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

Species name (Latin binomial)**:**	Brassica rapa L.
Synonyms:	Brassica campestris L.
Common names:	turnip, field mustard
Evaluation date (mm/dd/yy)**:**	3/9/2004
Evaluator #1 Name/Title:	Matt Brooks/Reearch Botanist
Affiliation:	U.S. Geological Survey
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Evaluator #2 Name/Title:	enter text here
Affiliation:	enter text here
Phone numbers:	enter text here
Email address:	enter text here
Address:	enter text here

Section below for list committee use—please leave blank

List committee members:	Cynthia Roye, Carla Bossard, Doug Johnson, Joe DiTomaso, Jake Sigg, Alison Stanton, Matt Brooks, Peter Warner.
Committee review date:	March 19, 2004
List date:	enter text here
Re-evaluation date(s):	enter text here

Table 2. Criteria, Section, and Overall Scores

1.1	Impact on abiotic ecosystem processes	**U**	**No Information**
1.2	Impact on plant community	**B**	**Observational**
1.3	Impact on higher trophic levels	**U**	**No Information**
1.4	Impact on genetic integrity	**D**	**Other Pub. Mat'l**

"Impact"

Enter four characters from Q1.1-1.4 below:

UBUD

Use matrix determine the score; enter below:

C

2.1	Role of anthropogenic and natural disturbance	**B 2**	**Observational**
2.2	Local rate of spread with no management	**C 1**	**Observational**
2.3	Recent trend in total area infested within state	**C 1**	**Observational**
2.4	Innate reproductive potential	**A 3**	**Observational**
2.5	Potential for human-caused dispersal	**B 2**	**Observational**
2.6	Potential for natural long-distance dispersal	**C 1**	**Observational**
2.7	Other regions invaded	**C 1**	**Observational**

"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

3.1	Ecological amplitude	**A**	**Other Pub. Mat'l**
3.2	Distribution	**D**	**Observational**

"Distribution"

Use matrix determine the score; enter below:

B

"Plant Score"

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

Low

No Alert

Table 3. Documentation

Question 1.1 Impact on abiotic ecosystem processes
Identify ecosystem processes impacted: U. Unknown
Rationale:
Sources of information:
Question 1.2 Impact on plant community composition, structure, and interactions
Identify type of impact or alteration: Displacement of natives.
Rationale: Can form dense stands, especially in north coast ranges.
Sources of information: Personal observation, Peter Warner; Joe DiTomaso; Jake Sigg.
Question 1.3 Impact on higher trophic levels
Identify type of impact or alteration: U. unknown
Rationale: enter text here
Sources of information: enter text here
Question 1.4 Impact on genetic integrity
Identify impacts: D. no known hybridiation
Rationale: There are no native Brassica species in California, although hybridization with the alien Brassica napus has been documented.
Sources of information: Hickman, 1993. The Jepson Manual, Higher Plant of Calfifornia. U.C. Press. and Joe DiTomoaso personal observation
Question 2.1 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 indefiniately in riparian areas with repeated natural disturbance.

Sources of information: Matt Brooks personal observation
Question 2.2 Local rate of spread with no management
Describe rate of spread: C. Slow unless there is disturbance.
Rationale: occurs in habitat openings caused by nautural distubances, roads, urban developments, agricultural fields, etc.
Sources of information: Matt Brooks personal observation
Question 2.3 Recent trend in total area infested within state
Describe trend: C. constant
Rationale:
Sources of information: Matt Brooks, Joe DiTomaso personal observation
Question 2.4 Innate reproductive potential
Describe key reproductive characteristics: A. high
Rationale:
Sources of information: 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).
Question 2.5 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
Question 2.6 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
Question 2.7 Other regions invaded
Identify other regions: C. low
Rationale: Found in similar habitats outside California, such as Oregon.
Sources of information: Other published materials: [floras to be cited]
Question 3.1 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: , 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).Hickman, 1993. The Jepson Manual, Higher Plant of Calfifornia. U.C. Press. and Matt Brooks personal observation
Question 3.2 Distribution
Describe distribution: D. not very frequent
Rationale:
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	**Yes: 1 pt**
Dense infestations produce >1,000 viable seed per square meter	**Yes: 2 pts**
Populations of this species produce seeds every year.	**Yes: 1 pt**
Seed production sustained over 3 or more months within a population annually	**No: 0 pt**
Seeds remain viable in soil for three or more years	**Yes: 2 pts**
Viable seed produced with *both* self-pollination and cross-pollination	**No: 0 pt**
Has quickly spreading vegetative structures (rhizomes, roots, etc.) that may root at nodes	**No: 0 pt**
Fragments easily and fragments can become established elsewhere	**No: 0 pts**
Resprouts readily when cut, grazed, or burned	**No: 0 pt**
6 pts	**Total Unknowns**
A (6+ pts)	

Note any related traits: enter text here

Worksheet C - California Ecological Types

(*sensu* Holland 1986)

Major Ecological Types	Minor Ecological Types	Code*
Marine Systems	marine systems	**score**
Freshwater and Estuarine Aquatic Systems	lakes, ponds, reservoirs	**score**
	rivers, streams, canals	**score**
	estuaries	**score**
Dunes	coastal	**score**
	desert	**score**
	interior	**score**
Scrub and Chaparral	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**
Grasslands, Vernal Pools, Meadows, and other Herb Communities	coastal prairie	**D. presen**
	valley and foothill grassland	**D. presen**
	Great Basin grassland	**score**
	vernal pool	**score**
	meadow and seep	**D. presen**
	alkali playa	**score**
	pebble plain	**score**
Bog and Marsh	bog and fen	**score**
	marsh and swamp	**score**
Riparian and Bottomland	riparian forest	**score**
	riparian woodland	**D. presen**
	riparian scrub (incl.desert washes)	**D. presen**
Woodland	cismontane woodland	**score**
	piñon and juniper woodland	**score**
	Sonoran thorn woodland	**score**
Forest	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**
Alpine Habitats	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).