3</td>
<td>Prevent bellyache bush spreading into clean areas or adjoining land.</td>
</tr>
<tr>
<td>2.4</td>
<td>Minimise seed production by controlling bellyache bush prior to flowering and seeding.</td>
</tr>
<tr>
<td>2.5</td>
<td>Monitor areas under active control for new infestations and control annually.</td>
</tr>
<tr>
<td>2.6</td>
<td>Control bellyache bush within 50m along all boundaries within 5 years of commencement of this Plan.</td>
</tr>
<tr>
<td>2.7</td>
<td>For properties &gt; 200ha: develop a property weed management plan(^5) which identifies buffer zones and submit to the Weed Management Branch upon request.</td>
</tr>
<tr>
<td>2.8</td>
<td>For development and construction areas: Design and implement a weed spread prevention program including quarantine and/or hygiene procedures, which will ensure no new infestations establish as a result of the development process/activities or off-property. Provide the spread prevention program to the Weed Management Branch upon request.</td>
</tr>
<tr>
<td>2.9</td>
<td>For development and construction areas: Control bellyache bush in areas scheduled for construction works prior to flowering and seeding and before any works commence.</td>
</tr>
<tr>
<td>2.10</td>
<td>For development and construction areas: Dispose of top soils from infested areas by deep burial on site. All contaminated material to be buried greater than 50 cm deep under construction material (including roads and buildings) or in areas that will not be exposed in the future.</td>
</tr>
<tr>
<td>2.11</td>
<td>Prevent movement of bellyache bush contaminated soil off site or into clean areas. Bury all contaminated soil on site. Do not use contaminated soil as topsoil or clean fill. No material is to be transported off site.</td>
</tr>
<tr>
<td>2.12</td>
<td>Notify the Weed Management Branch of the presence of bellyache bush within 14 days when identified in areas which it has not been observed previously.</td>
</tr>
</tbody>
</table>

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\(^5\) A compliant property weed management plan will include as a minimum, all steps listed as per the *Planning for better weed management* document, ‘How To’ guide.
### PART 3 – Class B zone - Transport and service corridors and easements, in addition to Part 2

All land owners and managers of transport and services with bellyache bush on their land in the Class B zone must:

| 3.1 | Consult the Weed Management Branch in the development of tenders and future contracts for weed management, other maintenance or construction activities. |
| 3.2 | Consult with adjoining land owners and the Weed Management Branch prior to corridor construction works. Utilise the Northern Territory Government’s [NR Maps](https://www.nt.gov.au/records/20181128109056) website as a guide to locate weed infestations. |
| 3.3 | Collect baseline data for weeds in corridors to inform a detailed management program. |
| 3.4 | Conduct annual survey, mapping and control schedules to identify any new or re-establishing bellyache bush infestations and to monitor contract performance. |
| 3.5 | Develop a construction or maintenance schedule for control that limits risk of spread from vehicles and equipment such as slashers, bulldozers, graders or other construction machinery by moving towards large infestations and never through these areas; include post-slash follow-up chemical control. Refer to the [Preventing Weed Spread Is Everybody’s Business](https://www.nt.gov.au/records/20181128109056) document for information. |
| 3.6 | Not use soil from contaminated borrow pits. |
| 3.7 | Actively control and contain all bellyache bush infestations and demonstrably reduce infestations in the Class B zone over the life of this plan. |
| 3.8 | Survey for and map bellyache bush in areas scheduled for construction, clearing or grading prior to works commencing to determine bellyache bush control requirements. Control all bellyache bush before works commence and prior to flowering. |
| 3.9 | Prevent movement of any soil contaminated with bellyache bush seed from site. It is to be buried greater than 50cm deep or treated. It is not to be used as clean fill or topsoil. |
| 3.10 | Maintain data records and submit weed survey and control data to the Weed Management Branch upon request. |

### PART 4 – Class B zone – Mining and extractive industries, in addition to Part 2

All land owners and occupiers with bellyache bush on their mining and/or exploration leases in the Class B zone must:

| 4.1 | Consult with adjoining land owners and the Weed Management Branch prior to applying for exploration and mining leases, licences and development of mines and associated roads and infrastructure. Utilise the Northern Territory Government’s [NR Maps](https://www.nt.gov.au/records/20181128109056) website as a guide to identify weed locations in your proposed lease areas. |
| 4.2 | Survey for and map weeds (including bellyache bush) in areas proposed for exploration lines, extractive leases and associated infrastructure and road corridors. Submit weed survey and control data to the Weed Management Branch prior to exploration or construction commencing. |
### PART 4 – Class B zone – Mining and extractive industries, in addition to Part 2

