

# NSW Weed Risk Management assessment: *Egeria densa*

(Return to: <http://www.dpi.nsw.gov.au/agriculture/pests-weeds/weeds/wrm-system>)

		<i>Egeria</i>		
		<i>densa</i>		
		Leafy elodea, Egeria, Dense waterweed		
		Hydrocharitaceae		
	Area considered:	Coastal areas of NSW (North, Central and Southern)		
	Land use:	Aquatic/Water		
	Density:	Medium density in waterway		
		Standard weed management: There are various issues associated with the application of herbicides near water ways in NSW and hence the widespread use of herbicides to manage aquatic weeds does not occur. There are few effective herbicides that are effective against aquatic weeds. Mechanical harvesting is rarely undertaken routinely and does not kill the plant. Note: this is the routine management used rather than any management directed at the species.		
	Invasiveness		Do not know	
<b>Q1</b>	<b>score</b>	<b>1.5</b>	1.5	'Do not know' more research is needed.
<b>Q2</b>	<b>score</b>	<b>3</b>	0.0	pg. 2 Johnson (2007) and personal observations.
Q3	<i>a</i>	0	0.0	pg. 63 Parsons and Cuthbertson (2001) and pg. 1 and 2 Johnson (2007).
	<i>b</i>	0	0.0	pg. 63 Parsons and Cuthbertson (2001) and pg. 1 and 2 Johnson (2007).
	<i>c</i>	2	0.0	pg. 63 Parsons and Cuthbertson (2001) and pg. 1 and 2 Johnson (2007).
	<i>total</i>	2		
<b>Q3</b>	<b>score</b>	<b>1</b>		
Q4	<i>a</i>	0	0.0	pg. 63 Parsons and Cuthbertson (2001) and pg. 1 and 2 Johnson (2007).
	<i>b</i>	0	0.0	pg. 63 Parsons and Cuthbertson (2001) and pg. 1 and 2 Johnson (2007).
	<i>c</i>	2	0.0	pg. 63 Parsons and Cuthbertson (2001) and pg. 1 and 2 Johnson (2007).
	<i>d</i>	0	0.0	pg. 63 Parsons and Cuthbertson (2001) and pg. 1 and 2 Johnson (2007).
	<i>total</i>	2		
<b>Q4</b>	<b>score</b>	<b>1</b>		
Q5	<i>a</i>	2	0.0	pg. 63 Parsons and Cuthbertson (2001) and pg. 1 and 2 Johnson (2007).
	<i>b</i>	2	0.0	pg. 63 Parsons and Cuthbertson (2001) and pg. 1 and 2 Johnson (2007).
	<i>c</i>	0	0.0	pg. 63 Parsons and Cuthbertson (2001) and pg. 1 and 2 Johnson (2007).
	<i>d</i>	0	0.0	pg. 63 Parsons and Cuthbertson (2001) and pg. 1 and 2 Johnson (2007).
	<i>total</i>	4		
<b>Q5</b>	<b>score</b>	<b>2</b>		
	Invasiveness score	<b>8.5</b>		

*Egeria densa* (cont.)

Impacts				
Q1	score	1.5	1.5	'Do not know' more research is needed.
Q2	score	4	0.0	pg. 33, col 1 Roberts <i>et al.</i> (1999) – applicable to <i>Vallisneria</i> at least.
Q3	score	2	0.0	pg. 1 Johnson (2007).
Q4	score	2	0.0	pg. 63, col 1 Parsons and Cuthbertson (2001), pg. 33, col 2 Roberts <i>et al.</i> (1999).
Q5	score	0	0.0	Pers. obs.
Q6	a	1	0.0	Pers. obs. and surmise from Parsons and Cuthbertson (2001) and Johnson (2007).
	b	0	0.0	Pers. obs. and surmise from Parsons and Cuthbertson (2001) and Johnson (2007).
	c	0	0.0	Pers. obs. and surmise from Parsons and Cuthbertson (2001) and Johnson (2007).
	d	0.5	0.5	Pers. obs. and surmise from Parsons and Cuthbertson (2001) and Johnson (2007).
	e	1	0.0	Pers. obs. and surmise from Parsons and Cuthbertson (2001) and Johnson (2007).
	f	0	0.0	Pers. obs. and surmise from Parsons and Cuthbertson (2001) and Johnson (2007).
	total	2.5		
Q6	score	2		
Impacts score		11.5		
Potential distribution				
	score	10	0.0	Estimate since species grows over a wide range of conditions (Csurhes <i>et al.</i> 2008).
Comparative weed risk and Uncertainty scores				
Corrected Invasiveness		5.7		
Corrected Impacts		6.1		
Corrected Potential distribution		10.0		
Comparative Weed Risk		343		
		<i>Very high</i>		
Uncertainty Invasiveness		10.7		
Uncertainty Impacts		18.2		
Uncertainty Potential Distribution		0.0		
Control costs				
Q1	a	1	0.0	Pers. obs.

