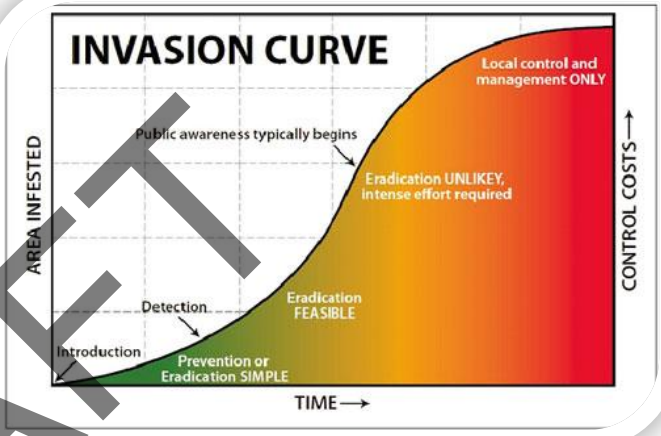
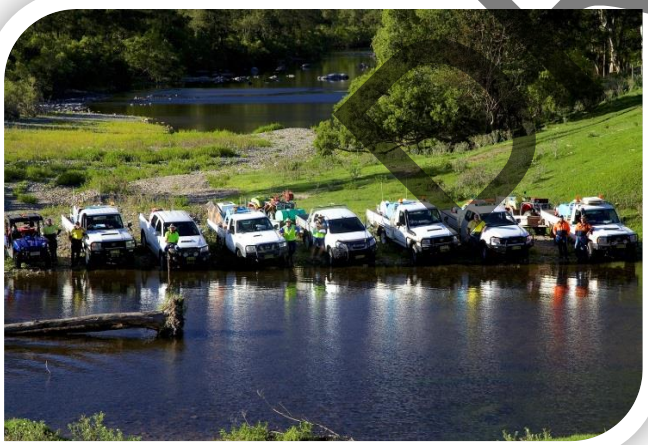
Northern Tablelands Regional Weed Committee Regional Weed Incursion Program 2018 - 2022





May 2018

NEW ENGLAND WEEDS AUTHORITY

Inverell Shire Council

TENTERFIELD SHIRE COUNCIL

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ABBREVIATIONS

AIIMS	Australian Inter-service Incident Management System
AUSBIOSEC	Australian Biosecurity System for Primary Production and the Environment
BO	Biosecurity Officer
LCA	Local Control Authority
NT	Northern Tablelands
NTRWC	Northern Tablelands Regional Weed Committee
NTRWC WIP	NTRWC Incursion Plan 2018 - 2022
NTRWC RRP	NTRWC Rapid Response Plan 2018 - 2022
NTRSWMP	NT Regional Strategic Weed Management Plan 2018 - 2022
NTRWC WAP	NTRWC Weeds Action Program 2015 - 2020
NTRWC WIT	NTRWC Weed Incursion Team
NSW DPI	NSW Department of Primary Industries
NSW ISP	NSW Invasive Species Plan 2015 - 2012
NWIP	National Weed Incursion Plan 2008 - 2015
RISO	Regional Invasive Species Officer
SWC	State Weed Committee
WMP	Weed Management Plan
WRA	Weed Risk Assessment

ACKNOWLEDGEMENTS

The NTRWC Rapid Response Plan has been modelled on the National Weed Incursion Plan. NTRWC wishes to thank Phillip Maher, Senior Project Officer, Biosecurity QLD, Department of Primary Industries and the participants of the 2007 workshop which developed many of the principles of the National Weed Incursion Plan.

1. EXECUTIVE SUMMARY

The key objective of an early detection and rapid response plan is to create a state of readiness (preparedeness), in order to significantly reduce the response time to new invasive plant incursions and therefore improve the level of success of efforts in containment and/or eradication.

As the generic emergency response plan for new weed incursions, this Plan will be used by local control authorities and other stakeholders as a guide to management of new weed incursions and is linked directly to the over-arching Northern Tablelands Regional Strategic Weed Management Plan 2018 – 2022 (NT RSWMP)

This Response Plan provides a comprehensive outline of the procedures, management structure and information flow systems for the handling of new weed incursions at a regional and local level.

Appendix 8 provides a rapid response checklist summary collating the individual stages within the Rapid Response Plan.

The steps of an emergency response described in this Plan may occur in a slightly different order depending on the type of emergency. Some steps may also occur concurrently. It may be possible to merge some of the roles described in the Plan, depending on the nature and size of the outbreak, the availability and capability of personnel, and the progress of the eradication program.

Regional rapid response to the new Tropical Soda Apple Incursion.

2. INTRODUCTION

Preventing the introduction of new weed incursions is the cornerstone to best management practice. However, even the best prevention efforts will not stop all invasive species incursions. Early detection and rapid response efforts increase the likelihood that invasions will be addressed successfully while populations are still localised and population levels are not beyond containment and eradication.

Once populations are widely established, all that might be possible is the partial reduction of negative impacts. The costs associated with early detection and rapid response efforts are typically far less than those of long term invasive species management programs.

The NTRWC Rapid Response Plan details the co-ordinated regional response primarily concerned with the containment and / or eradication of new weed incursions which pose a potential threat to the mid north coast region's agricultural industries and high conservation value ecosystems.

To assist in the implementation of a rapid response to a new weed incursion Appendix 8 provides a collation of the checklists of the various stages within the Plan.

1.1 Overview of stages within the NTRWC Regional Weed Incursion Plan (WIP)

Responses to new weed incursions in the NTRWC area are managed in a similar way to bushfire and other natural disasters.

To ensure a common understanding of incursion response this document and the NTRWC WIP is based on the National Weed Incursion Plan and the Plant Health Australia – PLANTPLAN. Both models divide incident management into 4 stages:

- Prevention
- Preparedness
- **Response**
- **Recovery**

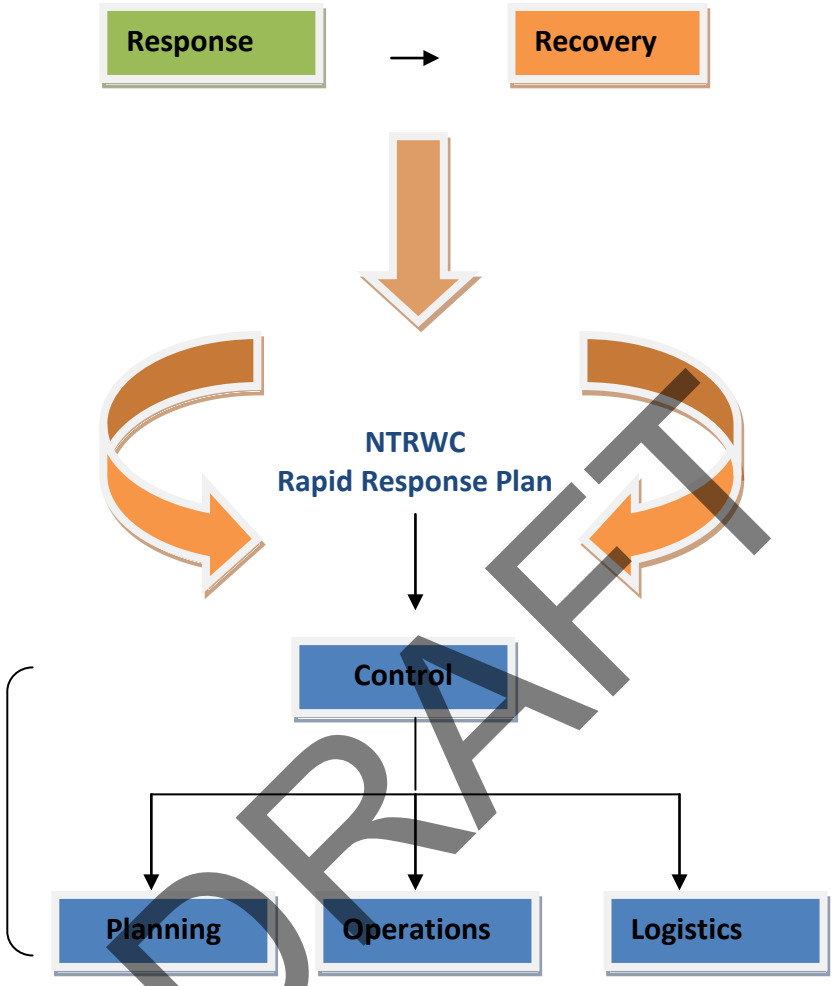
The NTRWC Rapid Response Plan 2018 - 2022 (RRP) covers the response and recovery stages.

The prevention and preparedness stages involve identifying the weed threats to the region, assessing the risks if that weed were to be found in the region and taking action to avoid the establishment of the species through the regional inspection program of high risk pathways and sites and other priority sites as identified in the NTRWC Weeds Action Program 2015 – 2020 (WAP 1520).

As part of being prepared, the Weed Alerts list (contained in the NTRWC WIP) details plant species not currently present in the region, which, should they occur will then instigate action under the NTRWC WIP and associated NTRWC RRP.