All land owners and occupiers with bellyache bush on their mining and/or exploration leases in the Class B zone must:

<table>
<thead>
<tr>
<th>Section</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.3</td>
<td>Avoid contact with bellyache bush or soils containing bellyache bush. Locate all new roads and exploration lines at least 30m away from bellyache bush plants.</td>
</tr>
<tr>
<td>4.4</td>
<td>Not drive vehicles or machinery through seeding bellyache bush.</td>
</tr>
<tr>
<td>4.5</td>
<td>Control bellyache bush in areas scheduled for construction, extraction or exploration works prior to flowering and seeding and before works commence.</td>
</tr>
<tr>
<td>4.6</td>
<td>Prevent movement of machinery or transport materials contaminated with bellyache bush or bellyache bush seed off site.</td>
</tr>
<tr>
<td>4.7</td>
<td>Prevent movement of bellyache bush contaminated soil off site or into clean areas. Bury all contaminated soil on site greater than 50cm deep. Do not use contaminated or treated soil as topsoil or clean fill. No material is to be transported off site.</td>
</tr>
<tr>
<td>4.8</td>
<td>Regularly inspect and control bellyache bush on or along stockpiles, tracks, windrows and haul roads.</td>
</tr>
<tr>
<td>4.9</td>
<td>Design and implement a weed seed spread prevention program in accordance with the <a href="#">Preventing Weed Spread Is Everybody's Business</a> document, including hygiene procedures. Include exclusion zones in heavily infested areas. Educate contractors and maintenance staff in bellyache bush identification. Avoid exploration or grading through seeding bellyache bush and liaise with adjoining land owners. Align and plan works in conjunction with owner/manager of underlying tenure.</td>
</tr>
<tr>
<td>4.10</td>
<td>Develop a weed management plan which identifies buffer zones as priority control areas and areas for containment and submit to the Weed Management Branch upon request.</td>
</tr>
</tbody>
</table>

### Permits

Under section 30 of the *Weeds Management Act*, a person may apply to the Minister for a permit to use a declared weed. The Minister may refuse or grant a permit subject to a range of conditions. Permits will generally only be granted where landholders have demonstrated a commitment to continual improvement in weed management or research, and are not intended to allow ongoing use or spread of declared weeds. Permit applications can take up to six weeks to process, depending on the proposed activity.
Section 3 – Planning

It is well recognised that successful planning, prevention of weed spread and management of weeds requires effective partnerships, clear management goals, best practice management techniques, and methods to monitor progress and targeted research. Planning is one of the most useful tools in managing weeds and achieving the best outcomes for effort.

Regional weed management plans

Weeds are an increasing threat to the natural, economic and cultural assets of a region. This continues despite the time and effort already invested in weed management.

Regional weed management plans identify priority weeds in a region and form part of a strategic approach to reducing these weeds by the Northern Territory Government, in collaboration with key stakeholders including Regional Weed Reference Groups.

In the Northern Territory, there are regional weed management plans for Darwin, Katherine, the Barkly and Alice Springs regions.

The plans also align with and support the implementation of individual statutory weed management plans and provide direction for managing weed threats through:

- Identifying priority weeds, priority landscape areas and priority pathways of weed spread.
- Providing a platform for a Regional Weed Reference Group to operate.
- Guiding future funding and resource investment.

The scale and range of weed management issues which already exist across the regions highlight the importance of a coordinated and collaborative approach to the reduction of weed impacts. Therefore, the regional weed management plans encourage a ‘working together’ approach. These plans aid in the development and implementation of catchment management plans.

Regional priority areas for weed management

As bellyache bush primarily affects the Top End and Katherine regions, landscapes and spread pathways have been identified as priority areas for weed management and asset protection within these regions. These priorities have been identified by the Regional Weed Reference Groups in both Darwin and Katherine.

Priority landscape areas presented in Table 2 were determined using one or more of the following criteria:

- Low incursions of weeds.
- Site of significance for biodiversity conservation in the NT.
- Significant commercial values.
- Very high visitation areas.
- Significant cultural and heritage values.
- Susceptibility to invasion.
- Weed source areas including top of streams and up-wind area.
Table 2: Examples of priority landscape areas for bellyache bush for management

