1. **Species:** Mexican Spotted Owl (*Strix occidentalis lucida*)

2. **Status:** Table 1 summarizes the current status of this species or subspecies by various ranking entity and defines the meaning of the status.

Table 1. Current status of *Strix occidentalis lucida*

Entity	Status	Status Definition
NatureServe	G3G4 T3T4 (T3)	*Species is Vulnerable* At moderate risk of extinction or elimination due to a fairly restricted range, relatively few populations or occurrences, recent and widespread declines, threats, or other factors.
CNHP	S1B, SUN	*Species is Critically Imperiled (Breeding Only)* At very high risk of extinction or elimination due to very restricted range, very few populations or occurrences, very steep declines, very severe threats, or other factors. (SUN = Non-breeding Under Review)
Colorado State List Status	State Threatened; Tier 2	Colorado State Endangered and Threatened Species List
USDA Forest Service	ESA Section 7	ESA Section 7 consultation requirement for activities that may affect the species.
USDI FWS[b]	FT	Federally listed as Threatened
USDI FWS Critical Habitat	None	No occurrence of proposed critical habitat within the planning area.

[a] Colorado Natural Heritage Program.
[b] US Department of Interior Fish and Wildlife Service.

The 2012 U.S. Forest Service Planning Rule defines Species of Conservation Concern (SCC) as "a species, other than federally recognized threatened, endangered, proposed, or candidate species, that is known to occur in the plan area and for which the regional forester has determined that the best available scientific information indicates substantial concern about the species' capability to persist over the long-term in the plan area" (36 CFR 219.9). This overview was developed to summarize information relating to this species' consideration to be listed as a SCC on the Rio Grande National Forest, and to aid in the development of plan components and monitoring objectives.

3. Taxonomy

Genus/species *Strix occidentalis lucida* is accepted as valid (ITIS 2015).

4. Distribution, abundance, and population trend on the planning unit [12.53.2,3,4]:

The Mexican spotted owl occurs from southern Utah and Colorado south through the mountains of Arizona, New Mexico, and west Texas into the mountains of central Mexico (McDonald et al. 1991 cited in USDI Fish and Wildlife Service 2013). Mexican spotted owl is widely but patchily distributed throughout its' range in the United States, with distribution reflecting the availability of forested mountains and canyons, and in some cases rocky canyonlands.

The Rio Grande NF has completed habitat and presence/absence surveys for the MSO since the late 1980's. Repeat surveys with current personnel have been completed in areas considered to offer the "best potential habitat" on the Forest. The BLM has also completed several years of surveys (2004-2009) in their best potential habitat. To date, no individuals have been detected on Forest or BLM lands in the San Luis Valley. Based on survey efforts, it is becoming increasingly unlikely that suitable nesting habitat for the Mexican spotted owl (MSO) occurs on the Rio Grande National Forest. In the southern portion of the planning area, some canyons do occur that contain suitable forest vegetation types such as Douglas-fir, white fir, and ponderosa pine. However, the canyons are not typically as steep, sheer or narrow as those described for the Wet Mountains of Colorado where MSOs do occur (Johnson 1997 cited in Ghormley 2015). Elevation may also be a limiting factor on the Rio Grande National Forest. Although some mixed-conifer and ponderosa pine cover types on the Forest do overlap with the elevation range of owls studied in the Wet Mountains, these quickly give way to spruce-fir forest as the elevation increases (Ghormley 2015).

The species is not known to occur on the RGNF or within the greater San Luis Valley area; therefore, no trends are identified for the planning area.

