

ATTACHMENT SS2

REGION 2 SENSITIVE SPECIES EVALUATION FORM

Species: *Cypripedium calceolus var. pubescens* / Large Yellow Lady's-slipper (*C. pubescens*, *C. parviflorum var. pubescens*)

Criteria	Rank	Rationale	Literature Citations
1 Distribution within R2	B	<p>Region 2 harbors an outlying southwestern portion of Large Yellow Lady's-slipper distribution. It occurs in all states within Region 2. In Wyoming, it is known from the Bighorn Range and Black Hills in Big Horn, Crook, Sheridan, and Washakie counties. A specimen from the east slope of the Wind River Range (Fremont County) has been attributed to this taxon, but may belong to <i>C. p. var. parviflorum</i>, a variety that is not otherwise known in the state. In Colorado, this taxon is known from the Arapaho-Roosevelt, San Juan, and Pike-San Isabel national forests. It is also present on the Black Hills National Forest in South Dakota.</p> <p>Large Yellow Lady's-slipper is found in damp, mossy woods at seepage zones or streambanks, and in bogs at 4000-6400 feet. These microhabitats are restricted and patchy on the landscape.</p> <p>Confidence in Rank High</p>	<ul style="list-style-type: none"> • Beauvais et al. 2000 • Colorado Native Plant Society 1997 • Dorn 2001 • Evert 1985 • Fertig 2000a, b • Girard 1992 • Ode and Marriott 1990 • O'Dea and Fertig 2000 • Porter 1965 • Welp et al. 1998 • Welp et al. 2000
2 Distribution outside R2	B	<p>It occurs from Alaska to Newfoundland, south to Washington, Arizona, New Mexico, Kansas, Mississippi, and Georgia. There are disjunct populations in the Rocky Mountains from Wyoming to New Mexico and Texas.</p> <p>Confidence in Rank High</p>	<ul style="list-style-type: none"> • Cronquist et al. 1977 • Hitchcock et al. 1969 • Larson and Johnson 1999 • Luer 1975 • NatureServe 2002 • O'Dea and Fertig 2000
3 Dispersal Capability	C	<p>The seeds of many species in the Orchid Family are dust-sized and wind-dispersed. The orchid embryo is not differentiated into distinct organs, as are most plant embryos. The lack of a nutrient storage compartment generally limits the length of time that seeds can survive without germinating, limiting dispersal capability.</p> <p>Confidence in Rank LOW</p>	<ul style="list-style-type: none"> • Dressler 1990
4 Abundance in R2	B	<p>In Wyoming, Large Yellow Lady's-slipper is known from 7 extant occurrences, all observed since 1979 and 2 historical populations. It was last observed in 2001 within Wyoming. Population size poorly known, but thought to be small.</p> <p>In Colorado and Wyoming, it is ranked "S2." It is present and may or may not be ranked and tracked in Kansas, Nebraska and South Dakota.</p> <p>Confidence in Rank Medium</p>	<ul style="list-style-type: none"> • NatureServe 2002 • O'Dea and Fertig 2000

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Criteria	Rank	Rationale	Literature Citations
5 Population Trend in R2	D	Probably declining during last century. Confidence in Rank High	<ul style="list-style-type: none"> O'Dea and Fertig 2000
6 Habitat Trend in R2	A	Grazing and developments have been concentrated around the species' low-elevation wetland habitat. Confidence in Rank Low	<ul style="list-style-type: none"> -
7 Habitat Vulnerability or Modification	A	This species and its habitat are potentially threatened by logging and grazing, picking or uprooting by wildflower enthusiasts, and habitat loss from development. This species is sought by wildcrafters in part of its range for commercial collecting as a medicinal plant but is not known to be harvested in Wyoming. One population on Bighorn National Forest is found within the potential Dry Fork Research Natural Area. The Black Hills population occurs in the vicinity of the Dugout Gulch Botanical Management Area. Large yellow lady's-slipper is otherwise found on lands managed for multiple use by the Bighorn National Forests and on the Wind River Indian Reservation. Confidence in Rank Medium	<ul style="list-style-type: none"> O'Dea and Fertig 2000
8 Life History and Demographi cs	D	Large Yellow Lady's-slipper is an herbaceous perennial that flowers more than once in its life cycle. Leafy stems extend from a short rhizome. The <i>Cypripedium</i> genus is adapted for pollination by small bees, with a "trap flower design" and lip that forms a deep pouch with nectar (Dressler 1990, Proctor 1972). Flowering occurs from late May to June. The fruit is an elliptic capsule that contains thousands of miniscule seeds. Life history information on this species, including life history stages, population structure, longevity, mortality, pollination biology and seed biology, are not available. Confidence in Rank High	<ul style="list-style-type: none"> Dressler 1990 O'Dea and Fertig 2000 Proctor 1972
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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>	Known	Likely	<u>Kansas NF/NG</u>	Known	Likely	<u>Nebraska NF/NG</u>	Known	Likely	<u>South Dakota NF/NG</u>	Known	Likely	<u>Wyoming NF/NG</u>	Known	Likely
Arapaho-Roosevelt NF	X		Cimmaron NG			Samuel R. McKelvie NF			Black Hills NF	X		Shoshone NF		
White River NF						Halsey NF			Buffalo Gap NG			Bighorn NF	X	
Routt NF						Nebraska NF			Ft. Pierre NG			Black Hills NF	X	
Grand Mesa, Uncompahgre, Gunnison NF						Ogalala NG						Medicine Bow NF		
San Juan NF	X											Thunder Basin NG		
Rio Grande NF														
Pike-San Isabel NF	X													
Comanche NG														

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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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