

# 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>	Rumex acetosella
<b>Synonyms:</b>	Acetosella vulgaris
<b>Common names:</b>	sheep sorrel
<b>Evaluation date (mm/dd/yy):</b>	21/8/03
<b>Evaluator #1 Name/Title:</b>	Jake Sigg
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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>	Peter Warner, Joe DiTomaso, John Randall, Jake Sigg, Alison Stanton, Cynthia Roye
<b>Committee review date:</b>	8/27/2004
<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	U	No Information
1.2	Impact on plant community	B	Other Pub. Mat'l
1.3	Impact on higher trophic levels	B	Other Pub. Mat'l
1.4	Impact on genetic integrity	C	Other Pub. Mat'l

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

2.1	Role of anthropogenic and natural disturbance	B 2	Other Pub. Mat'l
2.2	Local rate of spread with no management	B 2	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	Other Pub. Mat'l

**“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:  
**12**  
 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	A	Other Pub. Mat'l
3.2	Distribution	A	Observational

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

**Table 3. Documentation**

<b>Question 1.1</b> Impact on abiotic ecosystem processes	<b>U No Information</b>
Identify ecosystem processes impacted:	
Rationale:	
Sources of information:	
<b>Question 1.2</b> Impact on plant community composition, structure, and interactions	<b>B Other Pub. Mat'l</b>
Identify type of impact or alteration: Displaces native grasses and forbs by root competition, shading. Can form large dense stands. May reduce or eliminate mycorrhizae.	
Rationale: enter text here	
Sources of information: Observational, Jake Sigg. Observational, Peter Warner. Wilken D., Hannah L. Rumex acetosella L..(Polygonaceae) Sheep Sorreal, Red Sorreal. SBBG. 1998.	
<b>Question 1.3</b> Impact on higher trophic levels	<b>B Other Pub. Mat'l</b>
Identify type of impact or alteration: Reduces or eliminates faunal sustenance. On San Bruno Mtn, competes directly w/host plants for federally-listed Endangered butterflies: callippe silverspot, mission blue, and San Bruno Elfin. Because its oxalates are documented as toxic to domestic livestock, it is possible that it could be toxic to wild mammals. May reduce or eliminate mycorrhizae.	
Rationale: By displacing native plants, I infer that fauna are deprived of sustenance. Sources state the plant is non-mycorrhizal; when it eliminates other plants, mycorrhizae would die.	
Sources of information: Observational, Jake Sigg. For toxicity information: Kingsbury, J.M. Poisonous Plants of the United States and Canada. Prentice-Hall Inc. Englewood Cliffs, New Jersey. 1964. Pg. 231. DiTomaso J. D., Healy E. H. Weeds of California and Other Western States. As yet unphlshed. 611-612 Wilken D., Hannah L. Rumex acetosella L..(Polygonaceae) Sheep Sorreal, Red Sorreal. SBBG. 1998	

<b>Question 1.4</b> Impact on genetic integrity	<b>C Observational</b>
Identify impacts: None known	
Rationale: No hybrids with natives Rumex species observed or reported, but native spp exist.	
Sources of information: Observational, Jake Sigg. Hickman, JC. 1993. The Jepson Manual: Higher Plants of California. UC Press.	
<b>Question 2.1</b> Role of anthropogenic and natural disturbance in establishment	<b>B Other Pub. Mat'l</b>
Describe role of disturbance: Thrives on soil disturbance. Easily distributed by seed or nursery stock or other human transport agent. Seeds disperse w/wind, water, mud, animals, vehicles tires, ag and landscape operations, and as seed, grain, and hay contaminants.	
Rationale: enter text here	
Sources of information: DiTomaso J. D., Healy E. H. Weeds of California and Other Western States. As yet unplished. 611-612	
<b>Question 2.2</b> Local rate of spread with no management	<b>B Observational</b>
Describe rate of spread: Slow but steady, mostly vegetatively.	
Rationale: enter text here	
Sources of information: Observational, Jake Sigg.	
<b>Question 2.3</b> Recent trend in total area infested within state	<b>C Observational</b>
Describe trend: Not extending range throughout state.	
Rationale: Because base population and seed source is greater every year, there are more plants to produce propagules. Not extending range throughout the state.	
Sources of information: Observational, Jake Sigg, P.Warner, J. DiTomaso. Recorded 2004.	
<b>Question 2.4</b> Innate reproductive potential	<b>A Observational</b>
Describe key reproductive characteristics: Primary spread by creeping rhizomes, which form large colonies; colonies flower abundantly. Spread by seedling regeneration is a lesser, but significant, factor.	