Table 2. Known Occurrence Frequency within the Planning Area (NRIS database)

Known Occurrences within the last 20 years	0
Year Last Observed	NA

5. Brief description of natural history and key ecological functions [basis for other 12.53 components]:

Mexican spotted owls throughout their range nest, roost, forage, and disperse most commonly in mixed-conifer forests may include Douglas-fir and/or white fir, with codominant species including southwestern white pine, limber pine, and ponderosa pine. The understory often contains the above coniferous species as well as broadleaved species such as Gambel oak, maples, box elder, and/or New Mexico locust. In the northern part of the range, including southern Utah, southern Colorado, and far northern Arizona and New Mexico, owls occur primarily in rocky canyons and utilize caves and cliff ledges for nesting (Kertell 1977, Reynolds 1990, Rinkevich 1991, Willey 1993, cited in USDI Fish and Wildlife Service 2013).

Mexican spotted owls (MSO) in the Southern Rocky Mountains Ecological Management Unit (EMU) are found primarily in canyons, but the owls also occupy forest habitat types. The canyon habitat often has mature Douglas-fir, white fir, and ponderosa pine in canyon bottoms and on the north- and east-facing slopes. Ponderosa pine grows on the more xeric south and west-facing slopes, with pinyon-juniper growing on the mesa tops (USDI Fish and Wildlife Service 2012).

Foraging occurs in a variety of habitats including managed and unmanaged forests, pinyon-juniper woodlands, mixed-conifer and ponderosa pine forests, cliff faces and terraces between cliffs, and riparian zones (Ganey and Balda 1994, Willey 1998a,b; Ganey et al. 2003, Willey and Van Riper 2007, all cited in USDI Fish and Wildlife Service 2012). Reported prey items include woodrats, mice, voles, rabbits, gophers, bats, birds, reptiles, and arthropods.

6. Overview of ecological conditions for recovery, conservation, and viability [12.53 7, 9?, 10, 11, 12]:

Key habitat variables required to fulfill Mexican spotted owl life history requirements include nesting, roosting, and foraging habitat patches with structural, compositional, and successional diversity, as well as connectivity among suitable patches. Management recommendations for three categories of MSO habitat (i.e. Protected Activity Centers, Recovery Habitat, and Other Forest and Woodland Types) are provided within the Recovery Plan (USDI Fish and Wildlife Service 2012).

7. Threats and Risk Factors

Two primary reasons cited for the original federal listing of MSO in 1993 were 1) historical alteration of its habitat as the result of timber-management practices, and 2) the threat of these practices continuing as evidenced in existing national forest plans. The danger of stand-replacing wildland fire was also cited as a threat at that time. With recent forest management now emphasizing sustainable ecological function and a return toward pre-settlement fire regimes, the primary threats to the MSO population in the U.S. have since transitioned from timber harvest to an increased risk of stand-replacing wildland fire. Climate variability combined with current forest conditions may also synergistically result in increased loss of habitat from fire. More intense natural drought cycles and the ensuing stress placed upon forested habitats could result in even larger and more severe wildland fires in owl habitat (USDI Fish and Wildlife Service 2012).

8. Key literature

Ghormley, R. 2015. Southwestern willow flycatcher and Mexican spotted owl survey and status report, 2014 field seasons. Unpublished Report. Rio Grande National Forest. 11p.

USDI Fish and Wildlife Service. 2012. Final Recovery Plan for the Mexican Spotted Owl (*Strix occidentalis lucida*), First Revision. U.S. Fish and Wildlife Service. Albuquerque, New Mexico, USA. 413 pp.

USDI Fish and Wildlife Service. 2013. Mexican spotted owl; general biology and ecological relationships. Accessed online at: http://www.fws.gov/southwest/es/MSO_Main.html [07/29/2015].

9. Map of Known Occurrences and Suitable Habitat

There no known occurrences within the planning area. The RGNF modeled habitat in 2006 in an attempt to describe potential habitat and focus survey efforts as needed (Figure 1). Based on the query developed, this model identified 14,103 acres of potential MSO habitat on the Forest. Given the extensive surveys conducted throughout this habitat with no positive MSO occurrences resulting, this model likely over-estimates potential MSO habitat in the planning area substantially.