Chart 1: NTRWC Rapid Response Plan Stages

Clear management and co-ordination systems need to be in place to ensure those involved in the management of the incursion have a strong grasp of their roles and responsibilities and know who the relevant stakeholders are to contact in each organisation. This can be summarized in the following flow diagram.



As part of AUSBIOSEC protocols, it is recommended that the Australian Inter-service Incident Management Systems (AIIMS) be adopted in Rapid Response Plans.[1]

*AIIMS provides a system that facilitates the coordination of all activities by all parties involved in the resolution of an emergency.

[1] National Weed Incursion Plan P59

1.2 Purpose of the Rapid Response Plan

The purpose of the Rapid Response Plan is to provide:

- guidelines for the consistent management of new weed incursions by appropriately trained personnel within the northern tablelands region
- compatibility of operations and procedures within the Northern Tablelands Local Land Services region and with adjoining Regional Weed Committees
- a focus for training personnel in operational response procedures, and
- guidelines for the development of standard operating procedures for personnel involved in rapid response management for new weed incursions.

1.3 Responses to new weed incursions

There are 5 phases to be activated in a response to a new weed incursion:

- Investigation
- Alert / Scoping
- Operational/Response (eradication and containment)
- Stand Down, and
- Recovery

The NTRWC RRP provides a step by step guide to handling responses to new weed incursions.
It is important to note that:

- while the phases of the NTRWC RRP are represented as separate events, they should all be viewed as part of a continuous process;
- because of the potential urgency and changing timeline of an incident, the Investigation Phase can invariably move immediately into the Alert Phase, and/or the Operational Phase may be commenced prior to all activities in the Alert Phase being completed;
- the actions described in the NTRWC RRP are advisory in nature and during the course of a response additional actions may be performed or some actions listed will not be carried out; and
- there is a requirement for all phases of this response section to be carried out in conjunction with a communication strategy, an overview of which is provided in Section 5, and detailed in the NTRWC Communication Strategy 2018 -2022.

There are specific trigger points that continue through all of the five phases. Table 1 provides a summary guide to the trigger points for each of the five phases.

Table 1: Trigger points along the phases of the response continuum

Phases / Triggers	Detection	Verification / Notification	Weed Risk Assessment WRA	Surveillance	Planning	Response
Investigation	Detection of suspect weed	Identification verified and notified	Preliminary WRA (could be based on existing WRA)		Notify state authority (NSW DPI)	Establish a preliminary Weed Incursion Team (WIT)
Scoping / Alert	Detection/s of suspect weed/s may occur at all phases of the response	Verification and notification of suspect weed/s may occur at all phases of the response	Final WRA Initiate declaration process with NSW DPI	Scoping and delimitation - mapping & surveying at weed incursion site/s	Establish interim restricted and control area Instigate Weed Management Plan Set up control centre/s depending on the level of response	Investigate options for treatment and assess needs for chemical permits / trials
Operational - Containment	Detection/s of suspect weed/s may occur at all phases of the response	Verification and notification of suspect weed/s may occur at all phases of the response		Trace back and trace forward programs in region Delimitation program in area	Establish quarantine areas Decision on eradication vs containment Develop an exit strategy	Establish Weed Incursion Team (WIT) Application of chemical treatment /s or integrated weed management
Operational – Eradication				Delimitation program continues in area On-going surveillance, trace back and mapping	Endorse successful eradication or recommend termination	WIT implements WMP including organizational arrangements Application of chemical treatment /s or integrated weed management
Stand Down				On-going surveillance, trace back and mapping	Develop site / local/ regional rehabilitation plan/s	Implement exit strategy
Recovery				On-going surveillance, trace back and mapping		Implement site / local/ regional rehabilitation plan/s

2.1 INVESTIGATION PHASE

The investigation phase involves the reporting of a suspect weed, verification of the species and the initial investigation of the weed species by the relevant authorities.

The following Sections 2.1.1 – 2.1.8 detail the steps of the Investigation Phase

2.1.1 Detection

The investigation phase begins with the initial detection of a suspect weed. A landholder, community group member, consultant, state or local agency person or other individual reports the detection or provides a specimen to the Biosecurity Officer of a member Council of NTRWC.

The Biosecurity Officer will arrange to forward the specimen directly to the Royal Botanic Gardens Herbarium in Sydney for identification and verification.

The Biosecurity Officer, in association with the NTRWC must exercise a high level of judgement to determine the appropriate response at the time. Decisions must be balanced against the need to ensure that all necessary actions can be taken if the new weed incursion is verified.

Preliminary information, from the site of detection, which could be useful in identifying and dealing with a suspect plant, should be documented. Any information that can aid in early diagnosis, and help in the adoption of extra precautionary measures will increase the likelihood of eradication.

Useful information includes:

- site details – ownership, location, map (latitude and longitude using Global Positioning System (GPS) equipment if available);
- specimen photographs – electronic and/or print;
- when and where the weed species was first noticed and identification of probable incursion pathway (where available);
- precautionary measures (quarantine of site and decontamination) put in place
- any other details that could be helpful.

2.1.2 Initial verification and formal notification

The initial verification from the Royal Botanic Gardens Herbarium of the weed species is notified to the Officer who provided the initial specimen who will then forward the information onto the Biosecurity Officer who will in turn report to the State Weed Control Coordinator and the Regional Invasive Species Officer (RISO), NSW DPI. If further information is required by the Royal Botanic Gardens Herbarium to assist with the verification, the state herbarium usually requests this from the Biosecurity Officer who provided the initial specimen. Further taxonomic work may be required (e.g. identification to subspecies level may be needed to select the most effective control measure).

2.1.3 NTRWC informs landholders

The Biosecurity Officer informs the landholder of the weed incursion and the process that will be taken to address the weed incursion, including any landholder obligations.

2.1.4 Notify adjoining weed control authorities, other land management agencies and other stakeholders

The Biosecurity Officer reports to the Chair of the NTRWC and their Local Control Authority and is to advise North West Regional Weed Committee, North Coast Regional Weed Committee, Hunter Regional Weed Committee, Upper Hunter Weeds Authority, NPWS Regional Pest Management Officer and the local NSW DPI Agronomists.

2.1.5 NTRWC (Lead Agency) co-ordinates relevant information

The Biosecurity Officer coordinates the collection of relevant information for the initial report and verbally advises the State Weed Control Coordinator and the Regional Invasive Species Officer (RISO), NSW DPI.

The Biosecurity Officer must ensure that chain of custody and record of evidence requirements for collection and retention of specimens are satisfied. An unbroken chain of custody and record of evidence must be maintained for results to be admissible in court, in the event of legal action by the lead agency or the landholder. (refer to Appendix 1 – Chain of Evidence).

Appropriate measures and documentation procedures must be followed at all times, in accordance with NSW DPI's publication: 'Field Inspection to Follow-up New or Unknown Weed Incursions'
(Appendix 2) and Weed Recording Standards in NSW (refer to Appendix 3).

2.1.6 Notification to the State Weed Control Coordinator NSW DPI

The Biosecurity Officer forwards a report to the State Weed Coordinator, NSW DPI of the notification of the confirmed new weed incursion.

2.1.7 Preliminary Weed Risk Assessment (WRA)

Northern Tablelands Local Control Authority Biosecurity Officers in association with NSW DPI, Weed Ecologist carries out a preliminary WRA on the confirmed weed incursion using the adopted NSW Weed Risk Assessment System (refer to Appendix 7).

2.1.8 Preliminary Weed Incursion Team (WIT) established and meeting convened

Biosecurity Officer establishes a preliminary WIT and convenes a meeting to be chaired NTRWC Chairman, or delegate, that discusses the situation report, herbarium identification, technical update of species specific response plan, administrative arrangements, communication and media releases
Table 2: Checklist of Procedures and Actions to be taken in the INVESTIGATION Phase

N.B Some actions may occur simultaneously

Agency	Procedures / Actions	Responsibility
NTRWC	Detection of a suspect weed incursion.	Landholder, community group member, consultant, state/territory or local agency person or other individual submits suspect weed incursion.
	Initial verification and formal notification.	State/territory herbarium provides verification and notification to the Northern Inland Weeds Advisory Committee.
	Landholder /s informed.	Biosecurity Officer advises landholder/s of incursion verification, response process and obligations.
	Adjoining weed control authorities, other land management agencies / stakeholders informed.	Biosecurity Officer notifies authorities, agencies and stakeholders.
	NTRWC co-ordinates relevant information.	Biosecurity Officer collects relevant information for initial report.
	Notification to State Weed Control Co-ordinator NSW DPI.	Biosecurity Officer reports notification.
	Preliminary WRA.	Biosecurity Officers conduct preliminary WRA in association with NSW DPI.
	Preliminary Weed Incursion Team (WIT) established.	Biosecurity Officer establishes preliminary WIT and convenes meeting to discuss situation, identification, response plan, administrative arrangements, communication, media releases and establishment of WIT.

