![NSW Government - Industry & Investment logo]

NEW SOUTH WALES WEED RISK MANAGEMENT SYSTEM

NEW SOUTH WALES
WEED RISK MANAGEMENT FORM

INTRODUCTION

The NSW Weed Risk Management (WRM) system aims to provide a standard, nationally accepted and transparent process to help make decisions about the introduction, prioritisation and declaration of potential weed or weed species. It has been designed so that it can be applied to a number of geographic scales, for example it can be applied to the state of New South Wales, to regions or catchments, or to individual Local Control Areas, and may even be applied to individual land management units, for example a farm or a National park.

This document contains the assessment form for the NSW WRM system. **It is important that this form be submitted with declaration applications.**

"How do I fill in the form?"
This assessment form is filled out after referring to the instructions contained in the New South Wales Weed Risk Management Guide. It is important to use accurate information to complete this form. To enable this, useful information sources are listed in the **Sourcing information** (page **Error! Bookmark not defined.**) and **Information sources** (page **Error! Bookmark not defined.**) sections of the guide.

"Is there any other information that I should provide?"
Aside from the answers required in this form, it is important to provide a copy of the source of the information (page **Error! Bookmark not defined.**) of the guide. Failure to supply information may result in the assessment being sent back to the assessor/s.

"What do I do with the completed form?"

The completed form and any additional information should be sent prior to 30 June annually to be considered that year to: -

> NWAC Secretary
> Weeds Unit
> New South Wales Department of Industry and Investment
> Locked Bag 21
> ORANGE NSW 2800
>
> Alternatively Fax: 02 6391 3206 (and post the original)

Assessments may not be processed in the year of submission if they are received after 30 June.

NSW DII will advise you of the outcome of the assessment.

NEW SOUTH WALES
WEED RISK MANAGEMENT FORM

Contact Assessors details

Contact Assessor's Name: ....

Company/Organisation: ....

Telephone Number: ....

Fax Number: ....

Postal Address: ....

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Assessment working group (stakeholders and experts who helped conduct assessments):

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....

....

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General weed information

Genus: ....

Species: ....

Common Name(s): ....

Family: ....

Subspecies/Variety/Cultivar...

Management Area: ....

Land use: ....

Assumptions

Invasiveness

1. What is the ability of the weed to establish amongst existing plants?

SCORE

☐ very high   "Seedlings" establish within dense vegetation or weeds.   *3*

☐ high   "Seedlings" establish within open vegetation or weeds.   *2*

☐ medium   "Seedlings" establish after moderate disturbance.   *1*

☐ low   "Seedlings" mainly need bare ground to establish.   *0*

☐ do not know   *1.5*

Source and comments

2. What is the weed's tolerance to average weed management practices in the land use?

SCORE

☐ very high   95% + weeds survive common management.   *3*

☐ high   Between 50 and 95% of weeds survive.   *2*

☐ medium   Between 5 and 50% of weeds survive.   *1*

☐ low   Less than 5% of weeds survive.   *0*

☐ do not know   *1.5*

Source and comments

3. What is the reproductive ability of the weed in the land use?

(a) Time to seeding		*(b) Annual seed production*		*(c) Vegetative reproduction*	
☐ 1 year or less	*2*	☐ high	*2*	☐ frequent	*2*
☐ >1 to 3 yrs	*1*	☐ low	*1*	☐ infrequent	*1*
☐ >3 yrs/never	*0*	☐ none	*0*	☐ none	*0*
☐ do not know	*1*	☐ do not know	*1*	☐ do not know	*1*

Total score (a+b+c)	*SCORE*
5 or 6	*3*
3 or 4	*2*
1 or 2	*1*
0	*0*

Source and comments

Invasiveness Question scores						'Do not know' scores												
Q1	Q2	Q3			Total	Q1	Q2	Q3a	Q3b	Q3c								Total

4. How likely is long-distance dispersal (>100 m) by natural means?

	(a) Flying animals	*(b) Other wild animals*	*(c) Water*	*(d) Wind*
common	□ 2	□ 2	□ 2	□ 2
occasional	□ 1	□ 1	□ 1	□ 1
unlikely	□ 0	□ 0	□ 0	□ 0
do not know	□ 1	□ 1	□ 1	□ 1

