



MISP Incursion Plan for High Risk Weeds

1. INTRODUCTION

The purpose of this plan is to ensure a consistent approach and response to new weed incursions is achieved throughout the Macquarie Valley region. This plan directly addresses goals 1 and 2 of the NSW Invasive Species Plan; it will aid exclusion and eradication of new weeds quickly before they have a chance to establish. This plan is designed for implementation by regional managers and local control authorities however the principles can be applied to all levels of management.

As defined in the NSW Invasive Species Plan, an incursion is “an isolated population of an invasive species detected in an area where it has previously not been established”.

2. RESPONSE

There are four aspects of response to a new weed incursion; these aspects of response may occur concurrently.

2.1 Investigation

The incursion must be comprehensively investigated to confirm the species identification and extent of the infestation. Confirmation of these will allow the land manager to plan the operational work required to successfully eradicate the plant from the site.

2.2 Alert

The existence of the incursion should be made known either as part of a greater public awareness campaign or to comply with legal responsibilities.

Public awareness can involve immediate neighbours, local communities or wider audiences. Creating awareness of the weed can help discover the extent of the incursion or aid with future detections.

If the species is declared as a class 1 or 2 noxious weed under the Noxious Weeds Act 1993, it is a “notifiable” weed. Landholders are obliged to notify the local control authority (LCA) within 3 days of becoming aware of a class 1 or 2 notifiable weed on their land. The LCA then reports the notifiable weed to NSW Primary Industries (DPI) to ensure record keeping is consistent across the state (private information about property owners etc are not provided to DPI).

2.3 Operational

The target species of this plan are all identified as high risk with a control aim of eradication. With a control plan appropriate for the species and site, the land manager should successfully achieve the aim.

2.4 Review and recovery

Ongoing surveillance and rehabilitation of the site are important steps to ensure regrowth does not occur and eradication is successful.

The entire process used to deal with new weed incursions should be reviewed regularly to ensure all obligations are met and the process delivers successful results in an economical manner.

3. INFORMATION

Information and data gathered for new incursions needs to be comprehensive and useful while maintaining the privacy of property owners. Maintaining correct records allows for the information to be preserved even though the people involved may have moved on.

3.1 Mapping and recording standards

A series of weed recording standards were set out by NSW Agriculture (now DPI) in 1999. These standards can be adapted to any level of weed management. DPI requires a subset of these standards to be provided when reporting a notifiable weed. They include:

- Species name
- GPS location
- Date of detection
- Growth status
- Number of plants
- Possible source
- Land use at the site
- Size of site

3.2 Trace back

Tracing the source of a weed incursion is an important step towards preventing future infestations. Identifying pathways of spread allows for future inspections to be targeted and weed incursions to be detected quickly.

4. HIGH RISK SPECIES

As part of the Weeds Action Program it was compulsory for regions to identify “high risk species”. The Macquarie Valley Weeds Advisory Committee assumed this phrase referred to species that have the potential to invade and impact on part of, or the entire region while currently not found in the region, or only newly found in 1 or 2 sites within the region.

Consultation with weed officers across the region as well as DPI staff produced a draft list of weed species. These species were then assessed using the NSW Weed Risk Management System (NSW WRMS), as promoted by the Noxious Weeds Advisory Committee. This system was used to give an objective review of the weeds current status and potential risk to the region. The species were then categorised according to the management outcome given by the weed risk assessment system and a regional list was produced (see appendix 1).

A secondary list was also created which lists weeds that pose a risk to part of the MISP region (see appendix 1). The MISP region is very large and covers a variety of landscapes and climates. This means that although a weed may be present in one part of the region, it can still be considered high risk in other parts of the region.

4.1 Definitions of Management Outcomes

The following definition of weed management outcomes were set out in the NSW Weed Risk Management System.

Management Outcome	Definition
Eradication	Aim to remove the weed species from the geographical area being considered. Detailed surveillance and mapping to locate all infestations. Destruction of all infestations including seed banks. Prevention of entry to geographical area, and movement and sale within. Must not grow and all cultivated plants to be removed. Monitor progress towards eradication.
Destroy infestations	Aim to significantly reduce the extent of the weed species in the geographical area being considered. Detailed surveillance and mapping to locate all infestations. Destruction of all infestations, aiming at local eradication where feasible. Prevention of entry to geographical area, and movement and sale within. Must not grow. Monitor progress towards reduction.

