



Weed Management Plan 2006 Central Region

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July 2007

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August 2007

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Forests NSW

Central Region

Weed Management Plan

2006 to 2011

Approval

This Weed Management Plan for Central Region is consistent with the principles of ecological sustainable forest management and is approved for implementation.

Submitted by:

Kathy Jones
Regional Manager
Central Region

Date

Reviewed by:

Andy Stirling
Manager, Planning & Environment
Native Forest Operations

Date

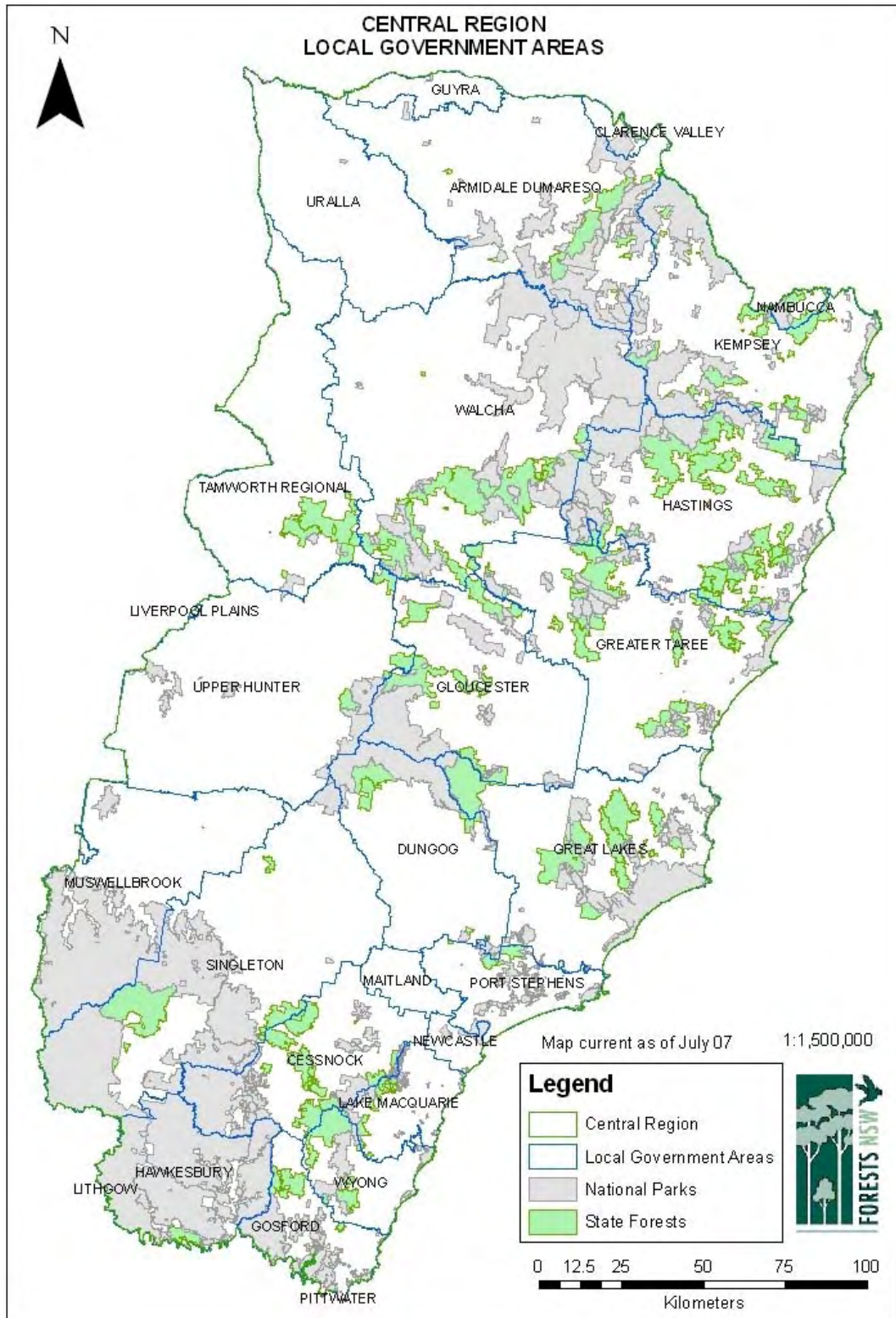
Approved by:

Michael Bullen
Director
Native Forest Operations

Date

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Forests NSW
Central Region
Weed Management Plan

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¶ We need some legal advise concerning the duel obligations under the RLP Act for the control of wild dogs and our responsibilities under the IFOA to protect critical weight species. First some background information.¶

¶ Nigel Fuller in Walcha has actively been working with several Wild Dog Associations, using the Regional Strategic Feral and Introduced Predator Control Plan as his guide. This Control Plan was developed as a requirement of clause 35 of the IFOA for the Lower North East and a condition 5.18 of the threatened species license under the Threatened Species Conservation Act. The control method recommends the preference for perimeter buried baiting, but does allow limited aerial perimeter baiting in instances of inadequate resources and/or where buried baiting is not practicable or feasible due to remoteness or lack of resources. No internal baiting in identified core dingo areas. This is also consistent with State Forest Policy.¶

¶ Following the recent gazettal of the Rural Lands Protection Act 1998 the Crown is now bound in the control of noxious animals. As it places us in a conflicting situation, the Department of Ag. has informed the agencies that provided that a mutually agreed plan is in place for control, it would meet the obligations under the (... [1])

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Implementation Requirements

Locate weed infestations:

- Field staff will report weeds encountered on State forests, using the form shown in Appendix 5;
- Reports will be received from other stake holders, including neighbours and local government;
- Records will be entered into the regional database which links to the GIS system;
- Additional species will be added to the list in Appendix 4 as they become known.

Develop an Annual Weed Management Program using the proforma contained in Appendix 7 and based on:

- Cooperative consultation with stakeholders described in 4.1;
- Feedback from previous years program and monitoring;
- Regional Priorities identified in 4.7;
- Collaborative programs undertaken with Local Control Authorities;
- Available resources (Business Plan and Annual Budget).

Develop a Weed Operations Plan for each weed and/or area to be treated using the proforma in Appendix 8 to:

- Identify the weed problem, location and anticipated control techniques;
- Identify any special precautions necessary to protect environmental values;
- Identify any special Occupational Health and Safety issues over standard operating procedures;
- Identify any warnings or neighbour advice necessary
- Record certification and briefings undertaken;
- Record extant weather conditions during operations (where spraying undertaken)

Monitoring and recording for the implementation of each Weed Operations Plan will include;

- Weed species targeted and their distribution;
- Area treated;
- Control methods;
- Timing of the operation;
- Success of the program and any follow-up required;
- Record information required under the Pesticides Amendment (Records) Regulation;

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1. Scope and Approval

1.1 Activity Covered by this Plan

Weed *means* "... a plant that has, or has the potential to have, a detrimental effect on economic, conservation or social values." (National Weeds Strategy)

Weed control is a key element of ecologically sustainable land management. It is also important to neighbours and the community. This Weed Management Plan provides the context and strategic direction for weed control for State forests of the Central Region.

This weed management plan covers the management of noxious and environmental weeds on State forests in Central Region. It does not deal with the treatment of competing vegetation for plantation establishment or the spraying of vegetation for fire trail maintenance. The map (Fig 1) shows the Region and the local government areas therein.

1.2 Duration of this Plan

Five years: 2006 – 2011.

1.3 Revision of this Plan

This Plan will be reviewed in 2010.

1.4 Approval

Signed Approval located on Cover Sheet.

2 Background and context

2.1 Ecologically Sustainable Forest Management

The *National Forest Policy Statement* requires ecologically sustainable development in forests to maintain ecological processes, maintain bio-diversity and optimise benefits to the community from all uses of the forest within ecological constraints. The statement states that, to meet the principles of environmental care in the planning and conducting of timber growing and harvesting operations, forests should be protected from the introduction and spread of plant pests (weeds).

The Ecologically Sustainable Forest Management (ESFM) plan for Central Region states, in the Forest Health Strategy, that a supplementary plan will be developed to address weed management. This Weed Management Plan provides the context and strategic direction for weed control and requires the development, implementation and monitoring of an Annual Weed Management Program for State forests of the Central Region.

2.2 Integrated Forestry Operations Approval

This Plan has been prepared consistent with clause 34 of the Integrated Forestry Operations Approval (IFOA) for the Lower North East Region.