<table>
<thead>
<tr>
<th>Landscape area</th>
<th>Identified examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>River corridors</td>
<td>Victoria River</td>
</tr>
<tr>
<td>All sites of significance for biodiversity conservation in the NT</td>
<td>Kakadu National Park, Nitmiluk National Park, Legune coastal floodplain, Limmen Bight and associated coastal floodplains, Western Arnhem Plateau, Channel Island Conservation Reserve</td>
</tr>
<tr>
<td>Sturt Plateau</td>
<td>Rangelands</td>
</tr>
<tr>
<td>Remote communities</td>
<td>Nauiyu, islands off Arnhem Land</td>
</tr>
<tr>
<td>Rural areas</td>
<td>Darwin River, Coomalie, Palmerston, Humpty Doo, Katherine, Mataranka, Borroloola, Timber Creek, Daly Waters, Pine Creek</td>
</tr>
</tbody>
</table>

**Priority pathways of spread** presented in Table 3, were determined using one or more of the following criteria:

- The physical characteristics of weeds to be transported.
- Human activities most likely to spread weeds.
- A physical corridor for weed spread.

Table 3: Examples of priority pathways of spread

<table>
<thead>
<tr>
<th>Pathway of Spread</th>
<th>Example mechanisms of spread along priority pathways</th>
</tr>
</thead>
<tbody>
<tr>
<td>River corridors</td>
<td>Livestock, feral and native animal movements, water, recreational activities</td>
</tr>
<tr>
<td>Mining &amp; exploration areas</td>
<td>Construction and maintenance of mines and access roads, including land clearing, slashing and grading</td>
</tr>
<tr>
<td>Gas pipeline</td>
<td>Construction and maintenance activities</td>
</tr>
<tr>
<td>Rail corridors</td>
<td>Construction and maintenance activities</td>
</tr>
<tr>
<td>Pastoral holdings</td>
<td>Point of delivery for livestock and hay; stock movement; feral animals</td>
</tr>
<tr>
<td>Road network</td>
<td>Construction and maintenance, such as slashing and grading; 4WD tourism; wind</td>
</tr>
<tr>
<td>Outstations</td>
<td>Movement of vehicles and equipment</td>
</tr>
<tr>
<td>Telstra network</td>
<td>Construction and maintenance activities</td>
</tr>
<tr>
<td>Barge landings</td>
<td>Shipping cargo to remote locations</td>
</tr>
<tr>
<td>People</td>
<td>Vehicles, quads, hikers, bikes, trespassers</td>
</tr>
</tbody>
</table>
Regional priorities may change over the life of this plan as the regional plans are reviewed and updated.

**Catchment weed management plans**

A catchment weed management plan can identify values and threats, prioritise management actions, direct annual weed management actions and provide a framework for resourcing, responsibilities and monitoring programs. This holistic planning approach means risks to assets are understood and better managed.

Catchment weed management plans incorporate integrated control methods across landscape or catchment-scale areas to ensure best management outcomes are achieved with the resources available.

Stakeholder and community participation play a major part in the development and implementation of catchment weed management plans. This can be achieved through community working groups or catchment action programs. A collaborative and proactive approach that allocates responsibilities and identifies resources and measurable reductions in weed infestations in certain timeframes will create greater ownership of weed management; in turn, accomplishing better on-ground outcomes.

**Property weed management plans**

It is recommended that all landholders who have declared or problematic weeds on their land develop a property weed management plan, which includes a detailed assessment of all weed infestations on the property. For those with properties greater than 200ha, that have bellyache bush, this is a legal requirement. This assessment will enable consideration of each weed’s current distribution, potential for spread (along water courses, access tracks/roads, animal movement etc.) and potential impacts on land use and other values such as biodiversity and agricultural production.

Successful weed management may require significant investment over an extended period of time. In particular, the control of large, established infestations will require careful planning, prioritisation and budgeting.

A property weed management plan should detail exactly what needs to occur in order to meet or exceed all requirements of this statutory weed management plan, and any other weed management requirements which may be applicable to a certain property.

What you should do:

- Survey and map clean areas, outlier bellyache bush plants and infestations on your property.
- Ensure ‘bellyache bush free’ areas are kept clean.
- Consider areas where risk of spread or impact is highest (e.g. along roads, rivers and creeks, corridors).
- Consider your legal requirements and obligations for management.
- Determine control methods and actions.
- Develop realistic timeframes and goals for management.
- Take into account the correct timing of control methods such as spraying and burning.
- Schedule survey, control and follow-up, and record the results.
Depending on circumstances, an effective property weed management plan may also identify:

- Early detection programs.
- Implementation and maintenance of bellyache bush free buffer zones as per required actions.

Prioritising control work will help get the most from resources. Prioritise control of:

- Outlier bellyache bush plants and infestations.
- Bellyache bush plants likely to contaminate vehicles and equipment such as slashers, graders (with seed), field vehicles (quads and other all-terrain vehicles).
- Bellyache bush infestations likely to spread into neighbouring properties or clean areas from upstream infestations.