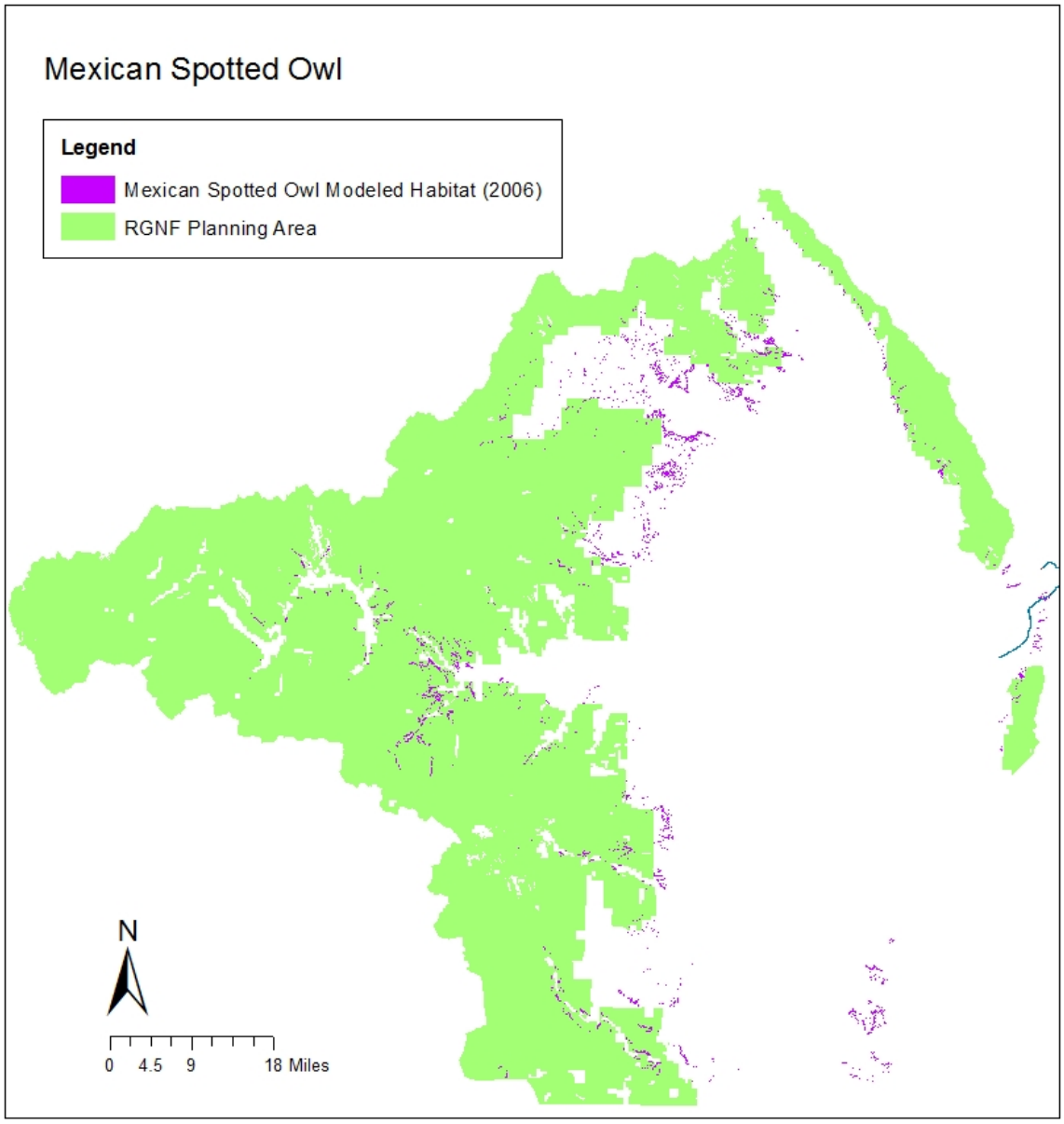

Figure 1. Mexican Spotted Owl Modeled Habitat.