This plan sets out the strategy for weed management proposed by Forests NSW, identifies how management programs are to be planned and implemented, and how weed occurrence and management programs are to be monitored, recorded, reported and used to inform future decisions to allow continuous improvement.

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2.3 Policy and legislation

This plan is consistent with the concepts of:

- National Weeds Strategy
- NSW Weeds Strategy
- *Noxious Weeds Act 1993* and other legislation
- NSW Bio-diversity Strategy including the *Threatened Species Conservation Act 1995*

Table 1 - Key actions for Forests NSW from the NSW Weed Strategy

Desired outcome	How to achieve outcome	FNSW Regional action
Prevent new weed problems in NSW	Develop and implement emergency response procedures for weeds new to NSW	FNSW will participate in implementation of plans as necessary.
Reduced environmental changes which favour weed invasion	Continue to implement national, state and regional policies, plans and strategies developed to reduce environmental degradation.	Develop and implement Ecologically Sustainable Forest Management Plans.
Effective weed control programs implemented on public, State-owned land	Develop integrated approach for control of weeds on State-owned land, including management of fire, animal pest and public access, etc.	Develop, implement and review this Weed Management Plan. Annual Weed Control Program developed in association with Local Control Authorities.
Effective weed control programs implemented on public, State-owned land	Provide adequate funding for weed control on State-owned land.	Continue to fund annual weed control programs.
Ongoing planning and monitoring of weed control programs to ensure that objectives are achieved in an efficient and cost-effective manner	Provide detailed action-plans for individual weeds and links to other strategies through NSW Agriculture's www site.	Identify and report weed occurrence on State forests. Develop Annual Weed Control Program in association with Local Control Authorities. Monitor and report effectiveness of weed control program.

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Weeds of Regional Significance

In several areas across the State, Local Government Areas (LGAs) have combined their resources to form Weeds Advisory Committees. These Committees include representation from a range of stakeholders, and generally aim to develop and implement cooperative and coordinated approaches to weed management issues. This forum offers the opportunity to identify key Weeds of Regional Significance. These species may include introduced or native plants posing a threat to the environment generally or threatening economic and social values in particular locations.

The Hunter and Central Coast Weeds Management Committee (HCCWMC) - covering local councils of Dungog, Maitland, Cessnock, Newcastle, Muswellbrook, Port Stephens and Lake Macquarie - has developed a list of Weeds of Regional Significance (see Appendix 3) as a component of the Regional Weeds Strategy.

A similar approach was taken by the Mid North Coast Weeds Advisory Committee (MNCWAC) - incorporating the local councils of Hastings, Greater Taree, Kempsey, Nambucca, Central Northern and Upper Hunter - and the Northern Inland Weeds Advisory Committee (NIWAC) - Armidale-Dumaresq, Walcha and Tamworth.

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2.4 Weeds in State forests – Aspects and Impacts

Weeds can have significant impacts on the productivity and management of plantations.

Weeds on State forests may have the potential to spread to neighbouring properties where they may have economic and social impacts.

In terms of biodiversity, weeds may prevent germination and regeneration of native forest canopy forming species, interrupt the lifecycle of plants, threaten habitat and threaten forest values at recreation and cultural heritage sites.

Disturbance and weed establishment

New weed invasion is largely dependent on reduction of overstorey competition and creation of a receptive seed bed. This occurs when the forest floor is disturbed during timber harvesting, plantation site preparation, constructing and maintaining roads and managing fire, either through fuel hazard reduction or the burning and suppression of wild fires.

Disturbance associated with timber harvesting is generally periodic and short-lived because disturbance intervals are usually in excess of ten years. Following disturbance, sites regenerate to a mixture of forest canopy species and herbs, grasses and shrubs depending on the composition of the previous understorey. Generally, the growth of regenerating forest tree species, once established, are very competitive with most weed species, themselves usually annuals or short-lived perennials that find it difficult to persist under reducing light levels as the canopy closes. Eventually the tree species prevail and the weeds die out but under two circumstances, the weeds may dominate some sites. If mesic vines are present and tree seedlings are slow to establish the vines can smother the young tree seedlings and with a dense ground cover prevent further tree species regeneration. When tree species regeneration is sparse, some weed species may persist in the enduring light conditions and low competition, become established and flourish on the site, and eventually prevent further tree species regeneration establishment and growth.

Where natural regeneration does not occur, artificial regeneration through the sowing or planting of desirable tree species may be necessary. In these circumstances intensive site preparation will be necessary and this will usually lead to greater disturbance than is usual, presenting a greater risk of weed invasion.

Plantation site preparation generally involves some form of mechanical and chemical weed control. These site preparation operations and the establishment of a vigorous plantation crop can suppress weed development on the majority of these sites.

Regular grading of major roads causes disturbance but generally traffic will assist in making conditions unfavorable for weed invasion on the pavement.

Catastrophic high intensity wild fires burning under extreme conditions may consume living and dead organic matter exposing mineral soil over thousands of hectares. These conditions create the potential for widespread explosion of weed populations if seed sources are available. Forest recovery tends to be slow and weed infestation becomes a real threat the longer the effects of the fire persist.

Regular moderate intensity fire is used to maintain low fuel levels to protect assets on the forest or surrounding areas. While the potential for weed invasion is quite high, these areas are normally quite small and since they are very accessible can be easily monitored.

Broad area fuel hazard reduction burning on the other hand tends to burn at much lower intensity, have a patchy character leaving large areas unburnt or with varying amounts of litter covering the soil surface. Fuel hazard reduction burnt areas tend to recover quickly and weed invasion is not normally a problem.

Spread of Weeds

Some weed species are prolific seed producers and vectors including vehicles, machinery, livestock and floods assist their spread, while other species rely on wind, water, insect and birds. The spread of weeds may be exacerbated by disturbance resulting in receptive seedbeds along seed transport paths, such as grading forest access roads.

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Weed Management Plan – Central Region

Many forests are in proximity to urban areas and dumping of household refuse and garden waste can be a source of infestation.

Weeds of Significance on State forests

Forests NSW will use the weed of regional significance developed by HCCWMC and MNCWAC as an indicator of weeds that may be on State forest. Forests NSW staff will also inspect forest areas and consult other regional stakeholders and agencies to identify weeds not on the list and which should be targeted. These are identified in Appendix 4 – Weeds of Significance on State forests in Central Region.

3 Objectives

In general terms, Forests NSW objectives will be to:

- Minimise the environmental, social and economic impacts of the occurrence of noxious and environmental weeds on State forests, within resource constraints.
- Ensure weed control operations are carried out in the context of the *Noxious Weeds Act 1993*, the New South Wales Weed Strategy and the *Threatened Species Conservation Act 1995*.

In particular Forests NSW will:

- Develop and implement annual weeds management programs and operational plans in accord with this plan;
- Base annual weed management programs on up to date information about the legal status, ecology, distribution and importance of weed species and the most appropriate management techniques;
- Maintain a database of areas treated and the success, or otherwise, of the management methods;
- Ensure implementation of operational programs has complied with the requirements of the *Noxious Weeds Act 1993*;
- Operate within budgetary constraints.

Weeds of Significance for Central Region of Forests NSW are identified in Appendix 4.

4 Strategy

Forests NSW aims to manage weed populations to minimise adverse impacts. Bearing in mind that total eradication is rarely feasible, Forests NSW will direct its limited resources to those species and areas where the benefits of control are likely to be greatest, particularly on boundaries with private property.

Forests NSW aims to minimise the impact of any control activity on the environment by using an integrated approach incorporating a combination of different methods, eg chemical knockdown followed by manual follow-up, and targeting more than one species. Biological control will be incorporated where appropriate agents are available.

Components of this strategy on State forests will include:

- Co-operative arrangements with stakeholders and other agencies;
- Standardised data collection to locate weed infestation on State forest;
- Appropriate weed control techniques;
- Available resources, training and accreditation;
- Weed Classification system;
- Regional program priorities;
- Forest lessee / permittee involvement;
- Annual Weed Management Program;
- Monitor occurrence, program results, reporting and continuous improvement.

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4.1 Cooperative arrangements

Effective weed management relies on cooperation between stakeholders with weed control responsibilities. This cooperation includes the preparation of regional weed control strategies and plans, data sharing, field research and collaborative programs.

Central Region will continue to work in close cooperation with the following agencies in the implementation of this Plan:

- Local Control Authorities
- Noxious Weeds Officers/Vegetation Management Officers of local councils
- Crown Lessees and Occupation Permittees on State forests
- Department of Environment and Conservation
- Other Forests NSW Branches
- Other land management agencies
- Forest neighbours.