Rationale: enter text here	
Sources of information: Observational, Jake Sigg, John Randall, Peter Warner, Joe DiTomaso. Recorded 2004.	
<b>Question 2.5</b> Potential for human-caused dispersal	<b>B Observational</b>
Identify dispersal mechanisms: Too small for hay. Seeds don't adhere to clothing. Easily distributed by seed or nursery stock or other human transport agent. Seeds disperse w/wind, water, mud, animals, vehicles tires, ag and landscape operations, and as seed, grain, and hay contaminants.	
Rationale: enter text here	
Sources of information: Observational, P. Warner.	
<b>Question 2.6</b> Potential for natural long-distance dispersal	<b>C Observational</b>
Identify dispersal mechanisms: Probably uncommon.	
Rationale: Because it is common and widespread, it is not easy to determine the source of new plants. Seed is sufficiently heavy to make long-distance wind dispersal infeasible, and transport by birds is probably minimal.	
Sources of information: Observational, Jake Sigg, Joe DiTomaso. Recorded 2004.	
<b>Question 2.7</b> Other regions invaded	<b>C Other Pub. Mat'l</b>
Identify other regions: An almost cosmopolitan plant.	
Rationale: enter text here	
Sources of information: DiTomaso J. D., Healy E. H. Weeds of California and Other Western States. As yet unpublished. 611-612 Kingsbury, J.M. Poisonous Plants of the United States and Canada. Prentice-Hall Inc. Englewood Cliffs, New Jersey. 1964. Pg. 231. Wilken D., Hannah L. Rumex acetosella L..(Polygonaceae) Sheep Sorreal, Red Sorreal. SBBG. 1998.	
<b>Question 3.1</b> Ecological amplitude	<b>A Other Pub. Mat'l</b>
Describe ecological amplitude, identifying date of source information and approximate date of introduction to the state, if known: Found in coastal dunes, common in coastal bluff scrub, coastal scrub, coastal prairie, closed cone coniferous forest. May be in lower montane coniferous forest. Unknown when introduced, but entered California previous to 1880.	
Rationale: Found in 6 major ecotypes in CA.	

Sources of information: Wilken D., Hannah L. Rumex acetosella L..(Polygonaceae) Sheep Sorreal, Red Sorreal. SBBG. 1998. Observational, Jake Sigg.	
<b>Question 3.2</b> Distribution	<b>A Observational</b>
Describe distribution: Found in more than 50% of coastal prairie.	
Rationale: enter text here	
Sources of information: Observational, Jake Sigg, John Randall, Peter Warner, Joe DiTomaso.	

### 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 for 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>No: 0 pt</b>
Has quickly spreading vegetative structures (rhizomes, roots, etc.) that may root at nodes	<b>Yes: 1 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      1 unknown</b>
	<b>A (6+ pts)</b>
<b>Note any related traits:</b> enter text here	

Complete the worksheet that corresponds to your stacurrences invaded).

## 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	D. presen
	desert	score
	interior	score
<b>Scrub and Chaparral</b>	coastal bluff scrub	B. 21-50%
	coastal scrub	B. 21-50%
	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
<b>Grasslands, Vernal Pools, Meadows, and other Herb Communities</b>	coastal prairie	A. >50%
	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	D. presen
<b>Riparian and Bottomland</b>	riparian forest	score
	riparian woodland	D. presen
	riparian scrub (incl. desert washes)	score
<b>Woodland</b>	cismontane woodland	C. 5-20%
	piñon and juniper woodland	score
	Sonoran thorn woodland	score
<b>Forest</b>	broadleaved upland forest	D. presen
	North Coast coniferous forest	D. presen
	closed cone coniferous forest	C. 5-20%
	lower montane coniferous forest	D. presen
	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).