Monitoring helps determine if what you are doing is working, or if you can do things better. It is essential to monitor control work, as management of bellyache bush requires ongoing commitment.

Follow-up control to destroy any re-emergent bellyache bush plants is required for at least ten years after the initial treatment. This period takes into account any viable seeds remaining in the soil.

Best practice for monitoring control efforts is as follows:

- Document control methods and success of control.
- Analyse success or failure of control works.
- Review and amend control as required to reach optimal results.
- Inspect and retreat controlled areas no less than four weeks after spraying but prior to seeding.
- Regularly check areas that are disturbed, bellyache bush free or are downstream of current infestations to ensure no new outbreaks are occurring.
- Establish photo points to help compare growth and management success from year to year.

Refer to the Northern Territory Government’s Planning for better weed management document for further information on developing a property plan.
Section 4 – Management

Best practice management methods should be utilised by land owners and occupiers to minimise the impacts of bellyache bush and are to be used to achieve compliance with the requirements of Section 2 of this plan.

Data collection and survey

Surveying for weeds and collecting and analysing weed data can greatly improve success in weed management, particularly on large blocks or at a landscape or catchment scale. Knowing the location and the extent of bellyache bush on your property or in the surrounding area will inform prioritisation of control work and most efficient use of resources. Pathways of spread, including road and infrastructure corridors and rivers and creek lines, are particularly important to survey.

Refer to the Northern Territory Government’s Weed Data Collection Manual and Field Guide documents for further information on data collection, or contact the Weed Management Branch for advice.

Integrated management

Integrated weed management is the control of weeds through a long-term management approach, using several techniques such as:

- Chemical control.
- Mechanical clearing or hand-pulling.
- Burning.
- Excluding stock and feral animals.
- Biological control.

Integrated weed management programs require long-term planning, knowledge of a weed's biology and ecology and appropriate weed control methods. An integrated natural resource management approach uses a range of methods to manage country effectively.

Using multiple techniques to control weeds increases the chance of better management outcomes. For example, an integrated weed management program for a large infestation of bellyache bush may involve:

- Stock exclusion to encourage native grass competition and allow opportunity for fuel loads to build up for a hotter burn.
- Burning in drier months to reduce adult and juvenile plant numbers and to promote the growth of native grasses, increasing competition for bellyache bush seedlings.
- Aerial spraying in open country with minimal timber.
- On-ground spraying and targeted control of outlier plants and infestations, and reducing core infestations.
- Follow up spot spraying on regrowth and new seedlings.
- Repeating this regime over a 10 year period.
- Working with neighbours for a coordinated approach.
Land degradation and soil erosion can also occur if large infestations are continually treated with herbicide or by physical control or fire without a plan for revegetation, rehabilitation or a species replacement program.

A long-term weed management plan that considers an integrated weed management approach, using all available techniques or tools to control weeds and manage country, can be developed for a particular area. Any integrated weed management plan or strategy should focus on the most economical and effective control of the weeds and include ecological considerations as well as hygiene and spread prevention measures.

The long-term approach to integrated weed management should reduce the extent of weeds and reduce the weed seed stock in the soil. It should consider how to achieve this goal without degrading the desirable qualities of the land, such as its native ecology or agricultural crops.

**Outlier plants and infestations – what do they look like?**

![Outlier bellyache bush plants and infestations](image)

*Outlier bellyache bush plants, as can be seen here, must be destroyed as a priority.*

*Outlier bellyache bush infestations spread from core infestations and must be destroyed to further prevent infesting clean areas. Disturbed ground provides ideal conditions for bellyache bush seedlings to establish. This is particularly important following flood events while seedlings are emerging and are more accessible to control.*

**Figure 2: Outlier bellyache bush plants and infestations**
Timing of control

The growth and reproductive cycle of a weed species must be taken into account when developing a weed plan for your property. Implementing control measures at the wrong time of year can significantly reduce both the short and long-term success of management actions and waste resources. Table 4 provides an overview of bellyache bush growth and reproduction and identifies corresponding optimal treatment times for different control options. It should be noted that peak growth, flowering and seeding times can vary due to seasonal variations, the type of environment and as a result of burning.