Forests NSW will develop the Annual Weed Management Program in cooperation with the above agencies and use a coordinated approach where necessary to maximise program delivery across the landscape. Liaison with these groups is documented in the meeting minutes of local and regional weeds committees.

4.2 Data collection to locate weed infestation

Planning and implementation of annual weed management programs requires collection, storage and retrieval of data describing the distribution and nature of weed infestations. Forests NSW intends that information be collected in a consistent manner using standard pro-formas and that it be stored in the a regional database linked to the Geographic Information System.

Central Region will use the following process to identify the distribution of weed infestations.

- **Field staff will use standard forms shown in Appendix 5 to record new weeds encountered on State forests;**
- **The Region will receive reports from other stakeholders including neighbours, other agencies and local government organisations;**
- **The Region will review monitoring data from previous programs;**
- **Records will be entered into the regional database which will be linked to Forests NSW GIS system;**
- **Additional species will be added to the list in Appendix 4 as they become known.**

4.3 Weed Control Techniques

Forests NSW will select and apply weed control measures consistent with currently recognised best practices, in accordance with Principles of Environmental Care and with State policies, procedures and approved usage. Weed control will be guided by the *Noxious and Environmental Weed Control Handbook 2004/2005*. The handbook considers the impacts on the environment of different weed control techniques and, where appropriate prescribes non-herbicide control techniques.

Wherever practicable, Forests NSW will reduce reliance on the use of chemicals for weed control purposes.

Control techniques may include, but will not be limited to:

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Plantation establishment

Plantation establishment, involving appropriate site preparation and tree planting can be a useful method of controlling some weeds, such as serrated tussock.

Biological

Biological control is the introduction of an insect or pathogen that attacks the weed. Biological control agents have varying success but are usually best accompanied by other means of control. Biological control is an attempt to restore the balance of nature by reducing the advantage the alien plant has over the natives. It is not an attempt at eradication. The most successful programs reduce weed levels to the point where no other form of control is necessary.

Less successful programs reduce the need for chemical control. In situations where chemical, mechanical or physical control is too costly or environmentally inappropriate, biological control may be the only realistic control option.

Mechanical

Mechanical weed control, including cultivation, slope mowing, tractor slashing, and manual brushing may be effective against localised weed occurrences in accessible areas.

Physical

The physical removal of weeds, sometimes combined with chemical control of cut stumps and regeneration activities, may provide effective control in sensitive areas (eg near threatened plants) or in small infestations.

Chemical

Herbicides often are the most efficient means of weed control but do have potential to impact on other environmental values. Herbicide use is guided by Forests NSW Pesticide Manual and by the *Noxious and Environmental Weed Control Handbook 2004/2005*.

Fire

Fire can be effective for the primary treatment of weeds. Depending on the intensity, fire can often kill the parent plant and either destroy or promote the germination of weed stored seed. Hazard reduction burning may be used to restrict the distribution of pine wildings. As with any other control technique, appropriate follow up is required.

However, it must also be noted that fire disturbance increases light onto an area, creating conditions which some weed species are well adapted to capitalise. Fire is not always a particularly effective method for weed control when used in isolation, and is most effective when accompanied by other forms of control.

Strategic grazing

The strategic use of forest grazing may be effective in controlling certain weeds and minimising their spread into adjoining areas. However livestock may also act as a spread mechanism for some species, either through droppings or having seed stick to the skin.

Other considerations can include:

Management of the spread of weeds

An integral component of effective weed management is the development and implementation of practices to minimise the spread of weeds across the landscape. The spread of weeds can be managed by:

- Implementing an ongoing awareness campaign involving Forests NSW employees, forest industry, neighbours and other forest users;
- Developing and implementing standard hygiene protocols, including vehicle and plant wash down when moving from infested to clean areas where weed infestations warrant;
- Targeting weed control measures across the landscape to minimise the potential spread of weeds, including appropriate linkages between forest disturbance and weed control.

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Timing

Timing of weed control programs in recognition of reproductive mechanisms and flowering season is can be crucial to the success of the program. Optimal period for treatment of significant weeds in Central Region is shown in Appendix 6.

Follow up

Most weed species require long term, integrated and sustained management to achieve lasting control.

Following any weed control operation, treated areas will be sampled to determine the efficacy of treatment in terms of weed control and non-target effects. Continuing active control is often required to maintain the benefits of past control operations, and achieve long-term weed control.

Long term monitoring requirements are identified in *Section 7 Monitoring, continuous improvement and reporting*.

Appropriate Control Techniques

Control techniques suitable for individual weed species are identified in weed profiles, as outlined in section 4.8. In selecting appropriate weed control techniques, Forests NSW will give due consideration to the issues as outlined in Table 2

Table 2 – Consideration of Issues to select appropriate Control Techniques

Issue	Consideration
The worker safety of available techniques	A risk assessment of alternative techniques should be carried out.
The efficacy of available techniques.	Consider proven ability of available techniques.
The impacts on the environment of different weed control techniques	Select techniques with minimal environmental impacts, consistent with weed control objectives, as documented in the <i>Noxious and Environmental Weed Control Handbook 2004/2005</i> .
The use of methods other than the application of herbicides (such as biological, mechanical and physical methods), where the use of those methods would have less adverse impacts on the environment than would the application of herbicides while still achieving an efficient result.	Consider with due regard to cost effectiveness, resource availability and achievement of control.
The possibility of herbicide resistance in weed species to be targeted for treatment.	Apply techniques specified in the <i>Noxious and Environmental Weed Control Handbook 2004/2005</i> in accord with the <i>Pesticide Act 1999</i> and all herbicide labels.
Site variations may dictate the type of technique/s to be used.	Site specific issues of slope, soils, access, threatened species, available resources, etc may determine control techniques.
Techniques agreed upon in local and regional weed management strategies.	Comply with agreed techniques.

Forests NSW will maintain an active awareness of new technology, methods and information for weed control. Where appropriate, weed profiles will be updated annually and improved techniques will be used to modify the strategic and operational plans to ensure best management practices.

4.4 Available Resources, Training and Accreditation

Weed Management will continue to be funded at current levels in the Regional Business Plan and annual budgets.

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Weed Management Plan – Central Region

Contractors and selected field staff will be trained and accredited to undertake weed control programs.

Field staff are trained in weed identification by a suitably qualified and experienced person for the early detection of new weed problems. Forests NSW staff, together with local and regional weeds committee members and local government Weed Management Officers, participate in opportunistic field days and seminars for specific weeds and control methods.

Under the Pesticides Amendment (User Training) Regulation 2003, training in the use of pesticides is compulsory in NSW from 1st September 2005. The purpose of the training is to protect workers who use pesticides, their families, the community and the environment.

4.5 Weed Control Prioritisation

Over most of the plantation estate, weeds will be controlled by establishment weed control treatments and crop canopy development. The main additional weed control strategy employed by Central Region will be the treatment of priority weeds located on boundaries, on drainage features, and along major roads. For weeds not on the Regional list (see 4.7), priority for treatment will be mainly determined by the noxious weeds class (e.g. greatest priority being given to Class 1 and 2, least to Class 4). To ensure the most efficient and effective use of limited resources, Central Region will also use the criteria in Table 3 to prioritise treatment.

Table 3 – Determining weed control priorities

Weed situation	Management Strategy
1. Weeds with emergency control programs in place.	Management to be consistent with national or state emergency control programs.
2. Weeds of strategic significance, such as weeds with a current limited distribution, but known to be a significant problem in other areas.	Weeds may be targeted for strategic purposes, for example, an infestation of a water dispersed species at the top of a catchment may be given priority for control.
3. Weed control required for the effectiveness of other high priority management activities	Other activities, such as plantation establishment and roadside control of encroaching vegetation to maintain road safety and trafficability may also include weed control.
4. Weeds identified for targeted control in approved Threat Abatement Plans or Recovery Plans.	Management activities will be consistent with the actions identified and agreed in approved Threat Abatement Plans or Recovery Plans.
5. Weeds, including noxious weeds, identified by the community as high priority for action.	Management will be consistent with collaborative programs with Local Control Authorities.
6. External factors including potential impact on neighbours, agriculture and economic production	Local Control Authorities may elect to target specific infestations, species or geographical areas in a coordinated approach with neighbours and stakeholders. Forests NSW will continue to participate in such collaborative programs.
7. Weeds threatening specific conservation, cultural heritage or recreational values.	Manage specific populations of weeds but also consider the benefits (protection of cultural heritage sites or threatened species habitat) that may be lost if weeds are eradicated.
8. Opportunistic weed control from a window of opportunity, such as the introduction of a new biological control agent	Forests NSW will continue to participate in the co-ordinated development and introduction of new biological control agents as opportunities arise.