2.2 ALERT AND SCOPING PHASE

The Alert and Scoping Phase is to delimit (map and survey) the extent of the incursion and provide further information for decisions about the type or level of response required. Actions within this phase cover the assessment of the weed species, its impacts and determining the appropriate nature and magnitude of the operational response.

The Alert Phase begins when the NTRWC declares that on initial analysis of the new weed incursion, an emergency exists or has the potential to exist. During the alert phase NTRWC will ensure all stakeholders are alerted and key response staff will be placed on standby.

The Alert Phase exists while accurate confirmation of the diagnosis is made. The aim of the Alert Phase is to complete a detailed scoping of the incident to define the extent of the emergency.

This in-turn will provide the basis for decisions about the type of response required.
Key issues to be addressed in the Alert Phase include whether the incursion can be effectively contained and eradicated, and the potential for the incursion to spread rapidly and lead to significant agricultural, social and economic impacts and / or environmental consequences.

In some emergency situations it may be necessary to move quickly to the operational phase and to conduct scoping activities as part of the operational phase.

The following Sections 2.2.1 – 2.2.7 detail the steps in the scoping of the Alert Phase.

2.2.1 Further work to confirm identification (if required)

If identification has not been confirmed, more detailed taxonomic work may be required or further specimens collected and provided to the Royal Botanic Gardens Herbarium in Sydney.

2.2.2 Initial containment and scoping

The Biosecurity Officer is to delegate officers in the affected area / region to conduct initial surveys, inspect properties and collect specimens to delimit the extent of the incursion (refer Appendix 5 - Delimiting Operational Plan template). This will determine the extent of the interim restricted and control areas. Hygiene protocols need to be activated and quarantine measures established.
Preparedness planning is an important procedure in handling potential new weed incursions. This should include assessment of risk scenarios, site access, staff capacity / training needs to respond to a new weed incursion and the availability of equipment to mitigate the effects of the new weed incursion. (refer to Appendix 6 NTRWC Inventory of Resources / Equipment).

2.2.3 Develop the preliminary Weed Risk Assessment (WRA) into a final WRA

The NTRWC is to develop the final WRA based on the preliminary WRA work in the Investigation Phase, information from the initial containment and scoping exercise and other research in collaboration with the Weed Ecologist, NSW DPI. (Refer to Appendix 7 – Weed Risk Assessment template)

2.2.4 Develop a species specific Weed Management Plan (WMP)

The Biosecurity Officer, in collaboration with the WIT, is to develop a species specific Weed Management Plan (WMP). The plan should also include a range of decision triggers for declaring a successful eradication.

In developing the WMP's it is important to allow scope for modification, innovation and adaptation should an unexpected event/s occur

2.2.5 Confirmation of weed incursion notified

The Biosecurity Officer notifies the State Weed Control Coordinator, NSW DPI and prepares a report on the weed incursion. This should include the initial containment and scoping exercise, the WMP Management Plan and the Final WRA.

2.2.6 NSW DPI review

NSW DPI reviews the WMP and Final WRA providing technical advice on appropriate actions, and where necessary oversees its implementation.

2.2.7 Treatment options investigated

The WIT, in conjunction with NSW DPI, investigates the options for treatment of the new weed incursion and assesses the need for chemical permits and or trials.

2.2.8 Weed incursion communication

The WIT, in conjunction with NSW DPI, co-ordinates the development of a local / regional / state / national communication / media release as outlined in the NTRWC Communication Strategy, as overviewed in Section 5.

Table 3: Checklist of Procedures and Actions to be taken in the ALERT / SCOPING Phase

N.B Some actions may occur simultaneously

Agency	Procedures / Actions	Responsibility
NTRWC	**Further work to confirm identification (if required)**	Biosecurity Officer co-ordinates further specimens to Royal Botanic Gardens Herbarium
	Initial containment and scoping	Biosecurity Officer delegates officers in the affected areas to conduct initial surveys, inspect properties, and take specimens to delimit the extent of the incursion.
	Develop the preliminary Weed Risk Assessment (WRA) into a final WRA	Biosecurity Officer, in collaboration with the Weed Ecologist NSW DPI , prepares the Final WRA.
	Develop a Weed Management Plan (WMP)	Biosecurity Officer in collaboration with Weed Incursion Team (WIT) prepares species specific WMP.
	Confirmation of weed incursion notified	Biosecurity Officer notifies NSW DPI and prepares report including WMP and Final WRA
NSW DPI	**NSW DPI review**	NSW DPI provides technical advice on WMP and Final WRA and where necessary , oversees implementation of a program to investigate the feasibility of eradication.
NTRWC	**Treatment options investigated**	The WIT, in conjunction with NSW DPI, investigates the options for treatment of the new weed incursion and assesses the need for chemical permits and or trials.
	Weed incursion communication	The WIT, in conjunction with NSW DPI, co-ordinates the development of a local / regional / state / national communication / media release as outlined in the NTRWC Communication Strategy

2.3 OPERATIONAL PHASE

The Operational Phase begins when NSW DPI agrees to implement the WMP with the aim to eradicate the new weed incursion. The Operational Phase should be carried out in conjunction with communication actions as discussed in Section 5.

Sections 2.3.1 – 2.3.11 detail the steps of the OPERATIONAL – CONTAINMENT Phase.
Sections 2.3.12 - 2.3.16 detail the steps of the OPERATIONAL – ERADICATION Phase.

2.3.1 Communicate the WMP to property owner/s

The Local Control Authority is to advise the affected property owner/s of the decision by NSW DPI to implement the WMP. This should include any plans to quarantine the owner/s property/s and any potential impacts to the property owner.

2.3.2 Communicate WMP to government and affected industry

Biosecurity Officer and the NSW DPI RISO to brief the affected state and local governments, industry and other stakeholders of the decision to implement the WMP. This should include any plans to quarantine areas and any potential impacts to stakeholders.

2.3.3 Implement containment

The Biosecurity Officer establishes the Weed Incursion Team (WIT) (based on the preliminary WIT) responsible for the strategic control of the weed incursion. This includes policy and research development, liaison with media and affected stakeholders, financial and personnel administration and operational control procedures. The control procedures agreed by NSW DPI are implemented at this stage to contain the outbreak while the feasibility of eradication is investigated.

Containment measures might include:

- establish quarantine areas and buffer zones around affected properties and implement quarantine controls such as vehicle wash downs and inspection of equipment
- restrictions on the movement of vehicles, equipment, plant material, stock and products onto and off the affected site and permit systems
- official surveillance and trace back programs, including mapping of affected sites, recording of survey data and further delimitation work where required
- application of chemical treatments and / or integrated weed management
- research established into optimal control methods, species life cycle, seedbank longevity, and dispersal
- public awareness campaign
- weed incursion response training (including Workplace Health and Safety) for the WIT and other contractors, where applicable.

2.3.4 Co-ordinate containment program

NSW DPI to liaise with the Biosecurity Officer to ensure effective and timely implementation of response actions.

2.3.5 Seek expert advice (if applicable)

NSW DPI may seek further technical advice from experts within Australia or overseas.

2.3.6 Technical feasibility, business plan and cost benefit analysis

NSW DPI to liaise with the affected local government to prepare a scoping package to determine technical feasibility, a business plan and cost-benefit analysis of proposed options to inform decisions on response actions for submission to the State Weeds Committee (SWC) for emergency funds.

2.3.7 Report to the NSW DPI

Biosecurity Officer to provide regular progress reports and other information on the incursion needed to assess the feasibility of eradication.

2.3.8 Decision on eradication vs. containment

NSW DPI, affected LCA/s, in association NTRWC and its WIT convene to consider the feasibility of eradication, considering the weed incursion distribution, available control methods, triple bottom line (economic, environmental and social) impact, efficacy of containment measures and cost-benefit analysis. If eradication is considered feasible, then NSW DPI explore funding issues.

Note: a species is often designated an eradication target before it has been properly delimited, which may take up to several years. If this is the case the weed incursion should be declared as a 'provisional eradication target' until it is delimited, at which time a realistic cost-benefit analysis can be done and the feasibility properly assessed.

2.3.9 Develop cost-sharing proposal

NSW DPI to develop a proposal for cost-sharing to fund response actions required.

2.3.10 Report to State Government on eradication

NSW DPI to brief the Minister for Primary Industries and the State Weed Committee (SWC) on the technical feasibility of containment / eradication. If containment / eradication is considered feasible based on current knowledge of incursion extent (which may be incomplete), NSW DPI will recommend an appropriate Strategy and propose state/local cost-sharing arrangements.

2.3.11 Develop a weed incursion exit strategy

Biosecurity Officer and the WIT team in collaboration with NSW DPI RISO will develop a weed incursion exit strategy to be used during the Stand Down Phase. This exit strategy will be used either when the weed incursion is confirmed eradicated or, when it is considered not cost-beneficial to continue with the weed incursion response. The exit strategy should include:

- definitions of the trigger points for termination of the restricted and containment zones;
- the surveillance zone;
- restrictions to industry/agencies;
- time frames for long-term monitoring;
- revegetation strategy/s for affected area;
- time frame for restoration of property/area free of weed incursion, and
- communication to all stakeholders of any status change.

