

ATTACHMENT SS2

REGION 2 SENSITIVE SPECIES EVALUATION FORM

Species: (<i>Packera mancosana</i> / Mancos Shale <i>Packera</i>)			
Criteria	Rank	Rationale	Literature Citations
1 Distribution within R2	A	<p>This species was described in 2011 (Yeats, Schneider, & Schneider) and is currently known from three occurrences in Dolores County, CO (Colorado Natural Heritage Program 2008). One of the occurrences is found in Lone Mesa State Park, with other locations found on San Juan National Forest and Bureau of Land Management lands, and on private land adjacent to the State Park. All occurrences are within a radius of approximately 1 mile of each other. All occurrences are found on barren Mancos shale outcrops and side slopes of shallow washes – this species appears to be a narrow endemic.</p> <p>Two other new species have been found nearby in similar habitat and these three species have not been found elsewhere, indicating that the habitat is rare (Lyon 2008).</p> <p><i>Packera mancosana</i> has been tentatively ranked by the Colorado Natural Heritage Program as a G1/S1 species (July, 2013).</p> <p>Confidence in Rank High</p>	<ul style="list-style-type: none"> • http://www.phytoneuron.net/PhytoN-Packeramancosana.pdf . • http://www.cnhp.colostate.edu/download/projects/rareplants/guide_print.asp?id=44578 . • Lyon, 2008. • http://www.cnhp.colostate.edu/download/list/vascular.asp .
2 Distribution outside R2	A	<p>Not known outside of Dolores County, CO. Apparently highly endemic.</p> <p>Confidence in Rank High</p>	<ul style="list-style-type: none"> • Al Schneider, pers. comm with S. Popovich 4/25/2015.
3 Dispersal Capability	B	<p>It is likely that this species grows only in a specific habitat and that dispersal is only through suitable habitat. This habitat is limited.</p> <p>The dispersal ability of this species has not been investigated. The achenes of this species are equipped with pappus hairs (Yeats, Schneider, & Schneider. 2011), which aid in wind and animal mediated dispersal. This species also spreads vegetatively.</p> <p>Confidence in Rank High</p>	<ul style="list-style-type: none"> • http://www.phytoneuron.net/PhytoN-Packeramancosana.pdf . • Geologist John Bregar. • http://www.phytoneuron.net/PhytoN-Packeramancosana.pdf .

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4 Abundance in R2	A	<p>Total estimated individuals (in all locations) is 500.</p> <p>All populations are in Dolores County, Colorado, and are within the Dolores Ranger District proclaimed boundary.</p> <p>NFS land has not been totally surveyed for <i>P. mancosana</i> but Al Schneider estimates the total number of plants on NFS to be about 100 in one or two sites very close to each other. Peggy Lyon might have more information about populations as she did surveys for CNHP for <i>Physaria pulvinata</i> and perhaps <i>G. elegans</i> in the exact same area that <i>P. mancosana</i> occurs.</p> <p>Confidence in Rank High</p>	<ul style="list-style-type: none"> Al Schneider, pers. comm with S. Popovich 3/25/2015.
5 Population Trend in R2	B	<p>No monitoring plot has been established to assess long-term trends.</p> <p>Al Schneider stated that "I have not made scientifically-valid sampling of the number of plants or their population shifts, but from my 1-3 visits per year over the past 7 years, I would indicate that the populations are stable." Reliability of these observations cannot be assessed and time needed to capture population trend or range of variation is unknown.</p> <p>Confidence in Rank LOW</p>	<ul style="list-style-type: none"> Al Schneider, pers. comm with S. Popovich 3/25/2015.
6 Habitat Trend in R2	A	<p>The habitat quantity and quality are currently in a downward trend due to human and cattle impacts in the area (see number 7 below).</p> <p>Confidence in Rank High</p>	<ul style="list-style-type: none"> Al Schneider, pers. comm with S. Popovich 3/25/2015.

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7 Habitat Vulnerability or Modification	A	<p>Plateau Creek cuts through the Mancos Shale where <i>Packera mancosana</i> is found. Potential impoundments of Plateau Creek for a \$30 million reservoir and for a \$1.3 billion pump storage project (both non-FS proponents) would extirpate almost all occurrences on NFS lands and on other lands. These project threats appear non-imminent at this time but remain proponent priorities.</p> <p>Habitat threats for <i>Physaria pulvinata</i>, a R2 Sensitive Species, and for <i>Gutierrezia elegans</i>, a R2 Sensitive Species, both of which occur sympatrically with <i>Packera mancosana</i> in the barren shale habitat were described as: grazing, recreational use, off-road vehicle traffic, and mining the soil for road surfacing (O’Kane and Reveal 2006). Several <i>P. mancosana</i> occurrences are located adjacent to a road and could be impacted by future road maintenance.</p> <p>Confidence in Rank High</p>	<ul style="list-style-type: none"> • http://www.cortezjournal.com/article/20140825/NEWS01/140829885/0/SEARCH/Reservoir-would-destroy-habitat-of-2-rare-plants • O’Kane and Reveal 2006.
8 Life History and Demographics	D	<p>No studies of life history or demographics of this species have been conducted.</p> <p>Confidence in Rank High</p>	<ul style="list-style-type: none"> • Al Schneider, pers. comm with S. Popovich 3/25/2015.
Evaluator(s): Steve Popovich (ARP) and Al Schneider (species authority); concurred by Mark Tucker and Cara Gildar (both SJNF)			Date: April 3, 2015

National Forests in the Rocky Mountain Region where species is KNOWN (K) or LIKELY (L)¹ to occur:

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.