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Note: Weeds will often meet one or more criteria and generally the more criteria, the higher the management priority.

4.6 Potential Success of Programs

Weeds of significance located on State forest or to be monitored for occurrence on State forest are identified in Appendix 4.

The probability of success of any management program will be reliant on:

- Species;
- Nature and extent of infestation;
- Availability of suitable control measures;
- Availability of resources;
- Potential for sustained control effort;
- Accessibility to operators and equipment;
- Coordinated management programs across the landscape;
- Spread vectors and reinfestation events eg traffic and through roads or regular flood events.

Potential for reinfestation does not necessarily reflect on the potential success of a single control activity but may mean that the activity will need to be ongoing.

4.7 Regional Priorities

Central Region will develop and record in Table 4 a five year management priority for each weed of Regional significance identified on State forest.

Table 4– Indicative Priorities for Weed Species Management Programs 2006 - 2011

Weed Species Common Name	Relative Abundance on State forest	Management Issue	Priority
Blackberry	Localised	Access	Medium
Cats claw	limited	Silvicultural	Low
Camphor laurel	Limited	Nil	Low
Crofton weed	Widespread	Nil	High
Eucalypt re-growth	Along trails	Road edges	Medium
Groundsel bush	Limited	Nil	Medium
Giant Parramatta Grass	Widespread	Nil	High
Lantana (Red Flowering)	Localised	Road edge, silvicultural	High
Lantana – general	Widespread	Road edge, silvicultural	High
Mistflower	Limited	Nil	Low
Morning Glory vine	Limited	Nil	Low
Mother of Millions	Limited	Nil	Low
Nodding Thistle	Localised	Nil	Medium
Privet	Limited	Access	Low
Serrated Tussock	Limited	Nil	Low
Scotch Broom	Localised	Access	High
St Johns wort	Limited	Nil	Low
Tobacco bush	limited	Access	Low
Vine, native spp.	widespread	Regeneration	Medium
Wattle	widespread	Road edge, silvicultural	Medium

These priorities will guide the development of annual weed management programs, which may, from time to time, be amended in consideration of emergencies, operational efficiencies, proximity to other operations (safety) and community or neighbour issues.

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4.8 Weed Profiles

Weed profiles summarise information relevant to the management of the weed species, including:

- Management objectives
- Weed problem
- Description and picture
- Distribution on State forest
- Control methods, including the preferred control

Profiles can be obtained from <http://www.agric.nsw.gov.au/reader/weed-list>.

Central Region will use these Weed Management Profiles for the weeds existing on State forests, particularly where control programs are to be undertaken.

Information will be obtained from NSW DPI – Agfacts and similar publications.

4.9 Liaison with Lessees on State forest

Central Region will continue to maintain close liaison with Crown Lessees and Occupation Permittees on Forests NSW, to ensure they are aware of their obligations to apply weed control measures according to their responsibilities under the Noxious Weeds Act, and that they are actively exercising their responsibility.

Where it is necessary for Forests NSW to develop a weed management program over an area covered by Crown land tenure (lease) or occupation permit, Forests NSW will liaise with lessees and permittees to achieve weed management objectives.

5 Annual Weed Management Program

This Plan provides the framework for weed management across Central Region, and is implemented in the field through the development, implementation and monitoring of Annual Weeds Management Programs and Weed Operations Plans.

Each Annual Weed Management Program will specify:

- Priority for weed management programs
- The weeds and areas to be treated
- The weed management methods to be adopted
- Estimated program costs
- Annual monitoring requirements
- Other relevant matters.

Central Region will develop an Annual Weed Management Program using the proforma contained in Appendix 7 and based on:

- **Cooperative consultation with stakeholders described in 4.1;**
- **Regional Priorities identified in 4.7;**
- **Collaborative programs undertaken with Local Control Authorities;**
- **Review of monitoring results from past programs;**
- **New information about species, control methods and control bodies;**
- **Available resources.**

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6 Weed Operations Plan and Implementation

Central Region will develop for each weed and/or area to be treated and using the proforma in Appendix 8, a Weed Operations Plan, which will:

- Identify the weed problem, location and anticipated control techniques;
- Identify any special precautions necessary to protect any known forest dependent threatened species or their habitats and aquatic habitats;
- Identify any special Occupational Health and Safety issues over standard operating procedures;
- Identify any warnings or neighbour advice necessary
- Record information required under the Pesticides Amendment (Records) Regulation;
- Record certification and briefings undertaken;
- Record extant weather conditions during operations (where spraying undertaken);
- Monitor Success and follow-up.

Individual weed control operations will be in accord with an approved Weed Operations Plan.

The Weed Operations Plan will instruct competent operators about where and how the control work is to be carried out.

The Weed Operations Plan will comprise two pages of text and a map. Where the operation involves spraying of chemicals and it is anticipated the operation will take more than four days, a copy of the text section must be available to facilitate record keeping for each day of spraying. Some of the generic information can be filled out prior to copying. The area treated each day should be progressively recorded on the map.

The Weed Operations Plan will be approved by the Operations Officer and be acknowledged by the operators or contractors.

When operations covered by the plan are completed, all parts of the plan, including the completed map, should be returned to the Regional Office for processing and filing.

7 Monitoring, continuous improvement and reporting

For the implementation of every Weed Operations Plan Central Region will record;

- Weed distribution;
- Area treated;
- Targeted weed species;
- Management methods;
- Timing of the operation;
- Success of the program;
- Weather conditions at the time of spraying where chemicals are used.

The implementation of Annual Weeds Management Program and Weed Operations Plans will be captured on GIS to allow for effective monitoring and reporting of weed control programs.

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Monitoring the implementation and effects of this Plan is an essential component in ensuring continuous improvement of weed control and feedback to the planning process. Monitoring requirements of this Plan are detailed in Table 5 (see following page). Information will be recorded on the Weed Inspection pro-forma contained in Appendix 5 and entered into a Regional database for future review and incorporation into future annual programs where appropriate.

The Regional ESFM Report will document the implementation of the Weed Management Plan and Annual Operations Plans.

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Table 5 Monitoring and reporting elements

Monitoring and reporting element	Purpose	Feedback to planning pr
Weed distribution – continuous updating of GIS database of weed distribution.	To assess weed species abundance and distribution to: <ul style="list-style-type: none"> • enable long term monitoring of the effectiveness of programs; • assist in developing annual program. 	Update weed distribution GIS data layers Review weed distribution and, where necessary when developing annual programs and reviewing them Share data with stakeholders to improve appreciation of landscape and developing and targeting appropriate Monitor the occurrence of developing weed populations action when priority-setting criteria are met.
Annual area treated by weed species.	To use a spatial database to monitor and evaluate past treatments programs.	Monitor operational plan implementation to combine future programs. Monitor treated areas over time to assess populations..
Effectiveness of targeted weed control. Locate and assess 100% of the treated area under each control program from the previous year.	To assess and report on: <ul style="list-style-type: none"> • efficacy of treatment • non-target effects • level/type of follow-up required 	Review the success of control techniques from the Annual Programs and review of this Plan. Schedule follow-up treatment in Annual Programs. Re-consider control techniques if poor results (eg target effects), and update weed profiles and accordingly when reviewing this plan.
Compliance. Forests NSW audit will monitor weed control planning and operations.	To ensure: <ul style="list-style-type: none"> • planning of annual programs and operational plans is in accord with this plan • operations are implemented in an effective and safe manner 	Review application of planning procedures in developing operational plans to identify potential improvement plan. Review documentation of completed operations: adequately recorded, that implementation has been and that any non-compliance is addressed principles. Pesticides Register is accurate and complete and Sheets are on hand for reference to ensure personnel
New developments. Maintain active awareness of developments in weed control techniques and weed	To ensure cumulative corporate expert knowledge about weeds, including new listings and their control is	Modify weed profiles and preferred control techniques Include any new species and control techniques in Update weed distribution data layers with new listings

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Monitoring and reporting element	Purpose	Feedback to planning pr
nomination.	current.	developing annual programs.
Annual expenditure on weed management.	Analyse weed management program for: <ul style="list-style-type: none"> • Efficiency • Triple Bottom Line Accounting • Expenditure trends. 	Identify ability to meet high priority control program Pursue opportunities for external funding for unfun
Review of this Plan Systematic review of the components of the plan.	To ensure: <ul style="list-style-type: none"> • weed management objectives and strategy remain appropriate • planning and treatment continually improves to meet the objectives. 	Amend plan to reflect more appropriate objectives Amend planning and scheduling procedures operations.

