

# 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

**Table 1. Species and Evaluator Information**

<b>Species name (Latin binomial):</b>	Sisymbrium irio L.
<b>Synonyms:</b>	
<b>Common names:</b>	London Rocket
<b>Evaluation date (mm/dd/yy):</b>	03/10/04
<b>Evaluator #1 Name/Title:</b>	Matt Brooks/Research Botanist
<b>Affiliation:</b>	U.S. Geological Survey
<b>Phone numbers:</b>	702-564-4615
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<b>Address:</b>	160 N.Stephanie St., Henderson, NV 89074
<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>	Cynthia Roye, Carla Bossard, Doug Johnson, Joe DiTomaso, Jake Sigg, Alison Stanton, Matt Brooks, Peter Warner.
<b>Committee review date:</b>	March 19, 2004
<b>List date:</b>	enter text here
<b>Re-evaluation date(s):</b>	enter text here

**Table 2. Criteria, Section, and Overall Scores**

1.1	Impact on abiotic ecosystem processes	<b>C</b>	<b>Observational</b>
1.2	Impact on plant community	<b>B</b>	<b>Observational</b>
1.3	Impact on higher trophic levels	<b>U</b>	<b>No Information</b>
1.4	Impact on genetic integrity	<b>D</b>	<b>Rev'd, Sci. Pub'n</b>

**“Impact”**  
 Enter four characters from Q1.1-1.4 below:  
**CBUD**  
 Use matrix determine the score; enter below:  
**B**

2.1	Role of anthropogenic and natural disturbance	<b>B 2</b>	<b>Observational</b>
2.2	Local rate of spread with no management	<b>C 1</b>	<b>Observational</b>
2.3	Recent trend in total area infested within state	<b>B 2</b>	<b>Observational</b>
2.4	Innate reproductive potential	<b>B 2</b>	<b>Observational</b>
2.5	Potential for human-caused dispersal	<b>B 2</b>	<b>Observational</b>
2.6	Potential for natural long-distance dispersal	<b>C 2</b>	<b>Observational</b>
2.7	Other regions invaded	<b>U 0</b>	<b>No Information</b>

**“Invasiveness”**  
 For questions at left, recall that an A gets 3 points, a B gets 2, a C gets 1, and a D or U gets=0. 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 the Overall Score and Alert Status from the three section scores and enter them below:  
**Medium**  
**No Alert**

3.1	Ecological amplitude	<b>A</b>	<b>Other Pub. Mat'l</b>
3.2	Distribution	<b>B</b>	<b>Observational</b>

**“Distribution”**  
 Use matrix determine the score; enter below:  
**A**

**Table 3. Documentation**

<b>Question 1.1</b> Impact on abiotic ecosystem processes
Identify ecosystem processes impacted: C. Possibly fire regimes
Rationale: May increase fuel loads, but only where alien annual grasses have already altered the fire regime, so additional effect of this species may be only to slightly increase fire intensity.
Sources of information: Matt Brooks personal observation
<b>Question 1.2</b> Impact on plant community composition, structure, and interactions
Identify type of impact or alteration: B. May reduce biomass and fecundity of co-existing species.
Rationale: Can produce large amounts of biomass, and matures early in the phenologic year, possibly usurping soil water before other native annual plants reach peak development
Sources of information: Matt Brooks personal observation
<b>Question 1.3</b> Impact on higher trophic levels
Identify type of impact or alteration: U: Unknown
Rationale: There is some indication that chemicals in mustards eaten by the Desert Tortoise ( <i>Gopherus agassizii</i> ) may have negative physiological effect, but this is only conjecture at this point.
Sources of information: Kristin Berry, personal communication
<b>Question 1.4</b> Impact on genetic integrity
Identify impacts: D. no known hybridiation
Rationale: There are no native <i>Sisymbrium</i> species in California.
Sources of information: The Jepson Manual, Higher Plant of California. U.C. Press. and Matt Brooks personal observation
<b>Question 2.1</b> Role of anthropogenic and natural disturbance in establishment
Describe role of disturbance: B. Disturbance promotes dominance and spread.
Rationale: Early successional species, which may decline in dominance as native species re-establish, but likely varies among vegetation types. It may persist indefinitely in riparian areas with repeated natural disturbance.

Sources of information: Matt Brooks personal observation
<b>Question 2.2</b> Local rate of spread with no management
Describe rate of spread: C. Slow unless there is disturbance.
Rationale: occurs in habitat openings caused by natural disturbances, roads, urban developments, agricultural fields, etc.
Sources of information: Matt Brooks personal observation
<b>Question 2.3</b> Recent trend in total area infested within state
Describe trend: B. slightly increasing
Rationale:
Sources of information: Matt Brooks and Joe DiTomaso personal observation
<b>Question 2.4</b> Innate reproductive potential
Describe key reproductive characteristics: B. Moderate
Rationale: unknown seedbank persistence, otherwise could be ranked "high"
Sources of information: Matt Brooks personal observation
<b>Question 2.5</b> Potential for human-caused dispersal
Identify dispersal mechanisms: B. Moderate
Rationale: Mustard seeds are sticky when wet facilitating dispersal on vehicles and grow in hay fields where they may be dispersed along with the hay when it is sold
Sources of information: Matt Brooks personal observation
<b>Question 2.6</b> Potential for natural long-distance dispersal
Identify dispersal mechanisms: C. Low
Rationale: Likely dispersed by saltation or rodents.

Sources of information: Matt Brooks personal observation
<b>Question 2.7</b> Other regions invaded
Identify other regions: U. unknown
Rationale: enter text here
Sources of information: enter text here
<b>Question 3.1</b> Ecological amplitude
Describe ecological amplitude, identifying date of source information and approximate date of introduction to the state, if known: A. Widespread
Rationale: has invaded shrublands, grasslands, and riparian areas
Sources of information: Hickman, 1993. The Jepson Manual, Higher Plant of California. U.C. Press. and Matt Brooks personal observation, DiTomaso, J.M. and E.A. Healy. Weeds of California and other Western States. University of California, Division of Agriculture and Natural Resources, Oakland, CA (in press, expected publication in 2005).
<b>Question 3.2</b> Distribution
Describe distribution: B
Rationale: frequent in coastal scrub
Sources of information: Matt Brooks personal observation

## Worksheet A

Complete this worksheet to answer Question 2.4.

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>No: 0 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>No: 0 pt</b>
	<b>4 pts      1 unknown</b>
	<b>B (4-5 pts)</b>
<b>Note any related traits:</b> enter text here	

## Worksheet C - California Ecological Types

(*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	C. 5-20%
	coastal scrub	B. 21-50%
	Sonoran desert scrub	D. presen
	Mojavean desert scrub (incl. Joshua tree woodland)	D. presen
	Great Basin scrub	D. presen
	chenopod scrub	D. presen
	montane dwarf scrub	score
	Upper Sonoran subshrub scrub	D. presen
<b>Grasslands, Vernal Pools, Meadows, and other Herb Communities</b>	coastal prairie	D. presen
	valley and foothill grassland	C. 5-20%
	Great Basin grassland	score
	vernal pool	score
	meadow and seep	D. presen
	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	D. presen
	riparian scrub (incl. desert washes)	D. presen
<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).