



United States Department of Agriculture

Potential Species of Conservation Concern Comments and Response to Comments

Carson National Forest New Mexico



Forest Service

Carson National Forest

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About this Document

The Carson National Forest (NF) began the forest plan revision process in February 2014. As part of revising a forest plan, a list of species of conservation concern (SCC) must be developed by the forest and approved by the regional forester. The Carson NF began developing its SCC list in June 2014. As defined in the 2012 Planning Rule, SCC is “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\(c\)](#)). Guidance provided in the final directives for the 2012 Planning Rule ([Forest Service Handbook \[FSH\] 1909.12 – Land Management Planning, Chapter 10](#)) were used to develop the potential SCC list for the Carson NF. [Potential Species of Conservation Concern for the Carson National Forest](#) is the full report that explains why species were included or not included on the potential SCC list.

Internal databases (USDA FS 2014), Carson NF breeding bird species survey data (Beason et al. 2006, 2007) and museum databases, including Arctos Collection Management Information System (Arctos 2014), Biota Information System of New Mexico (BISON-M 2014), Natural Heritage New Mexico (NHNM 2014), New Mexico Biodiversity Collections Consortium (NM BCC 2009), Southwest Environmental Information Network (SEINet 2014) were queried for forest-specific observations.

In addition to the databases and lists cited above, Forest Service biologists at the Carson NF Supervisor’s Office and ranger districts, as well as the Southwestern Regional Office, were consulted in the development of the potential SCC list. Subject matter experts were interviewed via personal communications. Staff at Natural Heritage New Mexico (R. McCollough); New Mexico Department of Game and Fish (J. Stuart, N. Quintana, L Pierce, C. Hayes, S. Liley, R. Hansen, J. Caldwell, R. Winslow, E Goldstein, B. Lang, J. Davidson); New Mexico Museum of Natural History (J.T. Giermakowski); New Mexico State University (J. Frey); U.S. Fish and Wildlife Service (E. Hein); and others were able to review internal records and databases or rely on agency specialists to further filter the list.

The Carson NF potential SCC list was released for public comment in May of 2015. Based on public comment, the list was updated August 2015. The potential SCC list was then sent to Southwestern Region’s wildlife program staff for review in the fall of 2015. Following this review, the list went to the regional forester for approval. The regional forester approved the potential SCC list in March 2016. The Carson NF’s SCC list will not be final until the decision for the final revised plan is made (possibly in 2018). The SCC list will then be approved again by the regional forester. SCCs can also be changed throughout the life of the forest plan without an amendment based on new scientific information.

Below are comments the Forest Plan Revision (FPR) Team received concerning the Carson NF potential SCC list, and Forest Service responses to these comments. Only the portion(s) of the comment that pertained to SCC was transcribed, and to the best of our ability comments were transcribed as written by the original commenter.

Carson Species of Conservation Concerns Source Public Comments

Turner Endangered Species Fund and Vermejo Park Ranch (7/8/2015):

As the Draft Assessment indicates the black-footed ferret (ferret) is a federally listed endangered species whose historic range is concomitant with large portions of the Carson National Forest (CNF). The ferret remains one of the rarest mammals on the planet principally because it is an obligate predator of prairie dogs and all prairie dog species have become increasingly scarce throughout their historic ranges. The Gunnison's prairie dog, while not afforded any federal or state protection, is identified as a Species of Greatest Conservation Need by the state of New Mexico, is included in the Regional Forester's Sensitive Species List and Adjacent Federal Agency's Sensitive Species List and has been petitioned for ESA listing. Management to increase Gunnison's populations on the CNF would meet the sole habitat requirement for ferrets and would satisfy many of the habitat needs of several other species of conservation concern mentioned in the Draft Assessment including the western diamondback rattlesnake, golden eagle, burrowing owl, ferruginous hawk, bald eagle, and northern harrier.

In reviewing the Draft Assessment it appears the reason active ferret recovery was not considered was because of the lack of suitable habitat (absence of Gunnison's) on the CNF, and in turn, the rationale for removing Gunnison's from the Species of Conservation Need within the Draft Assessment were: "agricultural land development on adjacent private lands, plague and prairie dog control and target shooting are threats that are not under agency control".

Carson NF Response: Gunnison Prairie Dog was reviewed and re-added as a Carson NF potential SCC.