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References

- Agriculture and Resource Management Council of Australia and New Zealand, Australia and New Zealand Environment and Conservation Council and Forestry Ministers 1999 *The National Weeds Strategy: A Strategic Approach to Weed Problems of National Significance*, Commonwealth of Australia, 1999
- Agriculture and Resource Management Council of Australia and New Zealand, Australia and New Zealand Environment and Conservation Council and Forestry Ministers 2000 *Weeds of National Significance Blackberry (*Rubus fruticosus* L. agg.) Strategic Plan*, National Weeds Strategy Executive Committee, Launceston. (others available at the National Weeds website)
- NSW DPI - various documents including Agfacts and Agnotes.
- Forests NSW 2005 *Pesticide Manual*.
- Thorp JR & Lynch R 2000 *The Determination of Weeds of National Significance*. National Weeds Strategy Executive Committee, Launceston.
- Ensby, R. 2004 *Noxious and Environmental Weed Control Handbook 2004/2005*,
- WorkCover NSW *Code of Practice for the Safe Use and Storage of Chemicals in Agriculture*.

Further information is available at:

National Weeds Strategy website www.weeds.org.au

NSW DPI website www.agric.nsw.gov.au

Workcover NSW website www.workcover.nsw.gov.au

Dept of Environment and Conservation website www.nationalparks.nsw.gov.au

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Appendices

Appendix 1: Categories and Management Requirements for Noxious Weeds

Weed control classes

(1) The following weed control classes may be applied to a plant by a weed control order:

- (a) Class 1, State Prohibited Weeds,
- (b) Class 2, Regionally Prohibited Weeds,
- (c) Class 3, Regionally Controlled Weeds,
- (d) Class 4, Locally Controlled Weeds,
- (e) Class 5, Restricted Plants.

(2) The characteristics of each class are as follows:

- (a) Class 1 noxious weeds are plants that pose a potentially serious threat to primary production or the environment and are not present in the State or are present only to a limited extent.
- (b) Class 2 noxious weeds are plants that pose a potentially serious threat to primary production or the environment of a region to which the order applies and are not present in the region or are present only to a limited extent.
- (c) Class 3 noxious weeds are plants that pose a serious threat to primary production or the environment of an area to which the order applies, are not widely distributed in the area and are likely to spread in the area or to another area.
- (d) Class 4 noxious weeds are plants that pose a threat to primary production, the environment or human health, are widely distributed in an area to which the order applies and are likely to spread in the area or to another area.
- (e) Class 5 noxious weeds are plants that are likely, by their sale or the sale of their seeds or movement within the State or an area of the State, to spread in the State or outside the State.

(3) A noxious weed that is classified as a Class 1, 2 or 5 noxious weed is referred to in the Act as a **notifiable weed**.

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Appendix 2 - Declared Noxious Weeds within Central Region by Local Government Area

Common name	Scientific name	All of NSW	Cessnock City Council	Dungog Shire Council	Gloucester Shire Council	Gosford City Council	Great Lakes Council	Greater Taree City Council	Hawkesbury River County Council	Kempsey Shire Council	Lake Macquarie City Council	Nambucca Shire Council	New England Tablelands County Council					
African boxthorn	<i>Lycium ferocissimum</i>		4	4	4	4	4		4		4		4					
African feather grass	<i>Pennisetum macrourum</i>	5																
African lovegrass	<i>Eragrostis curvula</i>												4					
African tumip weed	<i>Sisymbrium runcinatum</i>																	
Alligator weed	<i>Sisymbrium thellungii</i>		2	2	2	3	2	2	3	2	3	2	2					
Anchored water hyacinth	<i>Alternanthera philoxeroides</i>	1																
Annual ragweed	<i>Eichhornia azurea</i>	5																
Arrowhead	<i>Ambrosia artemisiifolia</i>	5																
Artichoke thistle	<i>Sagittaria montevidensis</i>	5																
Athel tree/Athel pine	<i>Cynara cardunculus</i>	5																
Bathurst/Noogoora/ Californian/cockle burrs	<i>Tamarix aphylla</i>		4	4	4	4	4	4	4	4	4	4	4					
Bathurst/Noogoora/ Californian/cockle burrs	<i>Xanthium species</i>		4	4	4	4	4	4	4	4	4	4	4					
Bitou bush	<i>Chrysanthemoides monillifera subsp. rotunda</i>					4	4	4		4	4	4						
Black knapweed	<i>Centaurea nigra</i>	1																
Blackberry	<i>Rubus fruticosus aggregate species</i>	4																
Boneseed	<i>Chrysanthemoides monillifera subsp. rotunda</i>					4	4	4		4	4	4						

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	<i>monilifera</i>																	
Bridal creeper	<i>Asparagus asparagoides</i>	5																
Broad-leaf pepper tree	<i>Schinus terebinthifolius</i>							3		3		3						
Broomrapes	<i>Orobanche species except the native O. cernua variety australiana and O. minor</i>	1																
Burr ragweed	<i>Ambrosia confertiflora</i>	5																
Cabomba	<i>Cabomba caroliniana</i>	5																
Camphor laurel	<i>Cinnamomum camphora</i>											4						
Cape tulip	<i>Moraea species</i>		4	4														
Cayenne snakeweed	<i>Stachytarpheta cayennensis</i>	5																
Chilean needle grass	<i>Nassella neesiana</i>		4	4	4	4	4	4	4	4	4	4	4					
Chinese celtis	<i>Celtis sinensis</i>							3		3		3						
Chinese tallow tree	<i>Triadica sebifera</i>											3						
Chinese violet	<i>Asystasia gangetica subspecies micrantha</i>	1																
Clockweed	<i>Gaura lindheimeri</i>																	
Clockweed	<i>Gaura parviflora</i>																	
Columbus grass	<i>Sorghum x alnum</i>		4	4	4	4	4	4	4	4	4	4	4					
Corn sowthistle	<i>Sonchus arvensis</i>	5																
Crofton weed	<i>Ageratina adenophora</i>		4		4	4	4	4	4	4	4	4						

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Dodder	All <i>Cuscuta</i> species except the native species <i>C. australis</i> , <i>C. tasmanica</i> and <i>C. victoriana</i>	5																
East Indian hygrophila	<i>Hygrophila polysperma</i>	1																
Espartillo	<i>Achnatherum brachychaetum</i>	5																
Eurasian water milfoil	<i>Myriophyllum spicatum</i>	1																
Fine-bristled burr grass	<i>Cenchrus brownii</i>	5																
Fireweed	<i>Senecio madagascariensis</i>											4						
Fountain grass	<i>Pennisetum setaceum</i>	5																
Galenia	<i>Galenia pubescens</i>																	
Gallon's curse	<i>Cenchrus biflorus</i>	5																
Giant Parramatta grass	<i>Sporobolus fertilis</i>		3	3	3	3	4	4	3	4	3	4	3					
Giant rat's tail grass	<i>Sporobolus pyramidalis</i>				3			3		3		3						
Giant reed /Elephant grass	<i>Arundo donax</i>																	
Glaucous star thistle	<i>Carthamus glaucus</i>	5																
Golden thistle	<i>Scolymus hispanicus</i>	5																
Gorse	<i>Ulex europaeus</i>					3												2
Green cestrum	<i>Cestrum parqui</i>		3	3	3	3	3	3	3	3	3	3	3					
Groundsel bush	<i>Baccharis halimifolia</i>			3	3	3		3		3	3	3						
Harrisia cactus	<i>Harrisia species</i>	4																
Hawkweed	<i>Hieracium species</i>	1																