Total score (a+b+c+d) | *SCORE*

Total score (a+b+c+d)	*SCORE*
6, 7 or 8	*3*
3, 4 or 5	*2*
1 or 2	*1*
0	*0*

Source and comments

5. How likely is long-distance dispersal (>100 m) by human means?

	(a) Deliberate spread by people	*(b) Accidentally by people and vehicles*	*(c) Contaminated produce*	*(d) Domestic/farm animals*
common	□ 2	□ 2	□ 2	□ 2
occasional	□ 1	□ 1	□ 1	□ 1
unlikely	□ 0	□ 0	□ 0	□ 0
do not know	□ 1	□ 1	□ 1	□ 1

Total score (a+b+c+d)	*SCORE*
6, 7 or 8	*3*
3, 4 or 5	*2*
1 or 2	*1*
0	*0*

Source and comments

Invasiveness Question scores						'Do not know' scores													
Q1	Q2	Q3	Q4	Q5	Total	Q1	Q2	Q3a	Q3b	Q3c	Q4a	Q4b	Q4c	Q4d	Q5a	Q5b	Q5c	Q5d	Total

Impacts

1. Does the weed reduce the establishment of desired plants?

SCORE

☐ >50% reduction   More than 50% of desired plants do not establish.   *3*

☐ 10-50% reduction   Between 10 and 50% of desired plants do not establish.   *2*

☐ <10% reduction   Less than 10% of desired plants do not establish.   *1*

☐ no reduction   Establishment unaffected.   *0*

☐ do not know   *1.5*

Source and comments

2. Does the weed reduce the yield or amount of desired vegetation?

SCORE

☐ >50% reduction   More than 50% reduction in desired plants yield/amount.   *4*

☐ 25-50% reduction   Between 25 and 50% reduction in yield/amount.   *3*

☐ 10-25% reduction   Between 10 and 25% reduction in yield/amount.   *2*

☐ <10% reduction   Less than 10% reduction in desired plants yield/amount.   *1*

☐ no reduction   Desired plant yield or amount is unaffected.   *0*

☐ do not know   *2*

Source and comments

3. Does the weed reduce the quality of products, diversity or services available from the land use?

SCORE

☐ high   Severe reductions.   *3*

☐ medium   Substantial reductions.   *2*

☐ low   Slight reductions.   *1*

☐ none   No reduction.   *0*

☐ do not know   *1.5*

Source and comments

Invasiveness scores		Impact Question scores							'Do not know' scores								
Questions	Uncert	Q1	Q2	Q3				Total	Q1	Q2	Q3						Total

4. What is the weed's potential to restrict the physical movement of people, animals, vehicles, machinery and/or water?

			SCORE
☐	high	Major impediment and almost always impenetrable.	3
☐	medium	Moderate impediment and sometimes impenetrable.	2
☐	low	Never impenetrable but causes some obstruction.	1
☐	none	No effect on physical movement	0
☐	do not know		1.5

Source and comments

5. What is the weed's potential to negatively affect the health of animals and/or people?

			SCORE
☐	high	Highly toxic and frequently causes death/severe illness.	3
☐	medium	Occasional significant injuries/illness and/or death.	2
☐	low	Slight injury or mild illness with no lasting effects.	1
☐	none	No affect on human or animal health.	0
☐	do not know		1.5

Source and comments

6. Does the weed have major positive or negative effects on environmental health?

	major positive effect	*major negative effect*	*minor or no effect*	*do not know*
	-1	1	0	0.5
(a) food/shelter	☐	☐	☐	☐
(b) fire regime	☐	☐	☐	☐
(c) altered nutrient levels	☐	☐	☐	☐
(d) soil salinity	☐	☐	☐	☐
(e) soil stability	☐	☐	☐	☐
(f) soil water table	☐	☐	☐	☐

Total score (a+b+c+d+e+f)	SCORE
>3	3
2-3	2
0.5-1.5	1
0 or less	0

Source and comments

Invasiveness scores		Impact Question scores						
Questions	Uncertainty	Q1	Q2	Q3	Q4	Q5	Q6	Total

'Do not know' scores										
Q1	Q2	Q3	Q4	Q5	Q6a	Q6b	Q6c	Q6d	Q6e	Q6f

Potential distribution

Within the geographic area being considered, what is the percentage area of land use that is suitable for the weed?