Table 4: Checklist of Procedures and Actions to be taken in the OPERATIONAL – CONTAINMENT Phase
N.B some actions may occur simultaneously

Agency	Procedures / Actions	Responsibility
NTRWC	**Communicate Weed Management Plan (WMP) to property owners.**	Biosecurity Officer to advise affected property owners of implementation of WMP.
	Communicate WMP to government and affected industry.	Biosecurity Officer and RISO to brief state and local governments, industry and other stakeholders of implementation of WMP.
	Implement containment.	Biosecurity Officer convenes Weed Incursion Team (WIT) responsible for strategic control of incursion, policy development, financial administration, media and stakeholder liaison.
NSW DPI	**Co-ordinate containment program.**	NSW DPI liaises with Biosecurity Officer to ensure timely implementation of response actions.
	Seek Expert advise (if applicable).	NSW DPI seeks advise if applicable.
	Technical feasibility, business plan and cost benefit analysis.	NSW DPI prepares business plan and cost benefit analysis of options on response actions, in liaison with LCA/s.
NTRWC	**Report to NSW DPI.**	Biosecurity Officer to provide regular reports on progress.
NSW DPI	**Decision on eradication vs containment.**	NSW DPI in association with LCA/s, NTRWC, and WIT considers feasibility of eradication/containment and explores funding options.
	Develop cost-sharing proposal.	NSW DPI develops cost-sharing proposal to fund response actions.
	Report to state government on eradication.	NSW DPI briefs Minister and SWC on feasibility of containment / eradication and cost sharing arrangements.
NTRWC	**Develop weed incursion exit strategy.**	Biosecurity Officer and WIT in association with NSW DPI RISO develops exit strategy for stand down phase.

2.3.12 Approve eradication campaign and cost-sharing arrangements

NSW DPI to approve eradication campaign and funding for eradication programs.

2.3.13 Implement and manage eradication

The eradication phase includes procedures where quarantine/operational activities are established.

These may include:

- the maintenance of quarantine zones;
- further surveillance and monitoring surveys;
- trial and application of chemical/physical controls;
- debrief sessions daily (if feasible); and
- communication programs.

2.3.14 Report to NSW DPI

Biosecurity Officer to provide regular progress reports and other information on the incursion needed to assess the progress of eradication.

2.3.15 Evaluate progress

NSW DPI to review progress on a regular basis and prepare briefing papers for Minister for Primary Industries and SWC. Renewal of funding for eradication after the first year is subject to approval by NSW DPI.

2.3.16 Endorse successful eradication or recommend termination and brief Minister and SWC

NSW DPI to brief the Minister for Primary Industries and SWC on whether to endorse continuation of the eradication works or recommend to terminate the eradication program.

Table 5: Checklist of Procedures and Actions to be taken in the OPERATIONAL – ERADICATION Phase
N.B some actions may occur simultaneously

Agency	Procedures / Actions	Responsibility
NSW DPI	**Approve eradication campaign and cost sharing arrangements.**	NSW DPI approves eradication campaign and funding.
NTRWC	**Implement and manage eradication.**	Weed Incursion Team (WIT) implements eradication program.
	Report to NSW DPI.	Biosecurity Officer provides regular progress reports.
NSW DPI	**Evaluation progress.**	NSW DPI reviews progress & briefs Minister.
	Endorse continuation of successful eradication or recommend termination and brief Minister for Primary Industries & SWC.	NSW DPI to brief Minister & SWC on continuation or termination of eradication.

2.4 STAND DOWN PHASE

The stand down phase begins when either the eradication of the new weed incursion is confirmed or, is considered not cost beneficial to continue with the weed incursion response.

Steps in the Stand Down phase

2.4.1 Review and implement the exit strategy

Biosecurity Officer and Weed Incursion Team to review and implement the exit strategy.

2.4.2 Acquittal of funds and program documentation

The NTRWC and NSW DPI will be required to provide financial audit reports where cost sharing arrangements have been instigated. Final reports should be prepared and circulated to all relevant parties involved in the response.

2.4.3 Review intra- and inter-regional quarantine arrangements (if applicable)

NSW DPI to review the intra-and inter-regional quarantine arrangements to define the weed incursion free zones. This will apply if the eradication is unsuccessful or the RRP is terminated prior to completion.

2.4.4 Notify other partners

If eradication is successful NTRWC to advise the North West Regional Weed Committee, North Coast Regional Weed Committee, the Hunter Regional Weed Committee, Upper Hunter Weeds Authority as well as the Land and Property Management Authority, Local Land Services and the NPWS Regional Pest Management Officer.

2.4.5 Incident debrief and review of the response (Biosecurity Officer/WIT)

Biosecurity Officer to organise a debriefing workshop with the WIT and other operational staff. The debrief should occur within a reasonable time frame after the exit strategy has been implemented to evaluate the response and review the RRP. Each phase of the operation should be examined and evaluated for suggested improvements to the RRP incursion procedures. Biosecurity Officer to prepare a report documenting the suggested improvements and submit to NSW DPI and NTRWC.

2.4.6 Incident debrief and review of the evaluation report from NTRWC

NSW DPI to convene and chair a debriefing meeting with key local, regional and state agency and other stakeholders involved in the weed incursion response. The submitted evaluation report from the Biosecurity Officer is to be discussed and endorsed if acceptable.
NSW DPI to evaluate the NTRWC RPP, this should include the validity of the WRA, the transparency of the decision-making processes and the effectiveness of the communication strategy and reporting procedures.

2.4.7 Revise the NTRWC RRP

NTRWC to revise the NTRWC RRP following the outcomes of the incident debriefing meeting.

Table 6: Checklist of Procedures and Actions to be taken in the STAND DOWN Phase

N.B some actions may occur simultaneously

Agency	Procedures / Actions	Responsibility
NTRWC	**Implement the exit strategy.**	Biosecurity Officer and the WIT implement strategy.
	Acquittal of funds and program documentation.	NTRWC and NSW DPI provide financial audited reports.
NSW DPI	**Review intra- and inter- regional quarantine arrangements (if applicable).**	NSW DPI reviews arrangements and defines weed incursion free zones (if applicable).
NTRWC	**Notify other partners.**	NTRWC to notify other partner / stakeholder organisations.
	Incident debrief and review of response.	Biosecurity Officer to organise de-brief workshop with WIT and other operational staff and prepare report for NTRWC.
NSW DPI	**Incident de-brief and review of evaluation report from NTRWC.**	NSW DPI convenes de-brief and review meeting with key stakeholders involved in rapid response.
NTRWC	**Revise NTRWC Rapid Response Plan (RRP).**	NTRWC revises RRP following incident de-brief meeting.

3. RECOVERY FROM RESPONSE/S TO WEED INCSURSION/S

3.1 Review

The NTRWC RRP should be continually reviewed and evaluated to monitor the currency and application of the document. In the event of a response to a weed incursion NTRWC are required to activate the current version of the RRP. The RRP has a currency of five years, in line with the NT Regional Strategic Weed Management Plan. It is intended that the RRP will be reviewed biennially. Review should occur before the two-year period time frame if a response to a weed incursion incident has occurred.

3.2 Recovery

The recovery process involves returning the affected area to its normal level of functioning after an incursion event. This may include revegetation and habitat rehabilitation programs to reduce the potential for re-infestation from another weed species and the provision of on-going surveillance programs to ensure the area continues to be free of the weed incursion.

On-going surveillance programs will be required to ensure the area continues to be free of the weed incursion. Consideration needs to be given to appropriate time-frames required for a monitoring program to guide the recovery phase.

Recovery may also include financial assistance to landholders or others in the community who were directly affected by the incursion event. This may require negotiations with NSW DPI as part of a state cost-sharing arrangement.

Table 7. Checklist of critical decisions during the recovery phase

Recovery Phase decisions	Yes / No
Has the NTRWC RRP been reviewed and evaluated for currency and application?	
Has funding been allocated for rehabilitation for weed incursion site/s ?	
Has an on-going surveillance program/s been set-up to monitor for re-emergence of the weed species?	
Has the communication plan been reviewed and evaluated to include the recovery phase?	
Have landholders and the general public been urged to report further sightings?	
Is there further planning and financial assistance required to bring the affected area back to its normal level of functioning?	

4. COMMUNICATION

4.1 Communication Planning

Communication planning is a fundamental component to the NTRWC RRP. It will maintain organisational and community support, participation, alertness and awareness to ensure an effective flow of information during responses to new weed incursions.

The aims of the communication strategy for the RRP are to:

- create maximum possible awareness of the weed incursion, the problem, its potential and identification of the species;
- create a communications network that encourages community to report sightings/infestations of the weed incursion;
- create and facilitate an effective working environment between state, regional, local agencies and the community;
- provide effective key messages that are consistent with the outcomes of the RRP;
- provide quantifiable data into the future reporting requirements for the project;
- ensure all weed contingency and incursion action plans contain a communication component, and
- respect confidentiality and privacy requirements to protect affected landholders/managers and not compromise investigations.

