

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):	Agrostis avenacea
Synonyms:	Agrostis retrofracta
Common names:	Pacific bentgrass
Evaluation date (mm/dd/yy):	July 27, 2004
Evaluator #1 Name/Title:	Joseph M. DiTomaso
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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:	Jake Sigg, Alison Stanton, Peter Warner, Cynthia Roye, John Randall, Joe DiTomaso
Committee review date:	8/27/2004
List date:	enter text here
Re-evaluation date(s):	enter text here

General comments on this assessment:

Very little information is available on Pacific bentgrass. It has become naturalized in many areas of the state, country and world, but does not appear to be a significant problem.

Table 2. Criteria, Section, and Overall Scores

1.1	Impact on abiotic ecosystem processes	C	Observational
1.2	Impact on plant community	C	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:

DCUD

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 Wksht A	B 2	Other Pub. Mat'l
2.5	Potential for human-caused dispersal	C 1	Other Pub. Mat'l
2.6	Potential for natural long-distance dispersal	C 1	Rev'd, Sci. Pub'n
2.7	Other regions invaded	B 2	Rev'd, Sci. Pub'n

“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:

10

Use matrix to determine score and enter below:

C

“Plant Score”

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

Low

No Alert

3.1	Ecological amplitude/Range	C	Other Pub. Mat'l
3.2	Distribution/Peak frequency Wksht C	D	Observational

“Distribution”

Use matrix determine the score; enter below:

C

Table 3. Documentation

Question 1.1 Impact on abiotic ecosystem processes	D No Information back
Identify ecosystem processes impacted: No known effects on abiotic ecosystem processes. Populations do not appear to be significant enough to impact abiotic ecosystems.	
Rationale: enter text here	
Sources of information: DiTomaso, J.M. observational 2004	
Question 1.2 Impact on plant community composition, structure, and interactions	C Observational back
Identify type of impact or alteration: Does not appear to form a dense population that impacts plant communities.	
Rationale: enter text here	
Sources of information: DiTomaso, J.M. observational 2004	
Question 1.3 Impact on higher trophic levels	U No Information back
Identify type of impact or alteration: Unknown, but no impacts yet observed.	
Rationale: enter text here	
Sources of information:	
Question 1.4 Impact on genetic integrity	D Other Pub. Mat'l back
Identify impacts: Although there are some native species of <i>Agrostis</i> in California, there is no report of hybridization with <i>Agrostis avenacea</i> or other non-native species.	
Rationale: enter text here	
Sources of information: Hickman, J.C. (ed.). 1993. The Jepson Manual. UC Press.	
Question 2.1 Role of anthropogenic and natural disturbance in establishment	B Observational back
Describe role of disturbance: Often found in disturbed roadside environments, but has been observed to be in other sites, including ponds and open grassy areas, particularly with some moisture.	
Rationale: enter text here	

Sources of information: DiTomaso, J.M. observational 2004	
Question 2.2 Local rate of spread with no management	C Observational back
Describe rate of spread: Can be found in wildlands, but does not appear to spread readily or to form very dense stands.	
Rationale: enter text here	
Sources of information: DiTomaso, J.M. observational 2004	
Question 2.3 Recent trend in total area infested within state	C Observational back
Describe trend: Does not appear to be expanding its range in the state.	
Rationale: enter text here	
Sources of information: DiTomaso, J.M. observational 2004	
Question 2.4 Innate reproductive potential	B Other Pub. Mat'l back
Describe key reproductive characteristics: Very little is known of the biology of this species. It is a shortlived bunchgrass perennial which produces numerous small seeds.	
Rationale: enter text here	
Sources of information: Hickman, J.C. (ed.). 1993. The Jepson Manual. UC Press.; DiTomaso and Healy. 2005. Weeds of California and other western states. UC ANR (in press); DiTomaso, J.M. observational 2004	
Question 2.5 Potential for human-caused dispersal	C Other Pub. Mat'l back
Identify dispersal mechanisms: Thought that the inflorescences are picked up by vehicles and dispersed long distances, but this is probably fairly rare.	
Rationale: enter text here	
Sources of information: Nava-Rojo and Gomez-Sanchez et al. 2002. Agrostis avenacea: first record for the Mexican flora. Sida Contributions to Botany 20(1):423-429.	
Question 2.6 Potential for natural long-distance dispersal	C Rev'd, Sci. Pub'n back
Identify dispersal mechanisms: Plants act like tumble weeds and the dried panicles are carried widely by wind and in the process disperse their seeds. Probably does not move by this mechanism over 1 km. May also move via water in canals and streams, but typically not found alongside these sites.	

Rationale: enter text here	
Sources of information: Nava-Rojo and Gomez-Sanchez et al. 2002. <i>Agrostis avenacea</i> : first record for the Mexican flora. <i>Sida Contributions to Botany</i> 20(1):423-429.	
Question 2.7 Other regions invaded	B Rev'd, Sci. Pub'n back
Identify other regions: Reported from temporary and permanent ponds in Mexico. Not genererally found along ponds in California, so this may be a habitat that it can eventually spread into. Previously known from Australia, South Africa, Argentina, Chile, the Hawaiian Islands and most recently from Costa Rica. Native to the southern Pacific Islands.	
Rationale: nter text here	
Sources of information: Nava-Rojo and Gomez-Sanchez et al. 2002. <i>Agrostis avenacea</i> : first record for the Mexican flora. <i>Sida Contributions to Botany</i> 20(1):423-429.	
Question 3.1 Ecological amplitude/Range	C Other Pub. Mat'l back
Describe ecological amplitude, identifying date of source information and approximate date of introduction to the state, if known: Pacific bentgrass inhabits open, disturbed, often moist places on the southern North Coast, southern North Coast Ranges, Sierra Nevada foothills, Central Valley, Central-western region, and northern South Coast, to 300 m. It is especially invasive in vernal pool habitat in the San Diego area. Pacific bentgrass also occurs in Ohio, South Carolina, and Texas.	
Rationale: enter text here	
Sources of information: DiTomaso and Healy. 2005. <i>Weeds of California and other western states</i> . UC ANR. (in press)	
Question 3.2 Distribution/Peak frequency	D Observational back
Describe distribution: Not dominant or common in any community.	
Rationale: enter text here	
Sources of information: DiTomaso, J.M. observational 2004	

Worksheet A[back](#)

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	Unknown: 0 pts
Viable seed produced with <i>both</i> self-pollination and cross-pollination	Unknown: 0 pts
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	Unknown: 0 pts
	4 pts 3 unknowns
	B (4-5 pts)
Note any related traits: enter text here	

Worksheet C - California Ecological Types

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(*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	score
	coastal scrub	score
	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
Grasslands, Vernal Pools, Meadows, and other Herb Communities	coastal prairie	D. presen
	valley and foothill grassland	D. presen
	Great Basin grassland	score
	vernal pool	D. presen
	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	score
	riparian scrub (incl. desert washes)	score
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).