		SCORE
☐ >80% of land use	Weed has potential to spread to 80%+ of land use.	*10*
☐ 60-80% of land use	Weed has potential to spread to 60-80% of land use.	*8*
☐ 40-60% of land use	Weed has potential to spread to 40-60% of land use.	*6*
☐ 20-40% of land use	Weed has potential to spread to 20-40% of land use.	*4*
☐ 10-20% of land use	Weed has potential to spread to 10-20% of land use.	*2*
☐ 5-10% of land use	Weed has potential to spread to 5-10% of land use.	*1*
☐ <5% of land use	Weed has potential to spread to less than 5% of land use.	*0.5*
☐ unsuited to land use	Weed not suited to growing in any part of land use.	*0*
☐ do not know		*5*

Source and comments

(Please attach relevant maps if information is not published)

Invasiveness scores		Impact scores		Potential distribution scores	
Questions	Uncertainty	Questions	Uncertainty	Question	Uncertainty

Comparative Weed Risk and Uncertainty Scores

The score for weed risk is calculated by adjusting the Invasiveness, Impacts and Potential distribution scores to range from 0 to 10, and then multiplying these. Weed risk will have a maximum of 1000 and a minimum of 0. The electronic form does this for you.

To calculate manually, adjust the raw scores as follows:

<u>Invasiveness:</u>   Divide by 15 and multiply by 10. Round score to nearest decimal place.

<u>Impacts:</u>   Divide by 19 and multiply by 10. Round score to nearest decimal place.

<u>Potential distribution:</u>   Leave score unchanged.

Comparative Weed Risk = Invasiveness × Impacts × Potential distribution

(Round to the nearest whole number)

Splitting up these possible scores into bands of 20% gives cut-offs for categories of weed risk as follows:

Frequency bands and weed risk Categories

Frequency band	Weed Risk Score	Weed Risk
80-100% (top 20% of possible scores)	192+	*Very high*
60-80%	101-192	*High*
40-60%	39-100	*Medium*
20-40%	13-38	*Low*
0-20% (bottom 20% of possible scores)	<13	*Negligible*

Weed Risk scores

	Raw score	Correction	Adjusted score	
Invasiveness	…	((Raw score)/15) x 10	… (a)	
Impacts	…	((Raw score)/19) x 10	… (b)	
Potential Distribution	…	Unchanged	… (c)	
Comparative Weed Risk			…	i.e. (a) x (b) x (c)
Weed Risk Category **(from frequency band table above)**			…	(e.g. *Very high*)

The uncertainty score for weed risk assessment is determined by calculating the percentage of 'do not know' answers that have been recorded in the **Invasiveness**, **Impacts** and **Potential distribution** sections. In the case of part questions, for example Invasiveness Questions 3-5 and Impacts Question 6 record the individual scores from each 'do not know' question in each part to determine the section uncertainty score. **Do not** combine the scores from each 'do not know' question to calculate a score for that question as was done to calculate the question score. See page **Error! Bookmark not defined.** for an example. The electronic form does this for you.

To calculate manually, adjust the section uncertainty score as follows:

Invasiveness: Divide by 14 and multiply by 100. Round to nearest whole number.

Impacts: Divide by 11 and multiply by 100. Round to nearest whole number.

Potential distribution: Divide by 5 and multiply by 100.

<div align="center">(Round to the nearest whole number)</div>

Weed Risk uncertainty scores

	Section uncertainty score	Correction	Adjusted uncertainty score
Invasiveness	…	((Raw score)/14) x 100	…
Impacts	…	((Raw score)/11) x 100	…
Potential Distribution	…	((Raw score)/5) x 100	…

Control costs

1. How detectable is the weed?

(a) Distinguishing features

☐	non-descript	2
☐	sometimes distinct	1
☐	always distinct	0
☐	do not know	1

(b) Period of year shoot growth visible

☐	<4 months	2
☐	4-8 months	1
☐	>8 months	0
☐	do not know	1

(c) Height at maturity

☐	<0.5 m	2
☐	0.5-2 m	1
☐	>2 m	0
☐	do not know	1

(d) Pre-reproductive height in relation to other vegetation

☐	below canopy	2
☐	similar height	1
☐	above canopy	0
☐	do not know	1

Total (a+b+c+d)	SCORE
6, 7 or 8	3
3, 4 or 5	2
1 or 2	1
0	0

Source and comments

2. What is general accessibility of known infestations at the optimum time of treatment?

			SCORE
☐	low	Most sites difficult to access, requiring special equipment.	2
☐	medium	Most sites readily accessed, may require extra equipment.	1
☐	high	All sites readily accessible by conventional methods.	0
☐	not present	Not known to be present.	0
☐	do not know		1

Source and comments

Control cost scores					'Do not know' scores								
Q1	Q2			Total	Q1a	Q1b	Q1c	Q1d	Q2				Total