In each phase of the NTRWC RRP there will be a diverse range of stakeholders involved. Each of these will need to be engaged through a variety of methods and with a variety of messages.

The NTRWC Communication Strategy 2018 – 2022 provides more detailed information and should be read in conjunction with this document.

4.2 Media

All information pertaining to media will be listed in the NTRWC Communications Strategy 2018 - 2022. This will include information to be provided, frequency, nature of communication and responsibility for releasing media statements and briefs during the response.

Budgetary allocations for media components during the weed incursion should be considered within the overall budget for the response operations.

5. INFORMATION SYSTEMS

In response to a new weed incursion the information and data management system needs to be comprehensive, flexible and user friendly to allow for those individuals who may not use such systems during their normal duties. The system should be capable of disseminating data collected as part of response activities to the widest range of users and all data collected should be archived appropriately to ensure availability of data for future weed incursion project management purposes.

5.1 Data Management

Data management systems should provide for collection of the following information:

- landholders, owners and locations of target properties;
- area status – containment zone and restricted area;
- revisit frequencies;
- statistics for surveillance and tracing activities;
- staff movement and premises visit details;
- movement permits applications;
- reports or information provided by the public or industry;
- expenditure records;
- statistics for control techniques and kill response;
- routine management and surveillance; and
- exchange of information across Regional Weeds Committee areas and with NSW DPI.

The system should also allow for:

- tracking of specimens and taxonomic verification and notification information;
- ecological and biological information on weed incursion;
- generation of progress reports on destruction, containment and / or eradication;
- generation of forms for scheduled property visits;
- inclusion in NSW DPI Biosecurity Information System (BIS)
- review of monitoring, evaluation and improvement processes.

Appendix 3 'NSW Weeds Metadata Standard' provides guidelines for accurate and consistent recording of field data.

5.2 GIS mapping component

During the response phase to new weed incursions geographic information systems (GIS) are to be used to map new weed incursions.

The mapping can also be integrated with other spatially registered databases for analysis of the weed incursion (e.g. soil landscapes, vegetation classes, land use). Weed incursion risk pathways can be geographically defined, analysed and managed in relation to other spatially referenced data.

These databases and GIS technology are a vital component in helping to investigate and/or control suspected or actual weed incursions.

APPENDIX 1. CHAIN OF EVIDENCE

(based on National Weed Incursion Plan 2008 – Appendix 6)

In the event that a person takes legal action against the Lead Agency (LCA) a demonstrable chain of custody and record of evidence from the time of specimen collection until trial is essential for evidence to stand up in court.

The specimens taken from the infected properties are likely to be one of the most important forms of evidence for the Lead Agencies and the courts. Protocols are therefore required to maintain confidence in the integrity of the specimens and their value as evidence. The Lead Agencies must be able to ensure:

1. The collection of the specimens is authorised by law;
2. The specimens collected come from the infected properties;
3. The persons collecting the specimens have appropriate training, experience and authority; and
4. The specimens are properly identified, recorded, stored and handled between the time of collection and trial.

In order to maintain continuity of evidence, collection and survey teams and herbarium staff should follow these protocols when collecting and handling response weed incursion samples.

Chain of Evidence protocols do not have to be followed for samples from general surveys.
Chain of evidence protocols will be reviewed as part of the annual review of the NTRWC Weed Incursion Plan to ensure the protocols are relevant and reflect best practice.

Collection of the specimens is authorised by law

If a specimen is to be used as evidence, the Lead Agencies must ensure that the persons collecting the sample are authorised to do so by law. If the collection of the specimen is not authorised, a court may refuse to accept the specimen as evidence or, if accepted, accord it little or no weight.

The specimens collected come from the infected properties

The person or persons collecting the specimen must be able to establish that the specimens were collected from the infected properties .

To help establish that the specimens were collected from the infected properties and how the specimens were collected, the person or persons collecting the specimens should make a written record of collection at the time the specimen is collected and take a GPS point. It would then be appropriate for those persons to mark the point or points of collection on a map of the infected properties and to photograph the scene.

The persons collecting the specimen have appropriate training and experience

The training and experience of the persons collecting specimens is vital. The chain of evidence is only as good as the people who operate it and there are risks throughout the collection process of things going wrong: people making an error in identification or compromising the integrity of the specimen, or misinterpreting results.

Lead Agencies must ensure that everyone involved in the collection and processing of plant material is trained and competent to collect, store and handle specimens.

The specimens are properly identified, recorded, stored and handled between the time of collection and trial.

Chain of evidence protocols should be followed for all specimens taken from infected properties. Appropriate handling and documentation procedures are required when collecting and handling specimens to preserve the integrity of the evidence. All specimens must be uniquely numbered by the collector.

The written record should be sufficiently detailed to:

- Permit the Lead Agency to call witnesses who could explain how the specimens were collected, identified, stored and handled between the time of collection and trial; and
- Permit another expert to be able to identify what has been done to a particular specimen and to independently assess the Lead Agency's findings.

The collection team will complete a botanical specimen label form at the time of collection. This will form part of the Evidence Register. Botanical specimen label forms may be supplied by the state herbaria to which the specimens are being sent but must include at least the following information:

- Collector and collector unique number;
- date;
- location (address if applicable);
- location (GPS and distance from nearest town);
- taxon name;
- description of the plant (shrub, herb, vine, tree, bark etc);
- description of the situation (garden, cultivated field, roadside, forest etc.);
- abundance (number of plants, age classes, clump size, density etc);
- collectors signature and date;
- witness signature and date.

Marking the exhibit

The collection team (or person collecting specimens) will allocate each specimen with the collector's name and collector's unique number. The specimen should be marked by securely attaching a tag to the specimen. The collector should write their name and collection number for the specimen on one side of the tag and initial and date the other side of the tag. The specimen should be placed in a plant press for the appropriate drying procedure. The hand written botanical specimen label form must be included with the specimen for continuity of evidence and remain with the specimen at all times. When the specimen is incorporated into a herbarium collection the hand written label form is to be kept with the specimen at all times.

Evidence Register

Once the state herbaria takes possession of the specimen, the following procedures must occur immediately:

1. The specimen is identified by a qualified botanist (usually the curator of that family) and a legal statement of identification is provided, including the name of the collector and the collectors unique number, and other information relevant to the chain of evidence e.g. date of receipt, from whom, and where and how the specimen is to be housed. It is recommended that the identification botanist initial and date the specimen tag as well.
2. The specimen may be referred to as a voucher specimen and may be assigned a database number on incorporation for later internal tracking purposes (but see 5.). It is recommended that this number is also included on the statement if available.
3. Information that could be used to identify person or properties associated with impending legal action must not be databased or given out to the public or hosted on the world wide web or in any other way compromise the person's privacy.
4. The specimen is processed immediately and retained in a Quality Assurance Program (QAP) or other suitably secured area for a period of at least ten years. The original hand written label must be retained with the specimen, along with a copy of the statement of identification.
5. The specimen must not be discarded, loaned or gifted for at least ten years.

APPENDIX 2. FIELD INSPECTION TO FOLLOW-UP NEW OR UNKNOWN WEED INCURSIONS

As supplied by NSW DPI

Biosecurity Officers are often advised of new or unknown weeds growing in their district. Once a report has been received a Biosecurity Officer should follow the steps listed below.

Prior to inspection

- Contact person who made report and landowner by telephone to obtain clear directions and seek permission to access site.
- Ensure you have equipment needed. Equipment may include:
  - camera
  - field press and newspaper for collection of specimens
  - large plastic bags
  - topographic/cadastral maps
  - GPS unit if available
  - reference source with illustrations of the plant and its biology if available, to assist in finding the plant and,
  - copies of information to give to landowners
  - flagging tape, pegs and steel droppers to mark infestation
  - bags and spade to collect live specimens for growing out if in vegetative stage
  - perhaps a Dustbuster® and paper bags for seed collection
  - equipment for cleaning vehicle and boots to remove weed seeds
- Allow adequate time for the field search as it may take some hours to find the plant.
- Similarly allow sufficient time to prepare a written report.

Defining the infested area
After the infested area is found, determine the extent by going to the extremities of the infested area, depending on the terrain, go in the four compass point directions. After you have reached the extremities depending on time, go to other similar areas 1-2 km away, in the next valley, next river or next paddock and look for the plant.

At the site

- Collect at least 3 specimens, 2 for herbarium and one to retain for own record.
- Prepare notes to allow for a report.
- Mark location of infestation. (GPS or map)
- List ecosystems and environments where the plant is growing.
- Describe other vegetation where it does and does not occur.
- Describe soils and terrain etc.
- Density and local impact where established.
- Possible source.
- Determine how long the infestation has been present (or when first noticed) if possible.
- Record growth stage.
- Record the area surveyed and affected.
- Take photographs of;

- the plant (especially identifying features such as flowers, fruit, seeds etc)
- the situation (habitat)
- establish photo-points

To establish a photo-point, ensure you use a standard zoom setting or focal lens (eg 50mm) and take photographs including fixed points such as posts or distinctive trees from a fixed point such as a post (or 2m west of the gate post).

