

ATTACHMENT SS2

REGION 2 SENSITIVE SPECIES EVALUATION FORM

Species: *Sparganium eurycarpum* Engelm. giant bur-reed

Criteria	Rank	Rationale	Literature Citations
1 Distribution within R2	A/C	Widely scattered in n-central, ne-most, and se-most (Sheridan, Crook, and Goshen Cos) WY [rank A]; apparently common through sw and e SD; thence s through NE and into n KS [rank C]; scattered in central and se KS, and e CO. Weber & Wittman (2001b) report a single collection from nw-most (Routt Co) CO [rank A]. [Vouchers at KANU from Yuma Co, CO; 17 cos in KS; 24 cos in NE; 20 cos in SD; and Goshen and Sheridan Cos, WY.] Status: G5;CO S2?; WY S1. Confidence in Rank High or Medium or Low	<ul style="list-style-type: none"> Clark & Crawford 2000 Freeman 2000 Freeman in prep. Great Plains Flora Association 1977 Kaul 1991 Weber & Wittman 2001a Weber & Wittman 2001b
2 Distribution outside R2	C	Widely distributed throughout the n 2/3 of the US and s 1/2 of Canada. Range mapped by Kaul from the w 1/2 of BC, e to Newfoundland and Labrador; thence s to MD; thence s and e through s IN, s IL, s MO, n OK, and n NM to se CA (although largely absent from NV). Disjunct in the NWT and Baja CA. Also in e Asia. Confidence in Rank High or Medium or Low	<ul style="list-style-type: none"> Kaul 2000
3 Dispersal Capability	B/C	Evaluator was unable to find any information about species' dispersal capability. I assume that species is largely dispersed by a combination of water and vertebrate animals, especially water fowl. Species is limited by its requirement for wetland habitat [rank B], but –given the wide array of habitats that species occupies– it seems likely species is fairly readily dispersed across wetlands [rank C]. Confidence in Rank High or Medium or Low	
4 Abundance in R2	C	Species appears to be secure throughout much of its range in R2, at least in KS, NE and SD. Confidence in Rank High or Medium or Low	
5 Population Trend in R2	B	Evaluator was unable to find any information on population trends within R2. I assume populations are at least stable throughout the Region, however. Confidence in Rank High or Medium or Low	
6 Habitat Trend in R2	B	Kaul reports species occupies a wide array of wetland habitats, from “lowland marshes, shores, and ditches, mostly in neutral-to-alkaline, hard, and even brackish waters on mud, sand, or gravel, sometimes among boulders on wave-washed shores, tolerant of some desiccation; 0–1600 m.” Some native habitat has undoubtedly been degraded or lost, due to draining or grazing by livestock. However, species appears able to colonize new sites and I expect that throughout R2, habitat is stable. Confidence in Rank High or Medium or Low	<ul style="list-style-type: none"> Kaul 2000
7 Habitat Vulnerability or Modification	C	Evaluator was unable to find any direct evidence about habitat vulnerability. However, species occupies a wide array of wetland habitats, most of which are regularly subjected to some kinds of disturbance (cattle grazing or inundation, for instance). Indirect evidence, such as that presented in sect 8, suggests that species is an effective colonizer of disturbed sites. I assume that habitat is at least somewhat resilient. Confidence in Rank High or Medium or Low	

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8 Life History and Demographics	C	Perennial emergent aquatic forb. Flowering early June through mid July; fruiting early June through mid September. Species is evidently a rather aggressive weed in cultivated rice crops and has been the subject of several recent studies by agricultural researchers (a few examples are presented as literature cited). Evaluator was unable to find any other information about life history. Confidence in Rank High or Medium or Low	<ul style="list-style-type: none"> • Clay & Oelke 1988 • Clay & Oelke 1990 • Leiff & Oelke 1990a • Leiff & Oelke 1990b
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National Forests in the Rocky Mountain Region where species is KNOWN (K) or LIKELY (L)¹ to occur:

<u>Colorado NF/NG</u>	<u>Known</u>	<u>Likely</u>	<u>Kansas NF/NG</u>	<u>Known</u>	<u>Likely</u>	<u>Nebraska NF/NG</u>	<u>Known</u>	<u>Likely</u>	<u>South Dakota NF/NG</u>	<u>Known</u>	<u>Likely</u>	<u>Wyoming NF/NG</u>	<u>Known</u>	<u>Likely</u>
Arapaho-Roosevelt NF		X	Cimmaron NG			Samuel R. McKelvie NF		X	Black Hills NF		X	Shoshone NF		
White River NF						Halsey NF		X	Buffalo Gap NG		X	Bighorn NF		X
Routt NF		X?				Nebraska NF		X	Ft. Pierre NG		X	Black Hills NF		X
Grand Mesa, Uncompahgre, Gunnison NF						Ogalala NG		X				Medicine Bow NF		
San Juan NF												Thunder Basin NG		X
Rio Grande NF														
Pawnee NG		X												
Pike-San Isabel NF														
Comanche NG														

REFERENCES

Clark, D. and C. Crawford. 2000. Preliminary floristic survey of Lincoln, Cheyenne, Kit Carson and Kiowa Counties: 2000 field season. Reported prepared for Colorado Natural Areas Program. 48 pp.

Clay, S.A. and E.A. Oelke. 1988. Basis for differential susceptibility of rice (*Oryza sativa*), wild rice (*Zizania palustris*) and giant bur-reed (*Sparganium eurycarpum*) to bentazon. *Weed Sci.* 36: 301–304.

Clay, S.A. and E.A. Oelke. 1990. Chemical control of giant bur-reed (*Sparganium eurycarpum*) in wild rice (*Zizania palustris*). *Weed Techn.* 4: 294–298.

Freeman, C.C. 2000. Floristic surveys of Cheyenne, Kiowa, Kit Carson, and Lincoln Counties, Colorado. Unpublished report submitted to the Colorado Natural Areas Program. 63 pp.

Freeman, C.C. (in prep.) Checklist of the Vascular Plants of the Grassland Biome of Central North America.

¹ Likely is defined as more likely to occur than not occur on the National Forest or Grassland. This generally can be thought of as having a 50% chance or greater of appearing on NFS lands.

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- Great Plains Flora Association. 1977. *Atlas of the Flora of the Great Plains*. Iowa State University Press. Ames, Iowa. xii + 600 pp.
- Kaul, R.B. 1991. Sparganiaceae, pp. 1235–1237 in Great Plains Flora Association, *Flora of the Great Plains*. University Press of Kansas. Lawrence, Kansas. vii + 1402 pp.
- Kaul, R.B. 2000. Sparganiaceae, pp. 272–277 in Flora of North America Editorial Committee, *Flora of North America North of Mexico, Vol. 22: Magnoliophyta: Alismatidae, Arecidae, Commelidae (in part), and Zingiberidae*. Oxford University Press. New York, New York. xxiii + 352 pp.
- Leiff, J.W. and E.A. Oelke. 1990a. Effects of glyphosphate and surfactant concentrations on giant bur-reed (*Sparganium eurycarpum*) control with a ropewick applicator. *Weed Techn.* 4: 625–630.
- Leiff, J.W. and E.A. Oelke. 1990b. Growth and development of giant bur-reed (*Sparganium eurycarpum*). *Weed Techn.* 4: 849–854.
- Weber, W.A. and R.C. Wittman. 2001a. *Colorado Flora: Eastern Slope* (3rd Edition). University Press of Colorado. Boulder, Colorado. xl + 521 pp.
- Weber, W.A. and R.C. Wittman. 2001b. *Colorado Flora: Western Slope* (3rd Edition). University Press of Colorado. Boulder, Colorado. xxxvii + 488 pp.