Center for Biological Diversity, New Mexico Wilderness Alliance, Rio Grande Chapter of the Sierra Club, Amigos Bravos, Defenders of Wildlife, New Mexico Sportsmen, Back Country Horsemen of New Mexico, and WildEarth Guardians (7/9/2015):

Monarch Butterfly (*Danaus plexippus*)

Here, the monarch is known to occur in the plan area, and best available science suggests there is substantial concern about the species ability to persist in the area long-term. The rationale the Forest Service gave for why the monarch was removed as a species for conservation concern is that it is a "migrant". Whether or not a species is migratory is not the determinate factor as to whether it is considered a species of conservation concern. There are cognizable threats that the Forest Service can mitigate, so they should reconsider adding the monarch as a species of conservation concern.

The Monarch butterfly has seen a significant drop in population over the last decade (Peasants and Oberhauser 2013). Scientific literature on the subject indicates that herbicide use (an activity the Forest Service can manage) is one of the main contributing factors in the decrease in monarch population. In order for the monarch to recover or at least maintain its lower numbers, conservation of migration corridors of the species are imperative (See, for example Lotts and Naberhaus 2014). Wildlife should not be removed from Species of Conservation Concern list because they are only seasonal visitors to the region—conservation of migration corridors are important for wildlife health, and will become more so due to climate change and increasing habitat fragmentation across the United States.

Here, monarchs are known to occur in the plan area, and the scientific literature indicates that there are cognizable threats that the forest service can take steps to mitigate. Since it meets the main criteria, it should qualify as a species of conservation concern. There is no language in the statute, regulations, or Forest Service guidance that indicates solely because a species is a migrant it should be disqualified from the list, and the scientific literature has found that preserving migratory corridors are important for the continued health of the species.

Carson NF Response: Monarch butterflies are considered transient, possibly accidental on the Carson NF (Lotts and Naberhaus 2014). The monarch butterfly has been observed once during the spring on the Carson NF in 1950, as this species was migrating between summer and winter ranges. Breeding and occurrence of this species during the summer has not been documented on the Carson NF (Lotts and Naberhaus 2014). Currently, it is unknown whether monarch butterflies truly inhabit the Carson NF, and there is no population or abundance data for this species on the Carson NF or for New Mexico. There is insufficient population, abundance, and summer occurrence information to accurately evaluate whether the monarch butterfly's long-term persistence is currently at risk on the Carson NF.

American Marten

The American marten is distributed throughout North America, with populations expanding and contracting over the past several decades (Stone 2010). US Marten distribution and demographic rates are affected by the loss of closed-canopy forest due to logging (Reid & Helgen 2014). Additionally, the Forest Service neglects to note the fact that the marten can also live in mixed conifer regions. Logging in the areas where the marten are known to inhabit the Carson is a cognizable threat that the Forest Service can prevent and mitigate.

Within the draft assessment, the Forest Service states that forest management of marten habitat within the Carson would not "affect the viability" of marten because spruce-fir forest-type is common the forest and most of the habitat is within wilderness areas. However, the abundance of spruce-fir habitat and prevalence of such habitat in wilderness areas should not preclude the inclusion of marten on the list of species of conservation concern. Spruce-fir forest, like other forest types within the Carson is departed from reference conditions and subject to the same threats to vegetative structure and overall ecosystem function as other forest types. Additionally, marten utilize mixed-conifer forest, which is not noted or examined by the Forest Service. Moreover, the Forest Service has not documented whether the specific habitat components used by marten are present within these forests, nor how current management has impacted them. Without such information, the Forest Service lacks a reasonable basis for excluding the marten from the final list of species of conservation concern.

Marten show an association with older forests with large closed-canopy, possibly because of the decreased predator threat in those areas (Powell et al. 2003). Older forests are rare both on the plan and landscape level contexts. Moreover, marten populations are negatively affected by logging in their habitat areas (Carroll 2007). Climate Change models show adverse effects for marten, exacerbating existing threats (Carroll 2007).

Carson NF Response: Population and abundance data for American marten is unknown state-wide and within the forest; however, these species have been observed within the Spruce-fir Forest (SFF) ecosystem response unit (ERU) throughout the Carson NF (Assessment p. 46). Currently the Carson NF has 289,929 acres (18%) of SFF, of which 103,205 acres (36%) are in

wilderness and inventoried roadless areas (IRAs). The wilderness and IRAs provide high quality, contiguous spruce-fir habitat that is less influenced by human activities. Currently, SFF is moderately departed from reference conditions at both the plan and context scales, mostly due to legacy timber harvests that removed old trees and built roads (Assessment p. 46). However, the current disturbance regime is not significantly different from that of reference condition (Schoennagel et al. 2004; Vankat 2013). Over the next 100 years, it is anticipated that spruce-fir habitat on the Carson NF will approach reference condition, because of natural levels of disturbance and proper management activities (Assessment p. 46); therefore, the future trend for SFF on the Carson NF is stable to increasing (Assessment p. 46). For the following reasons American marten is secure within the Carson NF and its continued long-term persistence is not at risk: (1) population and abundance of this species is unknown; (2) their preferred habitat (spruce-fir) is secure; (3) spruce-fir forest is well-distributed across the forest; and (4) habitat is not normally subject to impacts from management activities, due to habitat remoteness.