- Collect live specimens for growing out if no flowering material available.
- Look for and collect seeds.
- Note down comments and concerns of landowners.

After return from site

- *Prepare specimens and forward to Royal Botanic Gardens. (see Collecting and preparing plant specimens for identification and Plant identification request form)*
- *Report verbally to the Invasive Species Information Officer (1800 680 244).*
- *Prepare your report as soon as possible, usually the same or next day.*
- *Process your photos, date and make notes on photos or slides. Store digital images where they can be accessed*

Once positive identification ascertained

- *Forward report to Invasive Species Information Officer.*
- *If a Scheduled Priority weed fill out notifiable weed form on the weeds extranet (Appendix Four)*
- *Develop weed management options*

APPENDIX 3. NSW WEEDS METADATA POLICY

Weed Recording Standards in NSW

Local control authorities (LCAs) play a key role in the collection of weed management information that can be used for planning at the regional, state and national scale. This requirement is recognised in the NSW Biosecurity Act and is a key deliverable of the NSW Weeds Action Program.

The NSW Weeds Metadata Standard is an agreed standard for the collection of weed data across NSW. Data submitted using this standard will be captured in BIS and be used to prepare a variety of reports. These reports will ensure each stakeholder has access to coordinated mapping information for weed management undertaken in the regions and across the state.

Specifically, weed management data captured will be used to determine:

- Future NSW Weeds Action Program funding and resource allocation;
- Weed compliance standards across NSW; and
- Statutory plans for specific weeds under the Biosecurity Act.

The data specified in the NSW Weed Metadata Standard aligns to biosecurity activities such as inspections, compliance, extension and control activities. This provides managers with the ability to have a broad view of where we've been, what we've seen and what "we" (government and landholders) are doing about weeds.

Accurate and consistent recording of field data is the first step in any good weed management program. Therefore, NSW DPI has endorsed a minimum set of core attributes for recording distribution and spread of Priority Weeds.

Refer to Appendix 1 in the NT Regional Inspection Program 2018-2022 for full document – NSW Weeds Metadata Standard

APPENDIX 4. AGENDA TEMPLATE FOR WEED INCURSION TEAM MEETING/S ON NEW WEED INCURSION

(based on National Weed Incursion Plan 2008 – Appendix 8)

Location / Teleconference: …… **Date**: …… **Time**:……..

DRAFT AGENDA

ITEM ……..……..

PRESENTER……

Attendees: ……..

Apologies:……..

Chair……..

1 OPENING
Papers distributed
Affected jurisdiction

2 REPORTS
2.1 Situation report
2.1.1 Overview
2.1.2 Location of infested sites — grid reference and map
2.1.3 Description of situation on sites
– description of weed
– density and distribution of weed
2.1.4 Duration of the infestation
2.1.5 Has the source of infestation been identified
2.1.6 Other susceptible areas in vicinity
2.1.7 Results of preliminary tracing/surveillance
2.1.8 Action taken to date
2.1.8a Existing media interest/public awareness
2.1.8b Stakeholder impacts
2.1.9 Resources used to date (personnel and/or equipment)
2.1.10 Feasibility of eradication, other response actions

2.2 Herbarium identification of suspect plant [Taxonomic specialist]

2.3 Technical update on weed [NSW DPI / CSIRO]

3 PROPOSED ACTION Affected jurisdiction

3.1 NTRWC Rapid Response Plan

- 3.1.1 Eradication, containment and/or risk mitigation techniques
- 3.1.2 Decontamination requirements
- 3.1.3 Clean-up methods

3.2 Quarantine and movement controls

- 3.2.1 Quarantine sites
- 3.2.2 Restricted Area movement and security — draft proclamation and map
- 3.2.3 Restricted movement provisions / draft proclamation (and map if other than entire State)

3.3 Tracings

3.4 Surveillance

4 DISCUSSIONS/CONCLUSIONS OF NSW DPI

5 MOVEMENT AND TRADE ISSUES

5.1 Intrastate - outside Restricted/Control Areas

5.2 Interstate

5.3 National

6 ADMINISTRATIVE ARRANGEMENTS

6.1 Additional staff/resources

6.2 Estimates of cost

6.3 Cost-sharing arrangements

7 NOTIFICATION TO INDUSTRY / STATE / NATIONAL SECTORS

7.1 Local

7.2 State

7.3 National

8 MEDIA RELEASE Affected jurisdiction

8.1 Local

8.2 State

8.3 National

9 RECOMMENDATIONS TO NSW DPI

9.1 Advice of the occurrence of the weed

9.2 Feasibility and mechanisms for response

9.3 Invoking the States cost-sharing agreement

10 OTHER BUSINESS

11 NEXT MEETING

12 CLOSE

APPENDIX 5. DELIMITATION OPERATIONAL PLAN TEMPLATE (SURVEY & MAPPING)

(based on National Weed Incursion Plan 2008 – Appendix 9)

DELIMITATION OPERATIONAL PLAN

NAME OF WEED:
Insert name of weed
AIM:
Insert aim of project here
BACKGROUND:
Insert background information here
SCOPE:
Insert the scope of the project here
ECOLOGY:
Insert info on reproduction, vectors and dispersal mechanisms, growth and spread rate, seedbank and budbank persistence, growth and flowering calendar, tolerances, biology and ecology

COMPONENTS:

- **Survey boundaries**
  Describe the survey boundaries here
- **Pathway analysis**
  Ecology of Weed Incursion
  Distribution
- **Sources**
- **Pathways**
- **Destinations**
- **Risk Assessment**
  Consultation Process

  Risk management

  Survey methodology and rigour

  Budget

PRIORITIES:
List the priority areas for the delimitation survey

AGENCY SUPPORT:
What types of partnerships/collaborations exist in the project

PERFORMANCE MANAGEMENT:
Data management
Data evaluation
Progress reporting

CRITICAL PRIORITIES
List the critical priorities required for project to move forward.
Examples of SURVEY TASKS

TASKS ACTIVITIES PERSON DAYS COMPLETION OFFICER

1. SURVEY OF INFESTED AND ADJOINING CATCHMENTS

- Prepare aerial map of existing and adjoining catchments
- Advise aerial operators of proposed surveillance
- Identify existing treatment zones and proposed delimitation surveillance zones
- Identify all waterways, roads, tracks and cleared land within existing catchments.
- Identify all waterways, roads and tracks in adjacent catchments
- Develop and confirm optimum detectability scenarios
- Implement surveillance based on risk and resources
- Identify projected costings for 95% confidence levels.
- Review, Document and Report Outcomes

2. TRACE FORWARD SURVEYS

Properties

- Determine Location, Ownership and Contact Details
- Liaise with property owners to determine Spread Potential of each property
- Determine survey methodology per property (Phone call, visit or direct survey)
- Conduct phone calls, surveys or visits
- Review, Document and Report Outcomes

Machinery within Catchment

- Identify relevant industries (earthmovers, slashers, trucking operators etc.)
- Confirm known movements with property owners and operators
- Develop a log of operators
- Confirm highest risk activities
- Conduct trace forward surveillance
- Review, Document and Report Outcomes

Sand/Gravel within Catchment

- Identify and contact all businesses operating within or sourcing from the catchments
- Develop a log of operators
- Document all pathways and assess risk
- Conduct trace forward surveillance (direct or by phone.)
- Review, Document and Report Outcomes

People/Vehicles within Catchment

- Contact all infested properties and document known, regular movements, especially via infestations
- Contact Tourist Operators?
- Follow up surveillance
- Review, Document and Report Outcomes

Slashing within Catchment

- Develop a log of Operators
- Determine routes and destinations
- Conduct follow up surveillance
- Review, Document and Report Outcomes

Stock Movements beyond Catchment

- Determine stock movements with landowners
- Check Saleyards
- Review, Document and Report Outcomes

Machinery beyond Catchment

- Identify relevant industries (earthmovers, slashers, trucking operators etc.)
- Confirm known movements with property owners and operators
- Develop a log of operators
- Confirm highest risk activities
- Conduct trace forward surveillance
- Review, Document and Report Outcomes

Sand/Gravel beyond Catchment

- Identify all businesses operating within or sourcing from the catchments
- Develop a log of operators
- Conduct trace forward surveillance (direct or by phone.)
- Review, Document and Report Outcomes

Stock Movements within Catchments

- Identify saleyards
- Identify relevant land holders
- Determine routes and destinations of stock
- Categorise risk and conduct appropriate follow up
- Review, Document and Report Outcomes

Bushwalker/Backpackers

- Contact catchment tourist operators and wildlife/outdoors groups
- Develop a log of clients (bird watchers, SGAP, Catchment Groups etc.)
- Disseminate pest information
- Conduct trace forward surveillance (direct or by arrangement with third parties)
- Review, Document and Report Outcomes