Table 4: Guide to timing of bellyache bush control

<table>
<thead>
<tr>
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</tbody>
</table>

Approximate times for reproductive events

Months most suitable for control

Spread prevention

Weed spread prevention is the most cost-effective way to manage weeds. Bellyache bush seed can be spread via vehicles, machinery and boats, livestock and other animals (e.g. feral animals) contaminated with seed. It can also be spread by seed-contaminated fill and gravel. To prevent spread within or from an area:

- Prioritise eradication of outlier plants/infestations along tracks and roads.
- If using construction machinery, work towards not away from major infestations.
- Control all plants before development, clearing or construction commences. Bury any contaminated soil to the required depth of greater than 50cm.
- Spray infestations from outside edges and work inwards.
- Implement and control all bellyache bush plants within buffer zones.
- Never drive through seeding bellyache bush.
- Wash down and clean contaminated vehicles and machinery away from waterways.
- Do not accept/buy bellyache bush contaminated products such as fill and sand.
- Do not sell or transport products contaminated with bellyache bush or its seed.
• Ensure recreational activities on your property, such as quad biking, fishing and hunting do not spread weeds.

Refer to the Northern Territory Government’s *Preventing Weed Spread Is Everybody’s Business* document for more industry specific weed spread prevention protocols.

### Eradication and control - tools and techniques

#### Chemical control

When applied correctly, chemical application is an effective means of bellyache bush control. Due to the long lived viable seed bank, it is necessary that follow up control over a number of years occurs (for at least 10 years after the last seeding plant is destroyed). Herbicides available for control include selective, non-selective and residual options. Refer to the *Northern Territory Weed Management Handbook* for further information on chemical control options for bellyache bush.

Bellyache bush that is subject to heat or water stress may not uptake the herbicide as effectively, resulting in lower kill rates. Spraying should be avoided when temperatures are extremely high or when plants are in standing water.

An effective chemical control program will require at least two to three treatments annually. The initial treatment of existing mature plants and any seedlings should ideally occur following the onset of Wet season rains (usually December to January). Follow up control will be necessary to control plants which may have been missed or newly germinating seedlings. Further control will be required to target seedlings grown from the seed bank (March-April). Bellyache bush seeds can persist in soil for up to six years, however the vast majority of seeds will germinate within 12 months of dispersal.

When undertaking chemical control:

- Always read the label on herbicide container.
- If ‘rank’ plant material from last year’s growing season is present, burn or use mechanical means to improve access before undertaking follow-up spraying. This will also reduce the amount of chemical required.
- Spray bellyache bush when the plants are actively growing and before the plants have produced mature seeds.
- Weather conditions such as high evaporation rates, low humidity, high temperature and high winds, decrease the effectiveness of herbicide and can cause spray drift and off-target damage.
- Vary the type of herbicide to avoid herbicide resistance. As bellyache bush control is long term, vary types of herbicides with different modes of action and ensure there is an integrated control program in place for a long term control program.
- Only use herbicides registered in the NT or under permit.

#### Biological control

Biological control of bellyache bush has been unsuccessful to date. Only one agent has been released and this failed to establish. A renewed biological control effort has identified a number of potential agents. There are currently three agents being tested and awaiting approval for use. The
availability of biocontrol agents would greatly improve control options and the management of bellyache bush particularly for core infestations in the future.

**Stock exclusion**

Stock exclusion along riparian areas is a key management tool for bellyache bush. Grazing should be minimised in areas where control has occurred to encourage the growth of any perennial grasses. The competition from many pasture species can reduce bellyache bush germination and seedling growth. Increased fuel loads also assist with providing hotter burns to further control the bellyache bush.

**Buffer zones**

A buffer zone is a designated area for bellyache bush control and isolates all other bellyache bush on a property from clean areas or adjoining properties. Buffer maintenance will reduce the spread into bellyache bush-free areas or across property boundaries.

Maintaining a bellyache bush free buffer does not constitute clearing of native vegetation, providing the works are undertaken in accordance with relevant clearing controls.

Careful consideration and planning is required for implementation of buffer zones, particularly on large parcels and in areas of native vegetation. A property management plan will assist in determining the best areas to implement buffer zones and if they are practical for your situation. Refer to Section 2 of this document for your specified buffer zone implementation requirements.

**Fire/burning**

Controlled burning can be used as part of an effective integrated management program to kill young bellyache bush seedlings and as a means to improve access for other control methods.

Fire is most effective when there is adequate fuel. Dense infestations of bellyache bush, particularly those which have excluded grass growth, may not contain sufficient fuel loadings to support a fire capable of killing mature plants. Even with good fuel loads, multiple burns may be required to kill mature infestations.

Fire is not an effective method used on its own. Managing fire will assist in maintaining a competitive cover of pasture, so it is more difficult for bellyache bush to establish and it also improves access for follow up control. In contrast, hot, uncontrolled fires may deplete native grass seed banks while stimulating germination of bellyache bush seeds. Bellyache bush is well suited to germination in disturbed areas created by wildfires.