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Hemlock	<i>Conium maculatum</i>												4					
Honey locust	<i>Gleditsia triacanthos</i>											3						
Horsetail	<i>Equisetum species</i>	1																
Hygrophila	<i>Hygrophila costata</i>		2			2	2	2	2	2	2	2						
Hymenachne	<i>Hymenachne amplexicaulis</i>	1																
Johnson grass	<i>Sorghum halepense</i>		4	4	4	4	4	4	4	4	4	4	4					
Karoo thorn	<i>Acacia karroo</i>	1																
Kochia	<i>Bassia scoparia</i>	1																
Kudzu	<i>Pueraria lobata</i>											3						
Lagarosiphon	<i>Lagarosiphon major</i>	1																
Lantana	<i>Lantana species</i>	5	4					4		4		4						
Lippia	<i>Phyla species</i>																	
Long-leaf willow	<i>Ludwigia longifolia</i>	5	4			4			4		4							
Long-style feather grass	<i>Pennisetum villosum</i>												4					
Ludwigia	<i>Ludwigia peruviana</i>					3			3									
Mesquite	<i>Prosopis species</i>												2					
Mexican feather grass	<i>Nassella tenuissima</i>	1																
Mexican poppy	<i>Argemone mexicana</i>	5																
Miconia	<i>Miconia species</i>	1																
Mimosa	<i>Mimosa pigra</i>	1																
Mintweed	<i>Salvia reflexa</i>						4											
Mistflower	<i>Ageratina riparia</i>				4	4	4	4		4	4	4						
Mossman River grass	<i>Cenchrus echinatus</i>	5																
Mother-of-millions	<i>Bryophyllum species and</i>		3	3	3		3	3	3									

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	hybrids																	
Mysore thorn	<i>Caesalpinia decapetala</i>											3						
Nodding thistle	<i>Carduus nutans</i>			4	4			4					4					
Onion grass	All <i>Romulea</i> species and varieties except <i>R. rosea</i> var. <i>australis</i>	5																
Oxalis	All <i>Oxalis</i> species and varieties except the native species <i>O. chnoodes</i> , <i>O. exilis</i> , <i>O. perennans</i> , <i>O. radicata</i> , <i>O. rubens</i> , and <i>O. thompsoniae</i>	5																
Pampas grass	<i>Cortaderia</i> species		4	4	4	4	4	4	4	4	4	4	4					
Parkinsonia	<i>Parkinsonia aculeata</i>												2					
Parthenium weed	<i>Parthenium hysterophorus</i>	1																
Paterson's curse, Vipers bugloss, Italian bugloss	<i>Echium</i> species		4	4	4		4	4	4	4			4					
Pellitory	<i>Parietaria judaica</i>					4			4									
Perennial ragweed	<i>Ambrosia psilostachya</i>																	
Pond apple	<i>Annona glabra</i>	1																
Prickly acacia	<i>Acacia nilotica</i>	1																
Prickly pear	<i>Cylindropuntia</i> species																	
Privet (Broad leaf)	<i>Opuntia</i> species except <i>O. ficus-indica</i>								4			4	4					

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Privet (Narrow-leaf/Chinese)	<i>Ligustrum lucidum</i>								4			4	4					
Privet (Narrow-leaf/Chinese)	<i>Ligustrum sinense</i>								4			4	4					
Red rice	<i>Orzya rufipogon</i>	5																
Rhizomatous bamboo	<i>Phyllostachys spp.</i>																	
Rhus tree	<i>Toxicodendron succedanea</i>	4																
Rubbervine	<i>Cryptostegia grandiflora</i>	1																
Saffron thistle	<i>Carthamus lanatus</i>												4					
Sagittaria	<i>Sagittaria platyphylla</i>	5																
Salvinia	<i>Salvinia molesta</i>		3	3	3	3	3	3	3	3	3	3	2					
Sand oat	<i>Avena strigosa</i>	5																
Scotch broom/English broom	<i>Cytisus scoparius</i>			4	4								4					
Scotch thistle, Stemless thistle, Illyrian thistle, Taurian thistle	<i>Onopordum species</i>																	
Senegal tea plant	<i>Gymnocoronis spilanthoides</i>	1																
Serrated tussock	<i>Nassella trichotoma</i>		4	4	4	4	4	4	4	4	4	4	3					
Siam weed	<i>Chromolaena odorata</i>	1																
Silk forage sorghum	<i>Sorghum species hybrid cultivar</i>																	
Silver-leaf nightshade	<i>Solanum elaeagnifolium</i>																	
Smooth-stemmed turnip	<i>Brassica barrelieri subspecies oxyrrhina</i>	5																
Soldier thistle	<i>Picnomon</i>	5																

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	<i>acarna</i>																	
Spiny burrgrass	<i>Cenchrus incertus</i>		4	4	4	4	4	4	4	4	4	4	4					
Spiny burrgrass	<i>Cenchrus longispinus</i>		4	4	4	4	4	4	4	4	4	4	4					
Spiny emex	<i>Ernex australis</i>		4	4		4												
Spotted knapweed	<i>Centaurea maculosa</i>	1																
St. Barnaby's thistle	<i>Centaurea solstitialis</i>												4					
St. John's wort	<i>Hypericum perforatum</i>		4	3	3	4	3	3	4		4		3					
Star thistle	<i>Centaurea calcitrapa</i>												4					
Sweet briar	<i>Rosa rubiginosa</i>												4					
Texas blueweed	<i>Helianthus ciliaris</i>	5																
Tree-of-heaven	<i>Ailanthus altissima</i>				4													
Water caltrop	<i>Trapa species</i>	1																
Water hyacinth	<i>Eichhornia crassipes</i>		4	4	3	3	3	3	3	3	4	3	2					
Water lettuce	<i>Pistia stratiotes</i>	1																
Water soldier	<i>Stratiotes aloides</i>	1																
Willows	<i>Salix species except S. babylonica, S. x reichardtii, S. x calodendron</i>	5																
Witchweed	<i>Striga species except native species and Striga parviflora</i>	1																
Yellow bells	<i>Tecoma stans</i>											3						
Yellow burrhead	<i>Limnocharis flava</i>	1																
Yellow nutgrass	<i>Cyperus esculentus</i>	5																

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Area of State forest in Local Government/County Council Area (ha)			29 181	12 908	28 837	7 115	51 873	43 075	2 905	28 819	7 425	4 138	90 559					

Note:

1. Relevant weed control class for each species within each LGA
2. For Weeds where cells are left blank these plants are not listed in those LGA areas
3. Area details obtained from FNSW GIS Local Government Boundary layer.
4. Information obtained from NSW Department of Primary Industries website <http://www.dpi.nsw.gov.au>
5. Information in this Appendix will assist discussion and development of a list of weeds of regional significance in **Ap**

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Appendix 3 - Weeds of Regional Significance

COMMON NAME	BOTANICAL NAME	WONS	Noxious	Management Committee
Alligator weed	<i>Alternanthera philoxeroides</i>	Yes	2	Both
Bitou bush	<i>Chrysanthemoides monilifera</i>	Yes	4	Both
Blackberry	<i>Rubus fruticosus</i> spp.	Yes	4	Both
Bridal Creeper	<i>Asparagus asparagoides</i>	Yes	5	HCC
Cabomba	<i>Cabomba</i> spp.	Yes	5	MNC
Camphora laurel	<i>Cinnamomum camphora</i>	No	4	Both
Crofton weed	<i>Ageratina adenophora</i>	No	4	Both
Giant parramatta grass	<i>Sporobolus fertilis</i>	No	3	Both
Giant rats tail grass	<i>Sporobolus pyramidalis</i>	No	3	MNC
Green cestrum	<i>Cestrum parqui</i>	No	3	Both
Groundsel bush	<i>Baccharis halimifolia</i>	No	3	MNC
Lantana (Red Flowering)	<i>Lantana camara</i>	Yes	5	Both
Madeira Vine	<i>Anredera cordifolia</i>	No		HCC
Mexican Clover	<i>Physalis minima</i>	No		HCC
Morning Glory	<i>Ipomoea indica</i>	No		HCC
Mother of Millions	<i>Bryophyllum delagoense</i>	No	3	HCC
Noogoora & Bathurst burr	<i>Xanthium</i> spp.	No	4	MNC
Pampas Grass	<i>Cortaderia</i> spp	No	4	HCC
Parrots feather	<i>Myriophyllum aquaticum</i>	No		MNC
Paterson's Curse	<i>Echium</i> spp	No	4	HCC
Privet	<i>Ligustrum</i> spp.	No	4	Both
Salvina	<i>Salvinia molesta</i>	Yes	2	Both
St Johns wort	<i>Hypericum perforatum</i>	No	3	Both
Water Hyacinth	<i>Eichhornia crassipes</i>	No	2	Both
Water lettuce	<i>Pistia stratiotes</i>	No	1	MNC
Wild Olive	<i>Olea europaea</i> L.	No		HCC

Notes:

- WONS - Indicates whether the species is a weed of national significance.
- Noxious - Indicates whether the species is declared noxious in NSW, the range of classification in the region or if not in the region the area in NSW where it might be a problem.
- Management Committee - Indicated whether listed by either HCCWMC, MNCWAC or both.
- This list will inform development of a list of weeds of significance on State forests in Central Region.