Slashing beyond Catchment

- Develop a log of Operators
- Determine routes and destinations
- Check yards and holding depots
- Conduct follow up surveillance
- Review, Document and Report Outcomes

Seed beyond Catchment

- Determine vectors of spread

Fauna within Catchment

- Determine ground migratory fauna and potential routes
- Liaise with property owners to determine likely tracks
- Survey tracks
- Review, Document and Report Outcomes

Timber within Catchment

- Determine sources/suppliers
- Liaise directly with suppliers
- Arrange trace forward inspections as necessary
- Review, Document and Report Outcomes

Hay/Mulch within catchment

- Determine sources/suppliers (liaise with landowners and
- contact produce suppliers)
- Conduct trace forward surveillance
- Review, Document and Report Outcomes

Seed within Catchment

- Determine sources/suppliers (liaise with landowners and contact produce suppliers)
- Conduct trace forward surveillance
- Review, Document and Report Outcomes

Hay/Mulch beyond Catchment

- Determine sources/suppliers (liaise with landowners and
- contact produce suppliers)
- Conduct trace forward surveillance
- Review, Document and Report Outcomes

Wind within Catchment

- Liaise with BOM to Determine High Risk Areas
- Conduct Aerial Surveys based on risk
- Review, Document and Report Outcomes

Fauna beyond Catchment

- Determine ground migratory fauna and potential routes
- Liaise with property owners to determine high traffic tracks
- Survey tracks
- Review, Document and Report Outcomes

Timber beyond Catchment

- Determine sources/suppliers
- Liaise directly with suppliers
- Arrange trace forward inspections as necessary
- Review, Document and Report Outcomes

Bushwalkers/Backpackers within Catchment

- Contact tourist operators and wildlife/outdoors groups
- Develop and maintain a log of clients (bird watchers, Landcare etc)
- Disseminate pest information
- Conduct trace forward surveillance (direct or by arrangement with third parties)
- Review, Document and Report Outcomes

APPENDIX 6. NTRWC INVENTORY OF RESOURCES / EQUIPMENT

LCA / Agency	*Fill in*			
Resource / Equipment *(insert rows as required)*				
Staff	**Name**	**Qualifications**	**Competencies**	**Contact Details**
Vehicles (insert rows as required)	**Descriptions** (Make / model)	**Fuel** (diesel / petrol)	**Type** (4WD, dual / single cab / tray back)	
Spray Equipment	**Description** (Make / model)	**Power** (petrol / electric)	**Reel type** (single or dual)	**Hose length**

Chemical Stores	**Location** (inc. site address)	**Contact person** and phone number	**Wash Down Bays** (inc. site address)	**Contact person** and phone number
Chemical Suppliers	**Location** (inc. site address)	**Contact person**	**Contact details**	
Office Accommodation	**Location** (inc. site address)	Contact person and phone number	**Equipment available** (computers, GIS mapping and GPS units)	
Water Carriers	**Location**	**Contact person** and phone number	**Description** (Make / model / capacity)	**Power** (petrol / electric)
Contractors	**Name**	**Contact Details**	**Qualifications**	**Equipment**
Volunteer Organisations	**Name Person**	**Contact Details**	**Qualifications**	**Equipment**

Appendix 7. Weed Risk Assessment

The NSW WRM system, developed NSW DPI aims to provide a standard, nationally accepted and transparent process to help make decisions about the introduction, declaration and prioritisation of weed species.[7]

It has been designed as a decision support tool for: -

- deciding which plants should be approved for release in NSW;
- identifying which plants require further research prior to release in NSW;
- prioritising weeds for the allocation of limited management resources;
- determining the appropriate legislative status for undeclared naturalised plants; and
- reviewing the legislative status of currently declared weeds.

The Questionnaire completed for each weed is available as an excel spreadsheet at http://www.dpi.nsw.gov.au/biosecurity/weeds/strategy

APPENDIX 8. RAPID RESPONSE CHECKLISTS SUMMARY

Table 1: Checklist of procedures and action to be taken in the INVESTIGATION PHASE

N.B Some actions may occur simultaneously

Agency	Procedures / Actions	Responsibility	Status		
			Pending	Commenced	Completed
NTRWC	**Detection of a suspect weed incursion**	Landholder, community group member, consultant, state/territory or local agency person or other individual submits suspect weed incursion			
	Initial verification and formal notification	State/territory herbarium provides verification and notification to the Northern Inland Weeds Advisory Committee			
	Landholder /s informed	Biosecurity Officer advises landholder/s of incursion verification, response process and obligations.			
	Adjoining weed control authorities, other land management agencies / stakeholders informed	Biosecurity Officer notifies authorities, agencies and stakeholders			
	NTRWC co-ordinates relevant information	Biosecurity Officer collects relevant information for initial report			
	Notification to State Weed Control Co-ordinator NSW DPI	Biosecurity Officer reports notification			
	Preliminary WRA	Biosecurity Officer and RWT carries out a preliminary WRA in association with NSW DPI			
	Preliminary Weed Incursion Team (WIT) established	Biosecurity Officer establishes preliminary WIT and convenes meeting to discuss situation, identification, response plan, administrative arrangements, communication, media releases and establishment of WIT .			

Table 2: Checklist of Procedures and Actions to be taken in the ALERT / SCOPING Phase

N.B Some actions may occur simultaneously

Agency	Procedures / Actions	Responsibility	Status		
			Pending	Commenced	Completed
NTRWC	**Further work to confirm identification (if required)**	Biosecurity Officer co-ordinates further specimens to Royal Botanic Gardens Herbarium			
	Initial containment and scoping	Biosecurity Officer delegates officers in the affected areas to conduct initial surveys, inspect properties, and take specimens to delimit the extent of the incursion.			
	Develop the preliminary Weed Risk Assessment (WRA) into a final WRA	Biosecurity Officer, in collaboration with the Weed Ecologist NSW DPI , prepares the Final WRA.			
	Develop a Weed Management Plan (WMP)	Biosecurity Officer in collaboration with Weed Incursion Team (WIT) prepares species specific WMP.			
	Confirmation of weed incursion notified	Biosecurity Officer notifies NSW DPI and prepares report including WMP and Final WRA			
NSW DPI	**NSW DPI review**	NSW DPI provides technical advice on WMP and Final WRA and where necessary , oversees implementation of a program to investigate the feasibility of eradication.			
NTRWC	**Treatment options investigated**	The WIT, in conjunction with NSW DPI, investigates the options for treatment of the new weed incursion and assesses the need for chemical permits and or trials.			
	Weed incursion communication	The WIT, in conjunction with NSW DPI, co-ordinates the development of a local / regional / state / national communication / media release as outlined in the NTRWC Communication Strategy			

Table 3: Checklist of Procedures and Actions to be taken in the OPERATIONAL – CONTAINMENT Phase

N.B some actions may occur simultaneously

Agency	Procedures / Actions	Responsibility	Status		
			Pending	Commenced	Commenced
NTRWC	**Communicate Weed Management Plan (WMP) to property owners**	Biosecurity Officer to advise affected property owners of implementation of WMP			
	Communicate WMP to government and affected industry	Biosecurity Officer and RISO to brief state and local governments, industry and other stakeholders of implementation of WMP			
	Implement containment	Biosecurity Officer convenes Weed Incursion Team (WIT) responsible for strategic control of incursion, policy development, financial administration, media and stakeholder liaison.			
NSW DPI	**Co-ordinate containment program**	NSW DPI liaises with Biosecurity Officer to ensure timely implementation of response actions.			
	Seek Expert advise (if applicable)	NSW DPI seeks advise if applicable			
	Technical feasibility, business plan and cost benefit analysis	NSW DPI prepares business plan and cost benefit analysis of options on response actions, in liaison with LCA/s			
NTRWC	**Report to NSW DPI**	Biosecurity Officer to provide regular reports on progress			
NSW DPI	**Decision on eradication vs containment**	NSW DPI in association with LCA/s, NTRWC, and WIT considers feasibility of eradication/containment and explores funding options.			
	Develop cost-sharing proposal	NSW DPI develops cost-sharing proposal to fund response actions.			
	Report to state government on eradication	NSW DPI briefs Minister and SWC on feasibility of containment / eradication and cost sharing arrangements.			
NTRWC	**Develop weed incursion exit strategy**	Biosecurity Officer and WIT in association with NSW DPI RISO develops exit strategy for stand down phase.			

Table 4: Checklist of Procedures and Actions to be taken in the OPERATIONAL – ERADICATION Phase

N.B some actions may occur simultaneously

Agency	Procedures / Actions	Responsibility	Status		
			Pending	Commenced	Completed
NSW DPI	**Approve eradication campaign and cost sharing arrangements**	NSW DPI approves eradication campaign and funding			
NTRWC	**Implement and manage eradication**	Weed Incursion Team (WIT) implements eradication program			
	Report to NSW DPI	Biosecurity Officer provides regular progress reports			
NSW DPI	**Evaluation progress**	NSW DPI reviews progress & briefs Minister			
	Endorse continuation of successful eradication or recommend termination and brief Minister for Primary Industries & SWC	NSW DPI to brief Minister & SWC on continuation or termination of eradication.			