Burning is typically from August to December to reduce rank growth and fuel loads for easy application of herbicide. Any burning must be in accordance with the *Bushfires Management Act* and *Fire and Emergency Act*. Bushfires NT has ‘Planned Burn Risk Assessment Sheets’ which must be completed prior to undertaking any burning.

Bushfires NT works with landowners and the wider community to manage bushfire in the Northern Territory by providing support for mitigation, management and suppression activities, and by coordinating landowner and volunteer participation in response to significant fires.
Telephone: 08 8922 0844.

If using burning as a control tool:

- Only use burning as an integrated control method with other management actions (e.g. chemical control).
- Obtain a ‘Permit to Burn’ prior to any fire control by contacting the Northern Territory Fire and Rescue Service, Bushfires NT or your local Volunteer Fire Brigade Captain.

Refer to the Northern Territory Government’s *Bellyache Bush Management Guide* for further information on control methods and timing of control.

**Mechanical clearing or hand pulling**

Individual bellyache bush plants (seedlings and juveniles) can be removed by hand or by using a mattock; however this type of physical removal is very laborious and generally it is not suited to the broad-scale infestations of the Northern Territory. All plants removed in this manner need to have the stems snapped to prevent the plant from regrowing.

Slashing or mulching will not eradicate bellyache bush but will kill most mature plants, reduce the biomass, provide easier access for other treatment options and create opportunities for more desirable species to establish.

Many seedlings will emerge after initial control; however removal of the mature plants will mean complete herbicide coverage of the seedlings can be easily achieved, reducing costs and increasing control effectiveness.

Stick-raking can be used to kill plants and to clear access and fire trails; however it should be recognised that this level of soil disturbance will facilitate extensive seedling recruitment. Follow up control with either fire or preferentially herbicide as necessary.

Mechanical clearing can allow greater access for monitoring bellyache bush infestations and should only occur after an infestation has been treated with herbicide. Bellyache bush can easily re-sprout if clearing without chemical control is undertaken.

Machinery and vehicles used in mechanical clearing must be thoroughly cleaned after entering a bellyache bush-infested area so as to not it.

Disturbance by heavy machinery such as tractors and dozers, on soil and desirable vegetation particularly in sites including steep slopes, gullies, stream banks and other sensitive areas should be considered prior to clearing. Soil disturbance should be kept to a minimum.

Mechanical clearing alone is not an effective control for bellyache bush.

**Good land management, soil conservation and rehabilitation**

Good land management is an important part of managing bellyache bush. This is particularly so where mechanical control methods are used or herbicide is used repeatedly in a single area, reducing the vegetation cover to bare ground in some instances. Prevention of soil erosion should be considered in these instances to reduce the risk of losing valuable topsoil. Whenever soil is exposed, it is at risk of erosion – from wind, rain or further disturbance (e.g. stock or vehicle access).

Groundcover is an effective, comparatively cheap and easy way to manage erosion risk and can eliminate the need for other erosion or sediment controls. Groundcover acts to protect the soil from
disturbance by reducing erosive forces, binding the soil and increasing infiltration. Establishment of new vegetative groundcover can be subject to seasonal constraints.

Rehabilitation is the restoration of degraded or disturbed areas to a pre-determined standard. It is required wherever there has been a change in the landscape which is causing active erosion and soil loss. Rehabilitation may be required where there is active erosion. Vegetation is the best defence to protect against soil erosion. However, the factors that caused the problem must be treated first. A combination of erosion control works and revegetation will have the most chance of success in preventing further erosion.

Clearing controls (Appendix B) apply to all bellyache bush management areas.

While bellyache bush is a vigorous competitor and will invade native vegetation eventually if a seed source is present, re-establishment of the native or other understorey plants will slow down re-invasion.

Refer to the Northern Territory Government’s technical notes for further information on groundcover management or land rehabilitation.
Section 5 – Monitoring and evaluation

Full compliance with a statutory weed management plan can require a great deal of effort, commitment and investment from land managers, particularly from those who are already affected by declared weeds. For this reason, it is essential that the Northern Territory Government monitors whether the stipulated management actions are contributing towards the identified outcomes at a Territory level.

The Weed Management Branch will monitor the results of this plan to determine whether it is achieving its objectives, remains relevant, responds to changing conditions and is supported by the community.

Continuous improvement can only be achieved if the following can be determined:

- investments in weed management are resulting in progress towards the plan’s identified goals and objectives.
- the recommended management actions are achieving the most effective and efficient control outcomes.