3. How expensive is management of the weed in the <u>first year</u> of targeted control?

	(a) Chemical cost - How much chemical will you use/ha?	*(b) Labour costs - How many person hours will it take you to control/ha?*	*(c) Equipment costs - What equipment are you going to use?*
very high	☐ *4*	☐ *4*	**- -**
high	☐ *3*	☐ *3*	☐ *3*
medium	☐ *2*	☐ *2*	☐ *2*
low	☐ *1*	☐ *1*	☐ *1*
none/not present	☐ *0*	☐ *0*	☐ *0*
do not know	☐ *2*	☐ *2*	☐ *1.5*

Total score (a+b+c)	*SCORE*
8.5-11	*5*
6.5-8	*4*
4.5-6	*3*
2.5-4	*2*
1-2	*1*
0	*0*

Source and comments

4. What is the likely level of participation from landholders/volunteers within the land use at risk?

			SCORE
☐	low	Weed management rarely undertaken, beyond capacity.	*2*
☐	medium	Significant weed management changes needed, within capacity.	*1*
☐	high	Minimal weed management changes needed.	*0*
☐	do not know		*1*

Source and comments

Control cost scores					'Do not know' scores									
Q1	Q2	Q3	Q4	Total	Q1a	Q1b	Q1c	Q1d	Q2	Q3a	Q3b	Q3c	Q4	Total

Persistence

1. How effective are targeted management treatments applied to infestations of the weed?

SCORE

☐ low More than 25% of weeds survive annual targeted treatment/s. 3

☐ medium 5-25% of weeds survive annual targeted treatment/s. 2

☐ high 1-5% of weeds survive annual targeted treatment/s. 1

☐ very high <1% of weeds survive annual targeted treatment/s. 0

☐ do not know 1.5

Source and comments

2. What is the minimum time period for reproduction of sexual or vegetative propagules?

SCORE

☐ <6 months Minimum generation time <6 months. 3

☐ 6-12 months Minimum generation time 6-12 months. 2

☐ <1-2 years Minimum generation time <1-2 years. 1

☐ >2 years Minimum generation time >2 years. 0

☐ do not know 1.5

Source and comments

3. What is the maximum longevity of sexual or vegetative propagules?

SCORE

☐ >5 years Propagules remain viable for at least 5 years. 2

☐ 2-5 years Propagules remain viable for 2-5 years. 1

☐ <2 years Propagules remain viable for less than 2 years. 0

☐ do not know 1

Source and comments

Control cost scores		Persistence scores					'Do not know' scores					
Questions	Uncert	Q1	Q2	Q3		Total	Q1	Q2	Q3			Total

4. How likely are new propagules to continue to arrive at control sites, or to start new infestations?

	(a) Long-distance (>100 m) dispersal by natural means	*(b) Long-distance (>100 m) dispersal by human means*
frequent	☐ *2*	☐ *2*
occasional	☐ *1*	☐ *1*
rare	☐ *0*	☐ *0*
do not know	☐ *1*	☐ *1*

Total (a+b)	*SCORE*
4	*3*
2 or 3	*2*
1	*1*
0	*0*

Source and comments

Control cost scores		Persistence scores					'Do not know' scores					
Questions	Uncert	Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4a	Q4b	Total

Current distribution

1. What percentage area of the land use in the geographic area is currently infested by the weed?

			SCORE
☐	>80% land use	Weed infests more than 80% of land use.	*10*
☐	60-80% land use	Weed infests 60-80% of land use.	*8*
☐	40-60% land use	Weed infests 40-60% of land use.	*6*
☐	20-40% land use	Weed infests 20-40% of land use.	*4*
☐	10-20% land use	Weed infests 10-20% of land use.	*2*
☐	5-10% land use	Weed infests 5-10% of land use.	*1*
☐	1-5% land use	Weed infests 1-5% of land use.	*0.5*
☐	<1% land use	Weed infests less than 1% of land use.	*0.1*
☐	0% of land use but 20-40% of area	Weed not known in land use but infests 20-40% of geographic area.	*2*
☐	0% of land use but 10-20% of area	Weed not known in land use but infests 10-20% of geographic area.	*1*
☐	0% of land use but 5-10% of area	Weed not known in land use but infests 5-10% of geographic area.	*0.5*
☐	0% of land use but 1-5% of area	Weed not known in land use but infests 1-5% of geographic area.	*0.1*
☐	0% of land use and <1% of area	Weed not known in land use and infests <1% of geographic area.	*0.05*
☐	not present	Weed not known to be present in the geographic area.	*0*
☐	do not know		*5*