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Appendix 4 - Weeds of Significance for State forests of Central Region

COMMON NAME	BOTANICAL NAME	WONS	Noxious	WORS	Location
Bitou bush	<i>Chrysanthemoides monilifera</i>	Yes	4	Yes	Low elevations Johns River, Queens
Blackberry	<i>Rubus fruticosus</i> spp.	Yes	4	Yes	Mostly tableland forests concentratec Group, and Upper Kendall forests
Camphor Laurel	<i>Cinnamomum camphora</i>	No	4	Yes	Becoming a pest on north coast of N:
Cats Ear		No		No	
Chilean Needle Grass	<i>Nassella neesiana</i>	Yes	4	No	Monitor
Crofton Weed	<i>Ageratina adenophora</i>	No	4	Yes	Associated with roads and infrastru
Fire Weed	<i>Senecio madagascariensis</i>	No	4	No	over 1000mm and little frost.
Green Cestrum	<i>Cestrum parqui</i>	No	3	Yes	Monitor
Groundsel bush	<i>Baccharis halimifolia</i>	No	3	Yes	Limited distribution on poorly drained
Giant parramatta grass	<i>Sporobolus fertilis</i>	No	3	Yes	Roads and verges in coastal forests,
Indian Weed		No		No	
Johnson Grass	<i>Sorghum halepense</i>	No	4	No	
Lantana (Red Flowering)	<i>Lantana camara</i>	Yes	5	Yes	Red Lantana has limited distribution, elevation forests and is a manageme
Mistleflower	<i>Ageratina riparia</i>	No	4	No	
Morning Glory Vine	<i>Ipomoea</i> spp.	No		No	
Mother of Millions	<i>Bryophyllum</i> spp.	No	3	No	
Nodding Thistle	<i>Carduus nutans</i>	No	4	No	Monitor
Noogoora & Bathurst Burr	<i>Xanthium</i> spp.	No	4	Yes	Not generally widespread
Parthenium Weed	<i>Parthenium hysterophorus</i>	Yes	1	No	
Privet	<i>Ligustrum</i> spp.	No	4	Yes	
Rag Weed		No		No	
Salvina	<i>Salvinia molesta</i>	Yes	2	Yes	Small isolated occurrences on SF in conjunction with Lower Hunter and C Committee.
Serrated Tussock	<i>Nassella trichotoma</i>	Yes	3	No	Monitor
Scotch Broom	<i>Cytisus scoparius</i>	No	4	No	Major infestation on the Barrington to Tablelands State forests. Treatment have been released. Monitor annuall
Star Thistle	<i>Centaurea calcitrapa</i>	No	4	No	Monitor
Stemless Thistle	<i>Onopordum</i> spp	No	4	No	Monitor
St Johns Wort	<i>Hypericum perforatum</i>	No	3	Yes	
Tall Fleabane		No		No	

Note: This list will inform discussion and consideration of regional priorities for inclusion in Annual Management Programs

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Appendix 5 - Weed Inspection Report

**WEED INSPECTION/OPERATION MONITORING
Central Region**

STATE FOREST		M.A.	COMPT
LOCATION AMG		Easting	Northing
LOCATION DESCRIPTION			
INSPECTORS(S)		DATE:	REGION CODE 462
SURVEY NAME/FILE NUMBER			
INFORMANT			DATE RECEIVED
INSPECTION INSTIGATED BY	<input type="checkbox"/> FNSW <input type="checkbox"/> DoL <input type="checkbox"/> RTA	<input type="checkbox"/> RLPB <input type="checkbox"/> NSW Ag <input type="checkbox"/> OTHER.....	<input type="checkbox"/> NPWS <input type="checkbox"/> Local Government
TARGET SPECIES	<input type="checkbox"/> Blackberry <input type="checkbox"/> St Johns Wort <input type="checkbox"/> Willow		
APPROXIMATE EXTENT OF INFESTATION	<input type="checkbox"/> ≤ 1 m ² <input type="checkbox"/> up to 10m ² <input type="checkbox"/> up to 1 ha <input type="checkbox"/> ≥ 10 ha <input type="checkbox"/> Known Area		
OPERATIONS MONITORING			
Distribution: (Widespread individuals, clumped or extensive)			
Area Targeted			
Methods Used (Type, combination, were they appropriate)			
Timing of the operation: (See returned operational plan)			
Success of the control program: (How effective was the program in managing the problem)			
Non-Target effects (Were there any adverse effects)			
OTHER COMMENT			
RECOMMENDED ACTION	<input type="checkbox"/> UNDERTAKE CONTROL	<input type="checkbox"/> FOLLOW UP INSPECTION IN MONTHS	<input type="checkbox"/> NO CONTROL REQUIRED
PROPOSED CONTROL PROGRAM	<input type="checkbox"/> PHYSICAL REMOVAL <input type="checkbox"/> STRATEGIC GRAZING	<input type="checkbox"/> CHEMICAL CONTROL <input type="checkbox"/> BIOLOGICAL CONTROL	<input type="checkbox"/> FIRE <input type="checkbox"/> OTHER
SIGNATURE OF INSPECTING OFFICER			DATE

Completed form to be returned to Regional Office for entry into SFNSW Flora and Fauna database

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Appendix 6 - Timing of Control Programs

For effective herbicide control, it is essential to treat weeds at the correct time of year.

The optimal time for chemical application (foliar spraying) is dependent on the chemical used, the chemicals mode of action and the growth stage of the plant. Weather conditions may also play a role. Various information is contained in herbicide labels, DPI NSW *Agfacts* and *Agnotes*, DPI NSW *Noxious and Environmental Weed Control Handbook 2004/2005*.

Although the table below outlines the best time for herbicide application, this is not comprehensive and is a guide only. Operators will need to use their professional judgment to ensure that conditions are appropriate.

Species	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Bitou Bush												
Blackberry												
Crofton Weed/ Mist Flower												
Lantana												
Noogoora Burr												
Pampas Grass												
Polygala												
Prickly Pear/s												
Sweet Briar												
Thistles												
Scotch Broom												

Appendix 7 – Annual Weed Management Program

The format for Annual Weed Management Program is shown below. Examples are given.

This generally summarises information contained in operational plans and highlights the monitoring of previous programs t

Annual Weed Management Program – Central Region – (Year)

1 Proposed Programs

Priority/ Program	Target Species	Aim	Control Method (Include herbicide, rate and application method if applicable)	Area to Treat (see map attached)	Estimated Total Cost	Cooperative Program Notes	Justi
1							
2							
3							
4							
5							
6							
Total							

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3 Costs

Priority/ Program	Area Proposed to be Treated	Herbicide	Herbicide quantity	Herbicide Cost	Person Days	Person Costs	Machinery /Vehicle days	Machinery /Vehicle costs			
1	All areas										
2	Roadways & forest boundaries										
3	Roadways & forest boundaries										

4 Monitoring

Program (Year, Species and priority)	Monitoring Method	Actual Area Treated	Target Species Controlled?	Non-target effects	Treatment Appropriate?	What Follow- up Required		
	Assess 100% of treated area							

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Appendix 8 – Weed Operations Plan

The Format for Weed Operations Plans is shown on the two following pages. Source of information or specific tasks are generally identified on the form and the preparer should consult specialist staff within the region.

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Weed Operations Plan – Central Region

State forest:		Compartment(s):		Local Government Area:	
(Year) Annual Program Priority:			Target Species:		
Weed Infestation Description: (Map at appropriate scale attached)					
AMG:		Easting:		Northing:	
Approximate extent of infestation	<input type="checkbox"/> ≤ 1 m ²	<input type="checkbox"/> up to 10m ²	<input type="checkbox"/> up to 1 ha	<input type="checkbox"/> ≥ 10 ha	<input type="checkbox"/> Known Area
Weed Control Technique:					
Operator(s):					

Information to be addressed prior to operations taking place are:

Protection for water ecosystems:
Site Safety Plan has been prepared:
Personal Protective Equipment available and appropriate:
Neighbours Advised:
Warning Signs Displayed:

Where Chemicals are being used the following information must be completed:

Date: (See over for more than one day)		Start Time:	Finish Time:
Location where pesticide was applied:			
Type of equipment used:			
Name of all Pesticides used on the job:			
Amount of each Concentrated Product used: (Has Pesticides Register been noted)			
Total quantity applied: (includes any water or other product used as a carrier)			
Size of the area sprayed:			
Order of areas sprayed:			
Weather Conditions:	Temperature:	Wind Speed:< XXX km/h	Wind Direction
Other weather conditions (if specified on the label or National Registration Authority permit)			

Note: Where a program will extend for more than one day, time and date of start and finish of operations can be recorded on page 2

This work sheet has been designed to facilitate planning of weed control operations, instruction to the operator carrying out the operation and, where chemicals are used, to meet the requirements of the *Pesticides Amendment (Records) Regulation* pertaining to the *Pesticides Act 1999*.