Adaptive management involves using the feedback from monitoring and evaluation to inform and revise plans and policy. This plan has been drafted using the best information available at the time of writing. However, should new information become available which should be included in, or influence the structure and content of this plan, it may be incorporated as a revision.

Performance indicators

A performance indicator is something which can be used to assess performance. The following indicators will provide a way to measure the performance of this plan against its objectives.

Table 5: Performance indicators

<table>
<thead>
<tr>
<th>Performance indicator</th>
<th>What will be measured?</th>
<th>How will it be measured?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Better information and awareness</td>
<td>Public knowledge of their roles and responsibilities with respect to bellyache bush management.</td>
<td>Number of website downloads from selected nt.gov.au links delivering bellyache bush information e.g. bellyache bush management guide, weed ID sheet, statutory weed management plan.</td>
</tr>
<tr>
<td>Active management</td>
<td>Weed spraying contractor capacity.</td>
<td>Number of active licences issued to businesses as at 1 October annually.</td>
</tr>
<tr>
<td></td>
<td>Change in (bellyache bush) distribution and coverage.</td>
<td>Aerial data. Selected monitoring sites.</td>
</tr>
<tr>
<td></td>
<td>Eradication in the Class A zone.</td>
<td>Property inspections. Proportion of properties that have reached compliance.</td>
</tr>
<tr>
<td>Area affected by bellyache bush</td>
<td>Spread reduction</td>
<td>Number of buffers established on property boundaries and maintained.</td>
</tr>
<tr>
<td>Northern Territory Government managed land</td>
<td>Planning capacity</td>
<td>Number of NTG and statutory authorities with active weed management plans in place</td>
</tr>
<tr>
<td>Effective enforcement</td>
<td>Effective enforcement by Weed Management Branch</td>
<td>Number of orders issued and complied with.</td>
</tr>
</tbody>
</table>
Appendices

Appendix A – Class B zone area extent – description

Inside that area of NTP 2682 (Tipperary Station); and inside that area starting at the most north west corner of NT Portion (NTP) 3982 (Aroona Station), moving southerly along the western boundary of NTP 3982, and of NTP 3983 (Willeroo Station), moving easterly along the southern boundary of NTP 3983, then the southern boundary of NTP 3867, then moving in a northerly direction along the eastern boundary of NTP 3983, then in an easterly direction along the southern boundary of NTP 3983, then moving northerly along the eastern boundary of NTP 3983, then moving in a north westerly direction along the north-eastern boundary of NTP 3983, then moving in a north easterly direction along the northern boundary of NTP 3982, then the southern boundary of NTP 3981 (Scott Creek Station), then moving in a northerly direction along the eastern boundary of NTP 3981, then moving in a westerly direction along the northwestern boundary of NTP 3981, NTP 4175 and NTP 3982 closing at the north west corner of NTP 3982; and inside that area starting at the most north west corner of NTP 1288 (Moroak Station), then moving southerly along the western boundary of NTP 1288 until intersecting the northern boundary of the NTP 5417 (Mangarrayi Aboriginal Land Trust), then moving in a generally westerly direction along the northern boundary of NTP 5417 to the north eastern most corner of NTP 3069 (Elsey National Park) then along the northern, western and south western boundaries of NTP 3069 (Elsey National Park) until re-joining the northern boundary of NTP 5417, then moving in a westerly direction along the northern boundary of NTP 5417, then following the western and southern boundary of NTP 5417 until intersecting the western boundary of NTP 671 (Alawa Aboriginal Land Trust), then moving in a southerly direction along the western boundary of NTP 671, NTP 700 (Hodgson River Station) and NTP 1513 (Nutwood Downs Station) to the south western corner of NTP 1513, then moving in an easterly direction along the southern boundary of NTP 1513 to the south eastern corner of NTP 1513, then moving in a northerly direction along the eastern boundary of NTP 1513, NTP 700 and NTP 671, to the north eastern corner of the NTP 671, then moving in a westerly direction along the northern boundary of the NTP 671 to the south eastern corner of NTP 4777 (Kewulyi Aboriginal Land Trust), then moving in a northerly direction along the eastern boundary of NTP 4777 to the southern boundary of NT Portion (NTP) 3276, then moving in a north easterly direction along the southern boundary of NTP 3276, and the southern boundary of NTP 4775 (Flying Fox Station) to the eastern boundary of NTP 4775, then moving in a northerly direction along the eastern boundary of NTP 4775 to the north eastern corner of NTP 4775, then moving in a westerly direction along the northwestern boundary of NTP 4775 and NTP 1288 closing at the most north west corner of NTP 1288 (Moroak Station); and inside that area of NTP 1333 (Lorella Station).
Appendix B – Clearing controls and information

What is native vegetation?