*Egeria densa* (cont.)

	<i>b</i>	1	0.0	Johnson (2007) and R. Coventry pers. comm.
	<i>c</i>	0	0.0	Pers. obs.
	<i>d</i>	1	0.0	Pers. obs.
	<i>total</i>	3		
<b>Q1</b>	<b>score</b>	<b>2</b>		
<b>Q2</b>	<b>score</b>	<b>2</b>	0.0	Pers. obs.
Q3	<i>a</i>	2	2.0	'Do not know' – more research is needed.
	<i>b</i>	2	2.0	'Do not know' – more research is needed.
	<i>c</i>	1	0.0	Pers. obs.
	<i>total</i>	5		
<b>Q3</b>	<b>score</b>	<b>3</b>		
<b>Q4</b>	<b>score</b>	<b>2</b>	0.0	Pers. obs.
<b>Control costs score</b>		<b>9</b>		
Persistence:				
<b>Q1</b>	<b>score</b>	<b>3</b>	0.0	pg. 2 Johnson (2007) - No known control measures.
<b>Q2</b>	<b>score</b>	<b>3</b>	0.0	pg. 62 lifecycle and pg. 63 dispersal Parsons and Cuthbertson (2001).
<b>Q3</b>	<b>score</b>	<b>1</b>	1.0	'Do not know' – more research is needed.
Q4	<i>a</i>	2	0.0	pg. 63 dispersal Parsons and Cuthbertson (2001).
	<i>b</i>	1	0.0	pg. 63 dispersal Parsons and Cuthbertson (2001).
	<i>total</i>	3		
<b>Q4</b>	<b>score</b>	<b>2</b>	0.0	
<b>Persistence score</b>		<b>9</b>		
Current Distribution				
<b>Q1</b>	<b>score</b>	<b>1</b>	0.0	Estimate based on PlantNET (Royal Botanic Gardens current known distribution).
<b>Q2</b>	<b>score</b>	<b>2</b>	0.0	Pers. obs.
<b>Current Distribution score</b>		<b>3</b>		
Comparative Feasibility of Coordinated Control and Uncertainty scores				
<b>Corrected Control costs</b>		<b>7.5</b>		
<b>Corrected Persistence</b>		<b>8.2</b>		

*Egeria densa* (cont.)

<b>Corrected Current distribution</b>	<b>2.5</b>		
<b>Comparative Feasibility of Coordinated Control</b>	<b>153</b>		
	<b>Negligible</b>		
Uncertainty Control costs	33.3		
Uncertainty Persistence	16.7		
Uncertainty Current distribution	0.0		
Overall Uncertainty score	13		
Positive impacts	Was a major species traded in Aquarium industry (PIAA) now illegal in many jurisdictions but still traded illegally..		
Comments	None		

Determining priorities

Weed risk is VERY HIGH

Feasibility of Coordinated control is NEGLIGIBLE

On the Management action matrix the weed falls into 'Manage weed' on the lower left of the matrix

Suggested Management actions of 'Manage weeds'

**Aims to reduce the overall economic, environmental and/or social impacts of the weed species through targeted management**

Research and develop Integrated Weed Management (IWM) packages for the species, including herbicides and biological control where feasible.

Promote IWM packages to landholders.

Monitor decrease in weed impacts with improved management.

Identify key sites/assets in the geographic area and ensure adequate resourcing to manage the weed species.

**References**

Csurhes, S., Hannan-Jones, M. and Dimmock, A. (2008). Pest plant risk assessment Dense waterweed *Egeria densa* Biosecurity Queensland. 12 pp. [http://www.dpi.qld.gov.au/cps/rde/dpi/hs.xsl/4790\\_9161\\_ENA\\_HTML.htm](http://www.dpi.qld.gov.au/cps/rde/dpi/hs.xsl/4790_9161_ENA_HTML.htm)

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Parsons, W. T. and Cuthbertson, E. G. (2001). Leafy elodea. *Noxious Weeds of Australia*. Second edition. CSIRO Publishing, Melbourne. pp. 61-63.

Roberts, D. E., Church, A. G. and Cummins, S. P. (1999). Invasion of *Egeria* into the Hawkesbury-Nepean River, Australia. *Journal of Aquatic Plant Management*, 37, 31-34.