

# Part IV. Plant Assessment Form

For use with "Criteria for Categorizing Invasive Non-Native Plants that Threaten Wildlands"  
by the California Exotic Pest Plant Council and the Southwest Vegetation Management Association

Electronic version, February 28, 2003

**Table 1. Species and Evaluator Information**

<b>Species name (Latin binomial):</b>	Euphorbia terracina L.
<b>Synonyms:</b>	
<b>Common names:</b>	Geraldton carnationweed, carnation spurge
<b>Evaluation date (mm/dd/yy):</b>	6/30/05
<b>Evaluator #1 Name/Title:</b>	Joseph M. DiTomaso
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<b>Evaluator #2 Name/Title:</b>	enter text here
<b>Affiliation:</b>	enter text here
<b>Phone numbers:</b>	enter text here
<b>Email address:</b>	enter text here
<b>Address:</b>	enter text here

Section below for list committee use—please leave blank

<b>List committee members:</b>	Jake Sigg, Peter Warner, Bob Case, John Knapp, Elizabeth Brusati
<b>Committee review date:</b>	7/8/05
<b>List date:</b>	enter text here
<b>Re-evaluation date(s):</b>	enter text here

<p><b>General comments on this assessment:</b> enter text here</p>
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**Table 2. Criteria, Section, and Overall Scores**

<a href="#">1.1</a>	Impact on abiotic ecosystem processes	<b>U</b>	<b>No Information</b>
<a href="#">1.2</a>	Impact on plant community	<b>B</b>	<b>Other Pub. Mat'l</b>
<a href="#">1.3</a>	Impact on higher trophic levels	<b>U</b>	<b>No Information</b>
<a href="#">1.4</a>	Impact on genetic integrity	<b>U</b>	<b>No Information</b>

**Impact**

*Enter four characters from Q1.1-1.4 below:*

**UBUU**

*Using matrix, determine score and enter below:*

**B**

<a href="#">2.1</a>	Role of anthropogenic and natural disturbance	<b>B (2 pts)</b>	<b>Observational</b>
<a href="#">2.2</a>	Local rate of spread with no management	<b>A (3 pts)</b>	<b>Observational</b>
<a href="#">2.3</a>	Recent trend in total area infested within state	<b>B (2 pts)</b>	<b>Observational</b>
<a href="#">2.4</a>	Innate reproductive potential <a href="#">Wksht A</a>	<b>A (3 pts)</b>	<b>Observational</b>
<a href="#">2.5</a>	Potential for human-caused dispersal	<b>D (0 pts)</b>	<b>Observational</b>
<a href="#">2.6</a>	Potential for natural long-distance dispersal	<b>C (1 pt)</b>	<b>Other Pub. Mat'l</b>
<a href="#">2.7</a>	Other regions invaded	<b>U (0 pts)</b>	<b>Anecdotal</b>

**Invasiveness**

*Enter the sum total of all points for Q2.1-2.7 below:*

**11**

*Use matrix to determine score and enter below:*

**B**

**Plant Score**

*Using matrix, determine Overall Score and Alert Status from the three section scores and enter below:*

**Medium**

**Red Alert**

<a href="#">3.1</a>	Ecological amplitude/Range	<b>C</b>	<b>Other Pub. Mat'l</b>
<a href="#">3.2</a>	Distribution/Peak frequency <a href="#">Wksht C</a>	<b>D</b>	<b>Observational</b>

**Distribution**

*Using matrix, determine score and enter below:*

**C**

**Table 3. Documentation**

<b>Question 1.1</b> Impact on abiotic ecosystem processes	U No Information <a href="#">back</a>
Identify ecosystem processes impacted: No information available.	
Rationale: Considered a noxious weed, but is primarily restricted to the south coast region of the state.	
Sources of information: enter text here	
<b>Question 1.2</b> Impact on plant community composition, structure, and interactions	B Other Pub. Mat'l <a href="#">back</a>
Identify type of impact or alteration: Similar to leafy spurge (1). Allelopathic, dense roots outcompete other plants, reduces germination of native plants (based on leafy spurge references). Does not currently form the dense stands typical of leafy spurge. It often forms dense patches and generally flowers March through August.	
Rationale: enter text here	
Sources of information: 1. DiTomaso and Healy. 2006. Weeds of California. UC DANR Publ. #3488.	
<b>Question 1.3</b> Impact on higher trophic levels	U No Information <a href="#">back</a>
Identify type of impact or alteration: Like many other spurges, geraldton carnationweed is reported to have toxic sap, but there are no records of problems in California.	
Rationale: enter text here	
Sources of information: DiTomaso and Healy. 2006. Weeds of California. UC DANR Publ. #3488.	
<b>Question 1.4</b> Impact on genetic integrity	U No Information <a href="#">back</a>
Identify impacts: There are seven native Euphorbia in California, so potential for hybridization is there. There is no evidence for hybridization though.	
Rationale:	
Sources of information: Hickman, J. C. (ed.) 1993. The Jepson Manual, Higher Plants of California. University of California Press. Berkeley, CA enter text here	
<b>Question 2.1</b> Role of anthropogenic and natural disturbance in establishment	B Observational <a href="#">back</a>
Describe role of disturbance: Euphorbia spp. often found in waste places, roadsides, fields, pastures, but can move into relatively undisturbed sites. It has moved into the coast scrub areas of southern California that do not appear to be disturbed.	