Table 5: Checklist of Procedures and Actions to be taken in the STAND DOWN Phase

N.B some actions may occur simultaneously

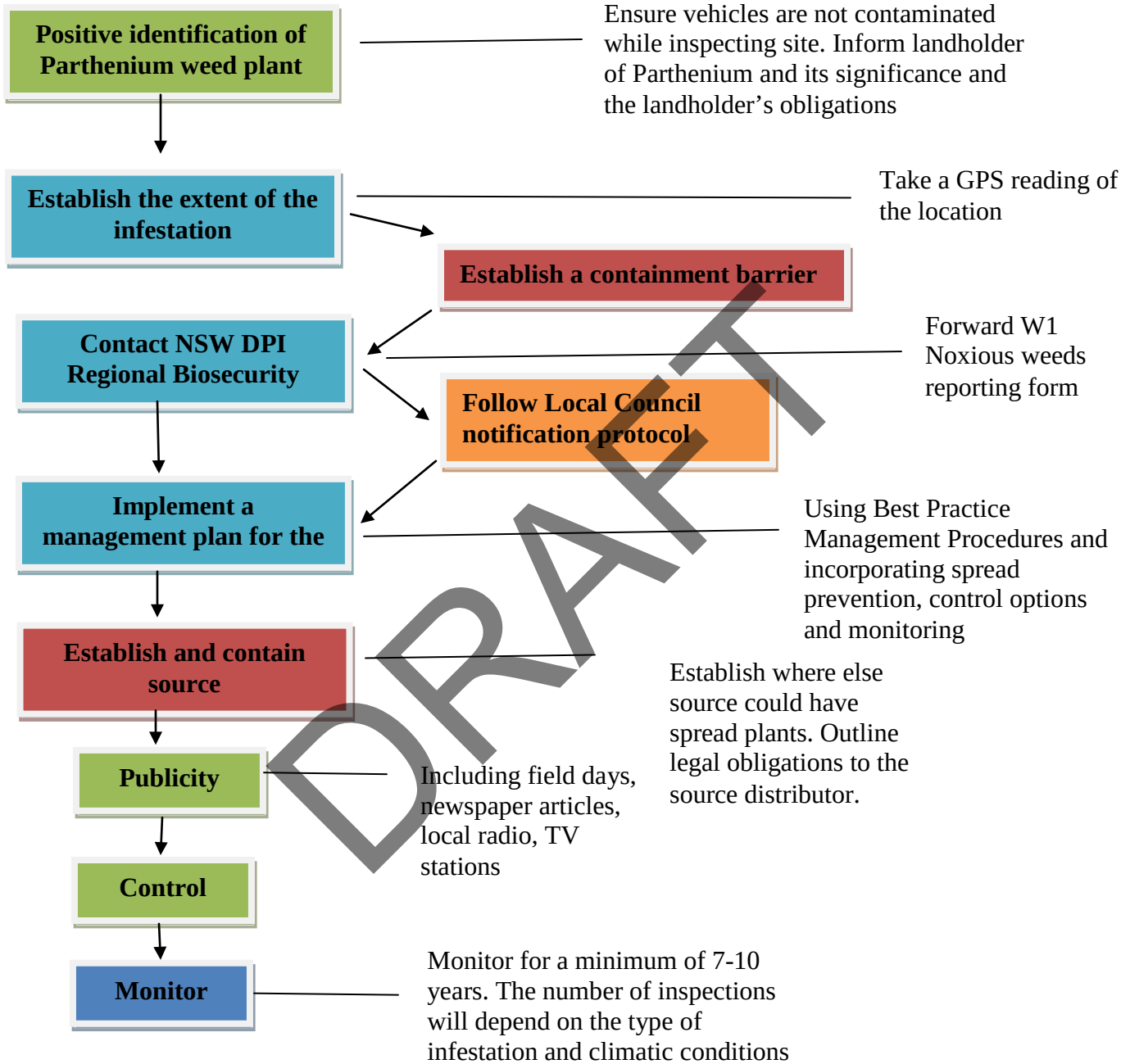
Agency	Procedures / Actions	Responsibility	Status		
NTRWC	**Implement the exit strategy**	Biosecurity Officer and the WIT implement strategy	**Pending**	**Commenced**	**Completed**
	Acquittal of funds and program documentation	NTRWC and NSW DPI provide dited reports.			
NSW DPI	**Review intra- and inter-regional quarantine arrangements (if applicable)**	NSW DPI reviews arrangements and defines weed incursion free zones (if applicable).			
NTRWC	**Notify other partners**	NTRWC to notify other partner er organisations			
	Incident debrief and review of response	Biosecurity Officer to organise rkshop with WIT and other staff and prepare report for			
NSW DPI	**Incident de-brief and review of evaluation report from NTRWC**	NSW DPI convenes de-brief and ting with key stakeholders rapid response.			
NTRWC	**Revise NTRWC Rapid Plan (RRP)**	NTRWC revises RRP following -brief meeting.			

Table 6. Checklist of critical decisions during the recovery phase

Recovery Phase decisions	**Yes / No**
Has the NTRWC RRP been reviewed and evaluated for currency and application?	
Has funding been allocated for rehabilitation for weed incursion site/s ?	
Has an on-going surveillance program/s been set-up to monitor for re-emergence of the weed species?	
Has the communication plan been reviewed and evaluated to include the recovery phase?	
Have landholders and the general public been urged to report further sightings?	
Is there further planning and financial assistance required to bring the affected area back to its normal level of functioning?	

APPENDIX 9 RAPID RESPONSE – CONTROL OF PARTHENIUM INFESTATIONS[3]

Procedure for a Parthenium Weed Outbreak



[3] Parthenium Weed Training Kit (NSW DPI)

APPENDIX 10 CASE STUDY – RESPONSE TO PARTHENIUM INFESTATIONS[4]

(Reproduced from Parthenium Weed Training Kit – NSW DPI)

Below are 3 examples of how NSW authorities have dealt with Parthenium incursions within the NTRWC region.

Case Study 1 – Narrabri Shire Council, May 2003

On May 6th, 2003 our office received a phone call from a landholder to report an infestation of Parthenium weed on his property located in the Boggabri area. The pasture-improved grazing property covers an area of 2442 hectares. The initial infestation was over half a hectare (roughly in the middle of the land; not visible from the road) and there were too many plants to count.

The landholder noticed the unusual plants growing around his shed area once they were in flower. He knew about Parthenium because he had visited a local display at AgQuip the previous year. Initially he sought advice with his local agronomist to confirm the identification. Then, he contacted the DPI's Noxious Weed Department and they organised a visit to his property the next morning.

A bit of history…

The landholder purchased his property in 1990. At the time, some cottonseed and sunflower hulls were stored in the shed. During the 2002 drought , the landholder decided to clean the shed out to utilise it to store some new feed for his cattle. He had no use for the old cattle feed that had been sitting there for at least 15 years so he decided to spread it around the yard not thinking that it could be contaminated.
The Parthenium weed germinated 12 months later after good rain.

What we did

The infestation was over half a hectare and there were too many plants to initially count. The infestation was mapped with our GPS system for monitoring references.

After assessing the situation, we applied a mixture of Dicamba and Atrazine on the core area and hand pulled all isolated plants outside the main infestation. Two weeks later, after review, we were unhappy with the herbicide treatment so we decided to hand pull all the flowering plants in an attempt to reduce the seed bank (over 2200 plants), A second chemical treatment was also applied at that time.

We then started the monitoring visits. We had quiet winter months but in Spring 2003, we experienced high levels of germination. We had pulled 53 plants (22 rosettes, 19 flowering & 2 seedling) so we then review our program to inspect every three weeks.

We continued to hand pull plants every time we visited the property (mostly rosettes but also the occasional flowering one). We had 300ml of rain in January 2004, which caused a large number of

[4] Parthenium Weed Training Kit (DPI)

seeds to germinate (300+). At that point of time, we continued to monitor closely until we applied a third herbicide treatment in early March 2004.

Since then, we have been continuing to monitor the property every three weeks and we are planning to do so for a number of years to come.

Key points to remember –

- If you are not familiar with Parthenium weed, don't hesitate to source help from your colleagues. There is a lot of expertise out there and help is also available through NSW DPI.
- Seed viability; close to 20 years
- The difficulties for some people to identify the plant before the flowering stage is an important factor to consider. Our landholder knew that it was Parthenium as soon as he noticed the flowers, but still today (close to 18 months later), he finds it extremely difficult to detect the rosettes and juvenile plants coming up.
- Be prepared to adapt and review the program to best manage the infestation.
- Finally, I believe that the most important point in being successful in containing and eventually eradicating a Parthenium weed infestation is to establish a solid collaboration between landholders and Biosecurity Officers.

Julie Roy – Weeds coordinator
Narrabri Shire Council

Parthenium