Source and comments

(Please attach relevant maps or other information if not published)

2. What is the number of infestations, and weed distribution within the geographic area being considered?

			SCORE
☐	widespread	Weed occurs as large and small infestations across most of the geographic area.	*2*
☐	scattered	Weed occurs mainly as small infestations across much of the geographic area.	*1*
☐	restricted	Weed is localised in a small number of outbreaks within the geographic area.	*0*
☐	not present	Weed is not known to be present within the geographic area.	*0*
☐	do not know		*1*

Source and comments

Control cost scores		Persistence scores		Current distribution scores			'Do not know' scores		
Questions	Uncert	Questions	Uncert	Q1	Q2	Total	Q1	Q2	Total

Comparative Feasibility of Coordinated Control and Uncertainty scores

The score for feasibility of coordinated control is calculated by adjusting the Control costs, Persistence and Current distribution scores to range from 0 to 10, and then multiplying these. Feasibility of coordinated control will have a maximum of 1000 and a minimum of 0. The electronic form does this for you.

To calculate manually, adjust the raw scores as follows:

Control costs: Divide by 12 and multiply by 10. Round score to nearest decimal place.

Persistence: Divide by 11 and multiply by 10. Round score to nearest decimal place.

Current distribution: Divide by 12 and multiply by 10. Round score to nearest decimal place.

Feasibility of coordinated control = Control Costs × Persistence × Current Distribution

(Round to the nearest whole number)

Splitting up these possible scores into bands of 20% gives cut-offs for categories of feasibility as follows:

Frequency bands and weed feasibility of coordinated control categories

Frequency band	Feasibility Score	Weed Feasibility
80-100% (top 20% of possible scores)	113+	*Negligible*
60-80%	56-113	*Low*
40-60%	31-55	*Medium*
20-40%	14-30	*High*
0-20% (bottom 20% of possible scores)	<14	*Very high*

Feasibility of coordinated control scores

	Raw score	Correction	Adjusted score	
Control costs	…	((Raw score)/12) x 10	… (a)	
Persistence	…	((Raw score)/11) x 10	… (b)	
Current Distribution	…	((Raw score)/12) x 10	… (c)	
Comparative Weed Risk			…	i.e. (a) x (b) x (c)
Weed Feasibility Category (from frequency band table above)			…	(e.g. *Negligible*)

The uncertainty score for feasibility of coordinated control is determined by calculating the percentage of 'do not know' answers that have been recorded in the **Control costs**, **Persistence** and **Current distribution** sections. In the case of part questions, for example Control costs Questions 1 and 3 and Persistence Question 4 record the individual scores for each 'do not know' question in each part to determine the section uncertainty score. **Do not** combine the scores from each 'do not know' question to calculate a score for that question as was done to calculate the question score. See page **Error! Bookmark not defined.** for an example. The electronic form does this for you.

To calculate manually, adjust the section uncertainty score as follows:

Control costs: Divide by 12 and multiply by 100. Round to nearest whole number.

Persistence: Divide by 6 and multiply by 100. Round to nearest whole number.

Current distribution: Divide by 6 and multiply by 100. Round to nearest whole number.

(Round to the nearest whole number)

Feasibility uncertainty scores

	Section uncertainty score	Correction	Adjusted uncertainty score
Control costs	…	((Raw score)/12) x 100	…
Persistence	…	((Raw score)/6) x 100	…
Current Distribution	…	((Raw score)/6) x 100	…

Overall uncertainty score

Calculation of overall uncertainty score

Section	Adjusted uncertainty score (Percentage uncertainty)
Invasiveness	
Impacts	
Potential distribution	
Control costs	
Persistence	
Current Distribution	
	=(sum of adjusted uncertainty scores above)/6 (round to nearest whole number)

The following levels of overall uncertainty need to be considered before submitting assessments. Assessments submitted with levels of overall uncertainty exceeding 15% will generally be returned to the assessor/s for further research.

Overall uncertainty level	Suggested response needed
<15%	Submit assessment (ensure all information sources have been attached)
15-30%	Revisit existing literature and source new literature before submitting assessment (contact NSW DII staff for other possible information sources)
>30%	Do not submit assessment (contact NSW DII regional staff for help in locating information)

Positive impacts

Are there any other positive impacts the species may have?	
Positive impact	**Source**

List stakeholders consulted and outcomes of these discussions.

Stakeholders consulted   **Outcomes**

Further comments

Are there any further comments you would like to offer to support this assessment?