Rationale: enter text here	
Sources of information: Jo Kitz and Joe DiTomaso, observational	
<b>Question 2.2</b> Local rate of spread with no management	A Observational <a href="#">back</a>
Describe rate of spread: Appears to be spreading locally, but not at rates observed for leafy spurge.	
Rationale: enter text here	
Sources of information: Jo Kitz, observational.	
<b>Question 2.3</b> Recent trend in total area infested within state	B Observational <a href="#">back</a>
Describe trend: Expanding range along southern California coast.	
Rationale: enter text here	
Sources of information: Observational, Jo Kitz	
<b>Question 2.4</b> Innate reproductive potential	A Observational <a href="#">back</a>
Describe key reproductive characteristics: Perennial. Monoecious. Spreads by seed or division. Crown buds develop at the bases of stems and can produce new shoots or roots. Probably has long lived seeds as do most other Euphorbia species.	
Rationale: The biology of these species is poorly understood.	
Sources of information: DiTomaso and Healy. 2006. Weeds of California. UC DANR Publ. #3488. DiTomaso, observational	
<b>Question 2.5</b> Potential for human-caused dispersal	D Observational <a href="#">back</a>
Identify dispersal mechanisms: Not typically sold in the nursery industry so opportunities for human dispersal are rare. Not found for sale in an internet search.	
Rationale: enter text here	
Sources of information: DiTomaso, observational. E. Brusati, Cal-IPC, observational	

<b>Question 2.6</b> Potential for natural long-distance dispersal	C Other Pub. Mat'l <a href="#">back</a>
Identify dispersal mechanisms: Seed primarily fall to ground below parent plant. No mechanism of long distance dispersal. Can occur close to water and this could move seed long distances on occasion.	
Rationale: enter text here	
Sources of information: DiTomaso, observational.	
<b>Question 2.7</b> Other regions invaded	U No Information <a href="#">back</a>
Identify other regions: It also occurs in Pennsylvania. No record of the types of communities in other regions.	
Rationale: enter text here	
Sources of information: DiTomaso and Healy. 2006. Weeds of California. UC DANR Publ. #3488.	
<b>Question 3.1</b> Ecological amplitude/Range	C Other Pub. Mat'l <a href="#">back</a>
Describe ecological amplitude, identifying date of source information and approximate date of introduction to the state, if known: Geraldton carnationweed inhabits disturbed places, grassland, coastal bluffs (particularly near Malibu), dunes, salt marsh, riparian areas, and oak woodlands in the South Coast (Los Angeles Co.).	
Rationale: enter text here	
Sources of information: DiTomaso and Healy. 2006. Weeds of California. UC DANR Publ. #3488.	
<b>Question 3.2</b> Distribution/Peak frequency	D Observational <a href="#">back</a>
Describe distribution: Uncommon in California, but expanding range.	
Rationale: enter text here	
Sources of information: DiTomaso, observational.	

**Worksheet A**[back](#)

Reaches reproductive maturity in 2 years or less	<b>Yes: 1 pt</b>
Dense infestations produce >1,000 viable seed per square meter	<b>Yes: 2 pts</b>
Populations of this species produce seeds every year.	<b>Yes: 1 pt</b>
Seed production sustained over 3 or more months within a population annually	<b>Yes: 1 pt</b>
Seeds remain viable in soil for three or more years	<b>Unknown: 0 pts</b>
Viable seed produced with <i>both</i> self-pollination and cross-pollination	<b>Unknown: 0 pts</b>
Has quickly spreading vegetative structures (rhizomes, roots, etc.) that may root at nodes	<b>No: 0 pt</b>
Fragments easily and fragments can become established elsewhere	<b>No: 0 pts</b>
Resprouts readily when cut, grazed, or burned	<b>Yes: 1 pt</b>
	<b>6 pts      2 unknowns</b>
	<b>A (6+ pts)</b>
<b>Note any related traits:</b> enter text here	

## Worksheet C - California Ecological Types

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(*sensu* Holland 1986)

Major Ecological Types	Minor Ecological Types	Code*
<b>Marine Systems</b>	marine systems	score
<b>Freshwater and Estuarine Aquatic Systems</b>	lakes, ponds, reservoirs	score
	rivers, streams, canals	score
	estuaries	score
<b>Dunes</b>	coastal	score
	desert	score
	interior	score
<b>Scrub and Chaparral</b>	coastal bluff scrub	D. presen
	coastal scrub	D. presen
	Sonoran desert scrub	score
	Mojavean desert scrub (incl. Joshua tree woodland)	score
	Great Basin scrub	score
	chenopod scrub	score
	montane dwarf scrub	score
	Upper Sonoran subshrub scrub	score
	chaparral	score
<b>Grasslands, Vernal Pools, Meadows, and other Herb Communities</b>	coastal prairie	score
	valley and foothill grassland	score
	Great Basin grassland	score
	vernal pool	score
	meadow and seep	score
	alkali playa	score
	pebble plain	score
<b>Bog and Marsh</b>	bog and fen	score
	marsh and swamp	score
<b>Riparian and Bottomland</b>	riparian forest	score
	riparian woodland	score
	riparian scrub (incl. desert washes)	score
<b>Woodland</b>	cismontane woodland	score
	piñon and juniper woodland	score
	Sonoran thorn woodland	score
<b>Forest</b>	broadleaved upland forest	score
	North Coast coniferous forest	score
	closed cone coniferous forest	score
	lower montane coniferous forest	score
	upper montane coniferous forest	score
	subalpine coniferous forest	score
<b>Alpine Habitats</b>	alpine boulder and rock field	score
	alpine dwarf scrub	score

\* A. means >50% of type occurrences are invaded; B means >20% to 50%; C. means >5% to 20%; D. means present but ≤5%; U. means unknown (unable to estimate percentage of occurrences invaded).