Contain spread	Aim to prevent the ongoing spread of the weed species in the geographical area being considered. Surveillance and mapping to locate all infested properties. Control of all infestations, aiming for a significant reduction in weed density. Prevention of entry to geographical area, and movement and sale within. Must not allow to spread from cultivated plants (if grown). Monitor change in current distribution.
Protect priority sites	Aim to prevent the spread of the weed species to key sites/assets of high economic, environmental and/or social value. Weed may be of limited current distribution and only threatens limited industries/habitats (lower weed risk), or the weed may be more widespread but is yet to invade/impact upon many key industries/habitats (higher weed risk). Surveillance and mapping to locate all infested areas. Identification of key sites/assets in the geographical area. Control of infestations in close proximity to key sites/assets, aiming for a significant reduction in weed density. Limits on movement and sale of species within geographical area. Must not allow to spread from cultivated plants (if grown) in close proximity to key sites/assets. Monitor change in current distribution within and in close proximity to key sites/assets.
Manage weed	Aim to reduce the overall economic, environmental and/or social impacts of the weed species through targeted management. Research and develop Integrated Weed Management (IWM) packages for the species, including herbicides and biological control where feasible. Promote IWM packages to landholders. Monitor decrease in weed impacts with improved management. Identify key sites/assets in the geographical area and ensure adequate resourcing to manage the weed species.
Manage sites	Aim to maintain the overall economic, environmental and/or social value of key sites/assets through improved general weed management. Promote general IWM principles to landholders, including a range of control techniques, maintaining competitive vegetation/crops/pastures, hygiene and property management plans. Identify key sites/assets in the geographical area and ensure adequate resourcing to manage these to maintain their values. Broaden focus beyond weeds to all threatening processes.
ALERT	Species that are not known to be present in the geographical area being considered and which represent a significant threat would score zero in feasibility of coordinated control due to their absence and automatically also have a ALERT placed on the management outcome. Aim to prevent the species arriving and establishing in the management area being considered. Activities include ongoing surveillance for incursions of the species, for example nursery inspections, training and awareness activities for the community to enable early detection.
Monitor	Aim to detect any significant changes in the species weed risk. Monitor the spread of the species and review any perceived changes in weediness.

5. RAPID RESPONSE PLAN

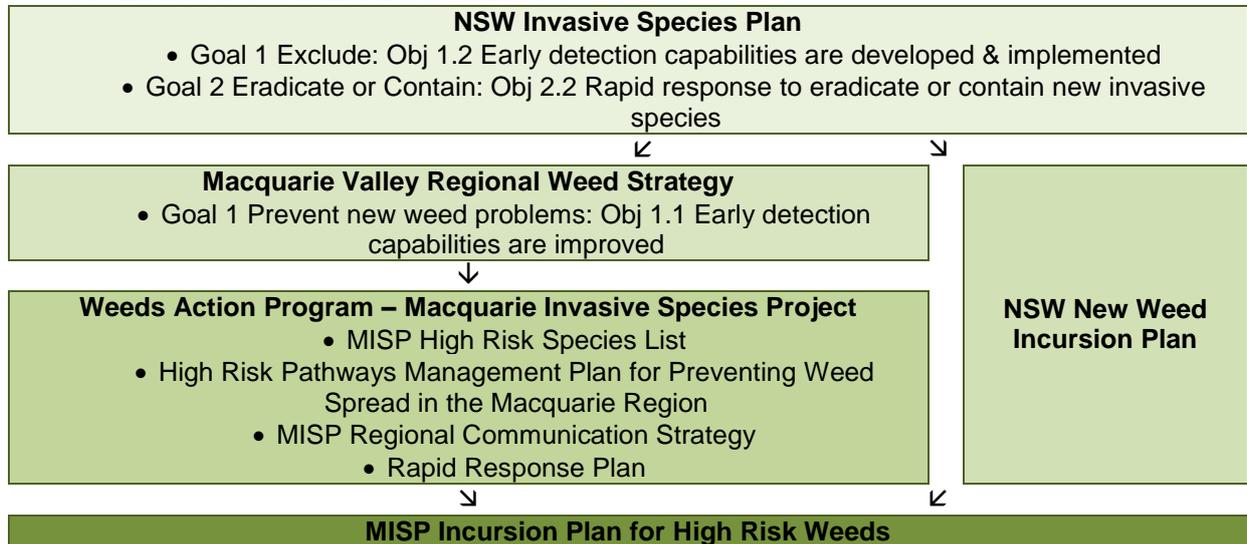
A rapid response plan helps achieve successful control of new weeds. It outlines specific procedures such as immediate on-ground control techniques and long-term follow-up actions including education and awareness campaigns. While this plan was created for use by Weed Officers, it can also be adapted and used by landholders as it sets out the basic steps and principles for long term management of weed incursions.