Defenders of Wildlife (7/10/2015) and in-person meetings (2/18/2015 and 2/29/2016)

Potential Species of Conservation Concern Removed from Further Analysis

We urge the forest to revisit some of its justifications for removing species from SCC consideration and to return several removed species to the list of “potential species of conservation concern.”

Migratory Species

The Forest Service used the following criterion for removing species from SCC consideration, “species that are only occasional users of the plan area” (Draft Assessment: 192; 195). It, then, seemed to remove from consideration all migratory species known to occur in the plan area. The bald eagle, ferruginous hawk, Lincoln’s sparrow, northern harrier, short-eared owl, and monarch butterfly may be migratory species, however, they may also be more than “occasional users” of CNF and use, even depend on, the planning area for breeding and seasonal, particularly wintering, habitat. However, even occasional users such as the monarch, may require crucial stop-over habitat that the CNF provides.

Removing species from the potential SCC list because they are migratory has no basis in policy under the planning rule or directives. The Forest Service may exclude “individual occurrences in a plan area that are merely “accidental” or “transient,” or are well outside the species’ existing range...”, yet these criteria do not apply to any of the species removed from the potential SCC list. See below.

Carson NF Response: Species considered “transient” are those that may utilize the Carson NF for brief periods of time as it migrates to or from wintering or breeding grounds, but does not overwinter or breed on the Carson NF. The bald eagle, ferruginous hawk, northern harrier, and short-eared owl were not observed annually nor were they detected repeatedly at the same location within the Carson NF during breeding season or overwinter.

Bald Eagle

Bald eagles winter and breed in northern New Mexico, and breeding pairs are known to stay year-round to defend territories (Stahlecker and Walker 2010, in Cartron 2010). Authors note that bald eagle breeding pairs, specifically in Colfax and Rio Arriba counties, tend to incubate

young in late February, and fledglings leave the nest by late June. Thus, nesting bald eagles within the CNF would be resident for a significant period of time.

Carson NF Response: Bald eagles are considered occasional transients, possibly accidental on the Carson NF (Cartron 2010). The occurrence of resident or nesting bald eagles on the Carson NF is unlikely, since they generally require large open water areas as a source of food and none exist within the Carson NF (Cartron 2010 and USDA FS Carson NF 2014). An individual bald eagle is occasionally observed during the winter on the Carson NF (USDA FS Carson NF 2014), but does not stay on the forest the entire winter. The bald eagle appears secure within the Carson NF and its continued long-term persistence is not at risk. Additionally, the agency is required by law to protect bald eagle in accordance with the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c).

Ferruginous Hawk

The Forest Service cites Cartron (2010) as apparent scientific justification for removing the ferruginous hawk due being “migrant” (Draft Assessment 2015: 193). However, Cartron et al. (2010, in Cartron 2010) stated that the birds “can be found in New Mexico yearround” and noted sightings and nesting records in Rio Arriba County. Cartron et al. (2010) noted that New Mexico provides breeding habitat for ferruginous hawks and that it breeds “almost exclusively in the northern two-thirds of the state” (Cartron et al. 2010).

Carson NF Response: Ferruginous hawk are considered occasional transients, possibly accidental on the Carson NF (Cartron 2010). On rare occasions, an individual ferruginous hawk utilizes grasslands of the Carson NF during the winter months (USDA FS Carson NF 2014), but does not stay on the forest the entire winter. In the summer, this species is found in open grasslands within Rio Arriba County but at lower elevations than the Carson NF (Cartron 2010 and NMDGF 2015). In general, ferruginous hawks are mostly observed occasionally using the Carson NF during the winter and are not normally subject to impacts from management activities, which mainly occur during other times of the year. This species is a transient, possibly accidental, and was removed from further evaluation.

Lincoln’s Sparrow

The species is known to nest in northern New Mexico (Yong and Finch 1997).

Carson NF Response: Lincoln’s sparrows have been detected every year during Carson NF migratory bird surveys and are well-distributed within their associated habitats on the forest (Beason et al. 2006, 2007; USDA FS Carson NF 2014). According to breeding bird surveys (Sauer et al. 2014), population trends for this species within New Mexico is stable or increasing. Since Lincoln’s sparrow habitat is well-distributed across the Carson NF and their populations are stable or increasing, they appear secure within the Carson NF and their continued long-term persistence is not at risk. The Carson NF migratory bird surveys were used, instead of other surveys, as the migratory bird surveys provide specific population data for this species on the Carson NF; whereas, other surveys provide population data for all of New Mexico.