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WEED OPERATIONS PLAN – Central Region (Cont)

CERTIFICATION

Plan prepared by: _____ Date: _____ Signature: _____

Approved by
Operations Officer _____ Date: _____ Signature: _____

PRE-OPERATION BRIEFING

I acknowledge that I have received a copy of the Weeds Operation Plan for 200 Program Priority XXX and that I have been briefed on the conditions of the Plan and understand the supervision and operational control requirements as explained to me by the person who prepared the plan or his/her delegate.

Plan Preparer/delegate

Name	Signature	Date

Forests NSW Operator

Name	Signature	Date

Weed Spraying Contractor Acknowledgment

I acknowledge that I have received a copy of the Weeds Operations Plan for XXX Program Priority XXX and that I understand the conditions of the Plan as explained to me by a Forests NSW officer. I will brief other operators not present at this briefing prior to them starting operations.

Signature: Name:

Position: Principal Contractor/Other (explain) Date:.....

Contractor Personnel Attending Briefing

Contractor Personnel	Date	SFNSW Personnel	Date

Record of Wind Speed and Direction during spraying

Date	Time	8:00	9:00	10:00	11:00	12:00	1:00	2:00	3:00	4:00	5:00	6:00
	Speed											
	Directn											
	Speed											
	Directn											
	Speed											
	Directn											
	Speed											
	Directn											

Implementation of weed control program:

Operational compliance was checked by supervising officer Separate Report Attached	Supervisor Signature: Date:/...../.....
This is a true record of the work undertaken:	Operator Signature:..... Date/...../.....

Completed form must be returned, with the program map, to Regional Office for processing

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Tony;

We need some legal advise concerning the dual obligations under the RLP Act for the control of wild dogs and our responsibilities under the IFOA to protect critical weight species. First some background information.

Nigel Fuller in Walcha has actively been working with several Wild Dog Associations, using the Regional Strategic Feral and Introduced Predator Control Plan as his guide. This Control Plan was developed as a requirement of clause 35 of the IFOA for the Lower North East and a condition 5.18 of the threatened species license under the Threatened Species Conservation Act. The control method recommends the preference for perimeter buried baiting, but does allow limited aerial perimeter baiting in instances of inadequate resources and/or where buried baiting is not practicable or feasible due to remoteness or lack of resources. No internal baiting in identified core dingo areas. This is also consistent with State Forest Policy.

Following the recent gazettal of the Rural Lands Protection Act 1998 the Crown is now bound in the control of noxious animals. As it places us in a conflicting situation, the Department of Ag. has informed the agencies that provided that a mutually agreed plan is in place for control, it would meet the obligations under the Act. We are working with the various Wild Dog Associations in the development of their Wild Dog Management Plan. This Plan once approved by both the RLPB and the Regional Manager would meet our obligations under the RLP Act.

The use of aerial baiting is a strong and emotional issue with the grazing community on the New England tablelands, they strongly believe that it is unnecessarily being curtailed and that perimeter buried baiting does not provide suitable results. They also believe that aerial baiting is a better environmental result, as unchecked wild dogs destroy more critical weight species than accidental non target poisoning. Of course there is conflicting green interest.

The Region has recently sent out reminders to all Leasees and Occupation Permit holders about their responsibilities under their lease/permit to control weeds and feral animals. Many has stated that their intended method of wild dog control is by aerial baiting, which is an approved method under the NSW Agriculture Vertebrate Pest Control Manual. They wish to include this in their respective Wild Dog Control Plans. This raises several questions.

Does the Leasee of a Crown Lease on a dedicated State Forest has the option to conduct the legal control method of his choice, or is he compelled to comply with Regional Policy?

Does the Permit holder of an Occupation Permit on State Forest have the option to conduct the legal control method of his choice, or is he compelled to comply with Regional policy?

If the answers for the above questions are that they can do their elected control method, which would be to conduct internal aerial baiting, are we exposed to any repercussions under the IFOA or TSC Act?

Any other advice you can supply.

Thank you,

Steve Bishop

5.4 INTRODUCED ANIMALS

Introduced animals are those animals not native to the area such as wild dog (*Canis familiaris*), feral cat (*Felis catus*), feral goat (*Capra hircus*), fox (*Vulpes vulpes*) and stray stock. A range of environmental impacts are caused by these animals.

The *Rural Lands Protection (RLP) Act 1998* requires pest animals declared under the Act to be controlled. Wild dogs, including dingoes, have been declared throughout NSW and hence, the NPWS has a statutory obligation to control wild dogs on its estate.

Wild dogs and dingoes (*Canis lupus dingo*) can inflict losses and disruption to livestock on rural lands adjoining the planning area. Wild dog control is currently undertaken by the Casino Rural Lands Protection Board (RLPB) in conjunction with local landholders to minimise stock losses. The NPWS and Rural Lands Protection Board regularly liaise regarding the management of pest animals. Under the *RLP Act*, public lands considered to contain high quality dingo habitat have been listed as dingo management areas. This includes Richmond Range and Toonumbar NPs. The *RLP Act* requires the public land managers, such as the NPWS, to assist in the preparation of a wild dog management plan for dingo management areas. These plans are to identify methods for the control of wild dogs and the conservation of dingoes in these areas and are to be approved by the local RLPB.

Feral cats and foxes are widespread throughout the region and known to occur in the planning area. There is a high diversity of native animals in the planning area that are susceptible to predation from feral cats and foxes. Foxes are listed as a key threatening process under the *Threatened Species Conservation Act 1995*. The draft Fox Threat Abatement Plan has identified the need to control foxes in parts of the planning area to protect the rufous bettong (*Aepyprymnus rufescens*).

Feral goats are known to occur in the Middle Mount area in Toonumbar NP. A population of Rusa deer (*Cervus timorensis*) have been recorded near the township of Bonalbo to the west of Richmond Range NP. Local authorities are attempting to eradicate them before they establish in the local area.

Cane toads (*Bufo marinus*) are not yet established within the planning area. It is likely that individual cane toads may be inadvertently transported to the planning area by vehicles from nearby areas where they are common.

Domestic livestock are known to enter the planning area from adjoining properties where fencing is inadequate. This includes the Mallanganee lookout area adjacent to the north west corner of Mallanganee NP. No fence is located along the park boundary in this area. All former SFNSW occupation permits for grazing that applied to the planning area have expired and grazing is no longer permitted.

The NPWS Northern Rivers Region Pest Management Strategy provides management direction at a regional level for the control of introduced animals. Pest management plans for specific parks and reserves provide more detailed strategies and work programs.

Desired Outcomes

- ◆ A reduction of the distribution and impact of introduced animals, particularly predation by foxes on rufous bettong.
- ◆ New populations of vertebrate pest species are prevented from establishing in the area, particularly feral deer, goats and cane toads.

◆ Community awareness is raised regarding the impacts and appropriate control of pest animals.

Guidelines and Actions

- Prepare pest animal management plan(s) for the planning area.
- Implement the Fox Threat Abatement Plan as it relates to the planning area to reduce native animal predation, particularly on rufous bettong populations.
- Assist in the preparation and implementation of a wild dog management plan to be approved by the Casino Rural Lands Protection Board.
- Continue to liaise with the Casino Rural Lands Protection Board and park neighbours regarding pest animal control programs.
- Fence that part of the western boundary of Mallanganee NP adjoining the Mallanganee lookout to exclude stock from entering the park.
- Provide information to the community regarding the impacts of wild dog, feral cats, foxes, deer and goats and encourage off-park control programs to assist conservation of native animal populations.
- Provide information to park neighbours regarding the identification and control of cane toads in order to prevent their colonisation in the planning area.
- Encourage the community to report any new occurrences of pest animals.

Page Break

Page 4: [2] Inserted

Simon Hemer

2/6/2002 1:49 PM

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