All LCAs within the MISP region have adopted the following rapid response plan for use when a new weed is discovered:

- Confirm the weed's identification using the New Incursion Botanist (Royal Botanic Gardens Trust) and report to NSW Primary Industries if it is declared as a Class 1 or 2 'notifiable' weed under the Noxious Weeds Act 1993,
- Record all details of outbreak including maps, photos and any other relevant information to help identify the source of spread,
- Treat outbreak as necessary, in reference to recommended control techniques/herbicides,
- Inform surrounding Local Control Authorities/Livestock Health and Pest Authorities of outbreak,

- Inform surrounding landholders and other relevant community groups of outbreak as part of community awareness and education program,
- Ensure monitoring and follow-up treatment takes place under a plan of action,
- Maintain records of outbreak and status of control program.

6. LINKS TO OTHER DOCUMENTS



APPENDIX 1

High risk weeds list for the Macquarie Invasive Species Project region:

Common name	Scientific name	Reason for nomination as MISP regional high risk species	Regional WRA management outcome
Alligator weed	<i>Alternanthera philoxeroides</i>	<i>Present in neighbouring region (Riverina). Aquatic weed</i>	Eradication
Anchored water hyacinth	<i>Eichhornia azurea</i>	<i>Class 1 declared noxious weed for all of NSW. Aquatic weed.</i>	Eradication
Boneseed	<i>Chrysanthemoides monilifera</i> subspecies <i>monilifera</i>	<i>Not currently present but potential for invasion is high</i>	Eradication
Eurasian water milfoil	<i>Myriophyllum scipatum</i>	<i>Class 1 declared noxious weed for all of NSW. Aquatic weed.</i>	Eradication
Fireweed	<i>Senecio madagascariensis</i>	<i>Not currently present but potential for invasion is high</i>	Eradication
Horsetail	<i>Equisetum</i> species	<i>Class 1 declared noxious weed for all of NSW. Aquatic weed.</i>	Eradication
Hymenachne	<i>Hymenachne amplexicaulis</i>	<i>Class 1 declared noxious weed for all of NSW. Aquatic weed.</i>	Eradication
Karoo thorn	<i>Acacia karroo</i>	<i>Class 1 declared noxious weed for all of NSW</i>	Eradication
Lagarosiphon	<i>Lagarosiphon major</i>	<i>Class 1 declared noxious weed for all of NSW. Aquatic weed.</i>	Eradication
Leafy elodea	<i>Egeria densa</i>	<i>Aquatic weed.</i>	Eradication
Mesquite	<i>Prosopis</i> species	<i>Isolated plants found in North and West of region. High potential for further spread</i>	Eradication
Mexican feather grass	<i>Nassella tenuissima</i>	<i>Class 1 declared noxious weed for all of NSW</i>	Eradication
Miconia	<i>Miconia</i> species	<i>Class 1 declared noxious weed for all of NSW</i>	Eradication
Parkinsonia	<i>Parkinsonia aculeata</i>	<i>Isolated plants found in North and West of region. High potential for further spread</i>	Eradication
Parthenium weed	<i>Parthenium hysterophorus</i>	<i>Isolated plants found in North and West of region. High potential for further spread. Class 1 declared noxious weed for all of NSW</i>	Eradication + ALERT
Pond apple	<i>Annona glabra</i>	<i>Class 1 declared noxious weed for all of NSW</i>	Eradication
Rubbervine	<i>Cryptostegia grandiflora</i>	<i>Isolated plants found in West of region. High potential for further spread</i>	Eradication
Senegal tea plant	<i>Gymnocoronis spilanthoides</i>	<i>Class 1 declared noxious weed for all of NSW. Aquatic weed.</i>	Eradication
Siam weed	<i>Chromolaena odorata</i>	<i>Class 1 declared noxious weed for all of NSW</i>	Eradication
Water caltrop	<i>Trapa</i> species	<i>Class 1 declared noxious weed for all of NSW. Aquatic weed.</i>	Eradication
Water hyacinth	<i>Eichhornia crassipes</i>	<i>Aquatic weed</i>	Eradication
Water lettuce	<i>Pistia stratiotes</i>	<i>Class 1 declared noxious weed for all of NSW. Aquatic weed.</i>	Eradication
Witchweed	<i>Striga</i> species	<i>Class 1 declared noxious weed for all of NSW.</i>	Eradication
Yellow burrhead	<i>Limnocharis flava</i>	<i>Class 1 declared noxious weed for all of NSW. Aquatic weed.</i>	Eradication
Broomrapes	<i>Orobanche</i> species	<i>Class 1 declared noxious weed for all of NSW</i>	Destroy infestations
Chinese violet	<i>Asystasia gangetica</i> subspecies <i>micrantha</i>	<i>Class 1 declared noxious weed for all of NSW</i>	Destroy infestations
East Indian hygrophila	<i>Hygrophila polysperm</i>	<i>Aquatic weed</i>	Destroy infestations
Giant Parramatta grass	<i>Sporobolus fertilis</i>	<i>Not currently present but potential for invasion is high</i>	Destroy infestations