Native vegetation is defined as terrestrial and inter-tidal flora indigenous to the Northern Territory, including grasses, shrubs and mangroves. Native vegetation does not include introduced or exotic grass or pasture species, or declared weeds subject to the Weeds Management Act.

What constitutes clearing of native vegetation?

Clearing of native vegetation is defined by the Northern Territory Planning Scheme and means the removal or destruction by any means of native vegetation, other than: lopping a single tree; grazing livestock; constructing a road; burning by fire; mowing lawn; the removal or destruction of a declared weed within the meaning of the Weeds Management Act; or clearing in accordance with a permit.

Will I need a clearing permit to establish bellyache bush free buffer zones?

The physical or chemical removal of bellyache bush will not require a clearing permit so long as native vegetation is not disturbed or removed during the process. If native vegetation will be removed, then a permit will be required if the scope of works is outside of the relevant permitted controls.

On pastoral leases, clearing of native vegetation is subject to the Pastoral Land Act, which does not require a clearing permit to be issued for clearing associated with fixed improvements (e.g. roads, tracks, fencelines, laneways, firebreaks, etc.).

On freehold land, clearing of native vegetation is subject to the Planning Act and must be in accordance with Sections 10.2 and 10.3 of the Northern Territory Planning Scheme and the Northern Territory Land Clearing Guidelines. This means that a development permit will be required for clearing any native vegetation (including grasses) unless the clearing is for the purpose of:

- A property boundary firebreak up to 5m wide on a lot up to 8ha in size; or
- A property boundary firebreak up to 10m wide on a lot greater than 8ha in size; or
- An internal fenceline up to 10m wide on a lot greater than 8ha in size; or
- A firebreak otherwise specified by a Regional Fire Control Committee.

Where can I get more information about clearing controls?

Further information regarding clearing controls is located on the following websites.

- NTG general information: Land clearing guidelines and management plans
- NT Planning Scheme
- NT Land Clearing Guidelines
- NT Pastoral Land Clearing Guidelines
Appendix C – Support and information for land managers

The Northern Territory Government can provide training, advice and extension materials to support improved bellyache bush management. The following documents are available by contacting the Weed Management Branch on 8999 4567 or accessing the internet site www.nt.gov.au/weeds.

<table>
<thead>
<tr>
<th>Document</th>
<th>Description</th>
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<tbody>
<tr>
<td>Bellyache bush Identification Table</td>
<td>Contains photos and written descriptions to assist with identification.</td>
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<tr>
<td>Bellyache Bush Management Guide</td>
<td>Provides information on bellyache bush identification, impacts and habitat, and provides best management practice advice and control techniques.</td>
</tr>
<tr>
<td>Northern Territory Weed Management Handbook</td>
<td>Provides information on approaches to weed management, including integrated weed control methods. Specific information is provided on herbicides registered for use in the Northern Territory. The ‘Weed control option tables’ include a colour photo of the weed in question, list which herbicides are registered for use, indicate optimum treatment times and which method/s can be employed for maximum effectiveness.</td>
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<tr>
<td>Preventing Weed Spread Is Everybody’s Business</td>
<td>Provides information on roles and responsibilities regarding weed spread prevention in the NT.</td>
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<tr>
<td><strong>Weed Data Collection Manual</strong></td>
<td>Provides information on when, what and how to collect weed mapping data in the NT.</td>
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<tr>
<td><strong>Field Guide for mapping weeds in the Northern Territory</strong></td>
<td>This is a step-by-step guide to collecting weed mapping data using a GPS, how to submit data and how to use this data for weed management on your property.</td>
</tr>
<tr>
<td><strong>Weed ID Deck</strong></td>
<td>Weed identification flip-book. Contains photos and written descriptions to assist with identification. Great for the glovebox.</td>
</tr>
<tr>
<td><strong>Planning for better weed management</strong></td>
<td>This is a guide to help you plan your weed management on your property and identify areas of priority management.</td>
</tr>
</tbody>
</table>
Appendix D – References

Australian Department of Environment and Energy website.

Northern Territory Government (2013), Weed Management Plan for Bellyache bush (*Jatropha gossypiifolia*).


Appendix E - Submissions and consultations contacts

NT Weed Management Branch

Phone: 8999 4567

Email: [weedinfo@nt.gov.au](mailto:weedinfo@nt.gov.au)

Address: PO Box 496 Palmerston NT 0831

Web: [nt.gov.au/weeds](http://nt.gov.au/weeds)