

ATTACHMENT SS2

REGION 2 SENSITIVE SPECIES EVALUATION FORM

Species: ***Liochlorophis vernalis blanchardi* [*Opheodrys vernalis* (Harlan 1927) – smooth green snake]**

Comments: Cundall (1981) removed all of the Asiatic species of *Opheodrys* and retained only the species *aestivus* and *vernalis* in the genus. Given that *Liochlorophis* (Oldham and Smith 1991) is the monotypic sister genus to the monotypic genus *Opheodrys*, recognition of the former taxon is unnecessary, and reduces the amount of information conveyed by the names. As such, Crother et al. (2000) retained the species *vernalis* in the genus *vernalis* in the genus *Opheodrys*. Although several recent authors (e.g., Degenhardt et al. 1996; Hammerson 1999; Bartlett and Tennant 2000) retained the genus *Liochlorophis* this should be replaced with *Opheodrys* in future references. The several subspecies (including *O. vernalis blanchardi*, Western Smooth Green Snake and *O. v. vernalis*, Eastern Smooth Green Snake) described by Grobman (1941; 1992) are based on character clines and are not currently recognized (Crother et al. 2000). Collins et al. (1982) was the last of the “current-scientific-names” guides to recognize these taxa; they were not recognized by Collins (1990) and subsequent guides.

Criteria	Rank	Rationale	Literature Citations
1 Distribution within R2	B	Habitat within R2 patchy, some populations function as metapopulation, others widely disjunct. Distribution restricted by habitat requirements, e.g., lower montane stream and meadow habitat. Widespread in western 2/3 of Colorado; widespread and disjunct in Nebraska, South Dakota, Wyoming; limited to extreme northeast corner of Kansas. Confidence in Rank: High	<ul style="list-style-type: none"> • Ballinger et al. 2000 • Ballinger 2001 <i>unbpubl. data</i> • Bartlett and Tennant 2000 • Baxter and Stone 1985 • Hammerson 1999 • Tennant and Bartlett 2000 • Collins 1982
2 Distribution outside R2	C	Southern Saskatchewan east through the Great Lakes Region to the Maritime Provinces of Canada and Virginia, disjunctively southwest to Utah (including the mountain ranges of eastern Utah), New Mexico, Texas, and Chihuahua, Mexico. Some published records from Texas have been judged to be in error. Species is widespread in suitable habitat. Confidence in Rank: High	<ul style="list-style-type: none"> • Ernst and Barbour 1986 • Dixon 1987 • Hammerson 1999 • Hudson 1942 • Werler and Dixon 2000 • Wheeler and Wheeler 1966 • Worthington 1973
3 Dispersal Capability	B	Dispersal restricted by habitat requirements (lower montane stream and meadow habitat). The species is unable to disperse across high montane or low elevation, intermountain habitat due to low temperatures or xeric conditions. Confidence in Rank: High	<ul style="list-style-type: none"> • Hammerson 1999
4 Abundance in R2	B/C	Species is common in Colorado although limited and disjunct in other regions of R2 - thus the combination ranking. The species is reported as rare in Nebraska and Wyoming; it has a small and disjunct distribution in South Dakota and is unknown in Kansas. Confidence in Rank: Medium	<ul style="list-style-type: none"> • Ballinger et al. 2000 • Ballinger 2001 <i>unbpubl. data</i> • Baxter and Stone 1985 • Hammerson 1999 • Hudson 1942 • Tennant and Bartlett 2000

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Criteria	Rank	Rationale	Literature Citations
5 Population Trend in R2	B (in CO) D (else- where)	<p>Populations of this species have declined during the last 50 years in the northeastern U.S. The reason is unknown but may be attributed to habitat loss through agricultural uses or through pesticide contamination of its' insect prey. Because of this, the species formerly broad range has fragmented into numerous disjunct populations (especially in the west) resulting in the most complex configured range of any snake in eastern and central North America.</p> <p>In spite of the above discussion, the species is widespread and secure in the western 2/3 of Colorado. In the other regions of R2, the species is abundant at select sites but the population trends are unknown.</p> <p>Confidence in Rank: Medium</p>	<ul style="list-style-type: none"> • Baxter and Stone 1985 • Hammerson 1999 • Tennant and Barlett 2000
6 Habitat Trend in R2	A	<p>Habitat is lush growth of herbaceous and shrubby vegetation along mountains and foothill streams and meadow habitats adjacent to riparian vegetation. In National Forests the riparian areas should be rather secure, thus populations of this species should be secure. However, with overgrazing, pollution, and overall degradation of riparian areas and adjacent slopes on private or public lands, the habitat of this species would trend downward.</p> <p>Confidence in Rank: Medium</p>	<ul style="list-style-type: none"> • None used, professional opinion of Evaluator
7 Habitat Vulnerability or Modification	A	<p>The habitat described in "Habitat Trend" is likely to most susceptible habitat type in R2 to degradation through overgrazing.</p> <p>Communal hibernation is well known, making the species susceptible to winter kill through habitat destruction.</p> <p>Confidence in Rank: High</p>	<ul style="list-style-type: none"> • Jacobs 1991 • Stuart and Painter 1993

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Criteria	Rank	Rationale	Literature Citations
<p style="text-align: center;">8</p> <p>Life History and Demographics</p>	B	<p>Species has moderate reproductive rate, with 4-8 eggs. Western populations likely average fewer eggs due to smaller average size of adult females. Hatchling survivorship is unknown.</p> <p>Species is a generalist on invertebrate prey, thus the ability of a variety of insects and other invertebrates to rebound after perturbation is important in the recolonization potential of this species after a disturbance.</p> <p>Confidence in Rank: Medium</p>	<ul style="list-style-type: none"> • Degenhardt et al. 1996 • Hammerson 1999
<p>Initial Evaluator(s): Charles W. Painter; Endangered Species Program, New Mexico Department of Game and Fish, Santa Fe, NM 87504</p>			<p>Date:</p>

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National Forests in the Rocky Mountain Region where species is KNOWN (K) or LIKELY(L)¹⁴ to occur:

Occurs in both sections of Comanche NG and in Cimmaron NG. May occur in several other areas.

<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	Y		Cimmaron NG	N	N	Samuel R. McKelvie NF	N	N	Black Hills NF	Y		Shoshone NF	N	N
White River NF	Y					Halsey NF	N	N	Buffalo Gap NG	N	2	Bighorn NF	N	N
Routt NF	Y					Nebraska NF	N	3	Ft. Pierre NG	N	N	Black Hills NF	Y	
Grand Mesa, Uncompahgre, Gunnison NF	Y					Ogalala NG	N	4				Medicine Bow NF	Y	
San Juan NF	Y											Thunder Basin NG	N	1
Rio Grande NF	Y													
Pike-San Isabel NF	Y													
Comanche NG	N	N												

1 This NG is close to the Black Hills NF where the species is known. If there is suitable habitat (see #6 above) then the likelihood of the species occurring on Thunder Basin NG is very good.

2 This NG is close to the Black Hills NF where the species is known. If there is suitable habitat (see #6 above) then the likelihood of the species occurring on Buffalo Gap NG is good.

3/4 These areas are far south the Black Hills NF where the species is known. Given the distance to the nearest population (Tennant and Bartlett 2000) if there is suitable habitat (see #6 above) the likelihood of the species occurring on the NW section of Nebraska NF and the Ogalala NG is slim.

¹⁴ 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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