Hawkweed	Hieracium species	Class 1 declared noxious weed for all of NSW	Destroy infestations
Kidneyleaf mud plantain	Heteranthera reniformis	Class 1 declared noxious weed for all of NSW. Aquatic weed. Has previously been sold at chain nurseries.	Destroy infestations
Kochia	Bassia scoparia	Class 1 declared noxious weed for all of NSW	Destroy infestations
Mimosa	Mimosa pigra	Class 1 declared noxious weed for all of NSW	Destroy infestations
Prickly acacia	Acacia nilotica	Not currently present but potential for invasion is high	Destroy infestations
Spotted knapweed	Centaurea stoebe subspecies micranthos	Class 1 declared noxious weed for all of NSW	Destroy infestations
Water soldier	Stratiotes aloides	Class 1 declared noxious weed for all of NSW. Aquatic weed.	Destroy infestations
Black knapweed	Centaurea nigra	Class 1 declared noxious weed for all of NSW	Contain spread
Cats claw creeper	Macfadyena unguis-cati	Not currently present but potential for invasion is high	Contain spread
Sagittaria	Sagittaria platyphylla	Found at Dubbo zoo. High potential for further spread. Aquatic weed.	Contain spread
Salvinia	Salvinia molesta	Aquatic weed	Contain spread
Mimosa bush	Vachellia farnesiana	Isolated plants found in North and West of region. High potential for further spread	Protect priority sites

Secondary list of weeds that pose a risk to some parts of MISP region:

Common name	Scientific name	Reason for nomination as MISP regional high risk species	Regional WRA management outcome
Athel pine	Tamarix aphylla	Naturalisations in watercourses spread quickly and densely. Previously isolated in western LCAs: Bourke & Wellington. Concerns for spread beyond these areas.	Eradication
Coolatai grass	Hypparrhenia hirta	Capable of invading undisturbed natural ecosystems. Although common in Castlereagh Macquarie, it is isolated in central LCAs: Narromine & Wellington. Concerns for spread beyond these areas.	Eradication
Serrated tussock	Nassella trichotoma	Highly invasive and difficult to control. Common in eastern LCAs: Cabonne, Orange, Mid-Western and Wellington. Concerns for spread beyond these areas.	Destroy infestations
Gorse	Ulex europaeus	Aggressive seed dispersal. Previously isolated in eastern LCAs: Orange & Cabonne. Concerns for spread beyond these areas.	Contain spread
Hudson pear	Cylindropuntia rosea	Highly invasive cactus species. Previously isolated in northern LCAs: Castlereagh Macquarie & Brewarrina. Concerns for spread beyond these areas.	Protect priority sites
Mother of millions	Bryophyllum species and hybrids	Reproduces vegetatively in large numbers. Previously isolated in north eastern LCAs: Dubbo & Castlereagh Macquarie	Monitor + protect priority sites
Bridal creeper	Asparagus asparagoides	Climbing stems smother native plants. Previously isolated in central and eastern LCAs: Dubbo, Wellington and Mid-Western	Manage weed
St John's wort	Hypericum perforatum	Serious weed of pastures and native ecosystems. Occurs widespread in eastern LCAs: Cabonne, Orange and Wellington. Concerns for spread beyond these areas.	Manage weed
Cape broom	Genista monspessulana	Occasional and localised in far eastern LCAs: Cabonne, Orange & Wellington. Concerns for spread beyond these areas.	Manage sites

European olive	Olea europaea	<i>Becoming weedy in central LCAs: Dubbo, Castlereagh Macquarie and Mid-Western. Poses significant threat to native ecosystems.</i>	Manage sites
Chilean Needle grass	Nassella neesiana	<i>Significant threat to production and environment. Previously isolated in eastern LCAs: Orange, Cabonne, Wellington, Mid-Western and Dubbo. Concerns for spread beyond these areas.</i>	Varied
Lippia	Phyla canescens	<i>A major threat to watercourses, floodplains and pastoral areas. Significantly affects neighbouring catchment (Lachlan).</i>	Varied