Northern Harrier

Doster (2010, cited in Cartron 2010) noted that northern harriers winter and breed in New Mexico. In New Mexico they tend to nest by mid-April, and chicks fledge about five weeks later.

Carson NF Response: Northern harriers are considered occasional transients, possibly accidental on the Carson NF (Cartron 2010). Northern harriers have rarely been observed on Carson NF during the breeding season; and breeding has not been confirmed (Cartron 2010). Breeding for these species has mostly been verified at lower elevations than the Carson NF. In general, northern harrier is mostly observed occasionally migrating through or using the Carson NF during the winter and is not normally subject to impacts from management activities, which mainly occur during other times of the year. This species has also not been observed to stay on the forest the entire winter. This species is transient, possibly accidental and was removed from further evaluation.

Short-eared Owl

Short-eared owls migrate to New Mexico during the winter and stay during their non-breeding season (Avery and Keller 2010, cited in Cartron 2010). Avery and Keller (2010) emphasized that the birds require large tracts of land during the non-breeding season to help reduce mortality from threats such as vehicle strikes. Thus, the CNF may provide important seasonal habitat for this species.

Carson NF Response: Short-eared owls are considered occasional transients, possibly accidental on the Carson NF (Cartron 2010). The short-eared owl has rarely been observed on Carson NF during the breeding season or during the winter; and breeding has not been confirmed within the Carson or the State of New Mexico (Cartron 2010). This species is a transient, possibly accidental and was removed from further evaluation.

Monarch

Monarch butterflies may be migratory, but they are dependent on stop-over points (Opler et al. 2012) where they can find safe (i.e., pesticide-free) sources of flower nectar.

Carson NF Response: Monarch butterflies are considered transient, possibly accidental on the Carson NF (Lotts and Naberhaus 2014). The monarch butterfly has been observed once on the Carson NF in 1950 during the spring, as this species was migrating between summer and winter ranges. Breeding and occurrence of this species during the summer has not been documented on the Carson NF (Lotts and Naberhaus 2014). Currently, it is unknown whether monarch butterflies truly inhabit the Carson NF, and there is no population or abundance data for this species on the Carson NF or for New Mexico. There is insufficient population, abundance, and occurrence information to accurately evaluate whether the monarch butterfly's long-term persistence is currently at risk on the Carson NF.

Gunnison's Prairie Dog

We strongly dispute the claim that the Forest has no management control over Gunnison's prairie dogs (Cynomys gunnisoni) or conditions of the species' habitat. There are numerous management actions the Forest Service could implement to help ensure the species' persistence on the CNF. Taking direct management action to restore Gunnison's prairie dogs may be the only way to ensure its viability on the CNF. We believe it would be tragic for the Forest Service to remove this species from consideration and designation as an SCC for the Carson, especially given the species' ecological importance to several other at risk species in the plan area and in the region. Species-specific plan components could have significant positive impact on the CNF's small Gunnison's prairie dog population.

The Draft Assessment cites, “Agricultural land development on adjacent private lands, plague, and prairie dog control and target shooting are threats that are not under agency control” (citing BISON-M 2014) as its justification for removing the Gunnison’s prairie dog from further SCC consideration (Draft Assessment 2015: 194). It is not at all clear how the BISON-M (2014) source material pertaining to Gunnison’s prairie dogs supports this justification. The Forest Service must explain and specify how it used the BISON-M (2014) data in regards to its decision to remove the Gunnison’s prairie dog from SCC consideration.

“Agricultural land development on adjacent private lands” does not change the fact that the Carson National Forest has significant areas of suitable Gunnison’s prairie dog habitat (see Frey 2003, cited in the Draft Assessment) that were historically occupied by prairie dogs and that could potentially support a self-sustaining population of the species—with active management. Where and to what extent in the region, at the “context scale,” is agricultural land development impeding the ability of the Forest Service to manage Gunnison’s prairie dogs? The Forest Service must provide evidence for this in the assessment. In contradiction to this claim, for example, there appears to be important opportunities to coordinate with the Rio Grande del Norte National Monument, the Valles Caldera National Preserve, and the private Vermejo Park Ranch to protect and restore Gunnison’s prairie dogs across jurisdictional boundaries. Not only would this help maintain viable GPD, this may help establish a prairie dog complex sufficiently large to reintroduce black-footed ferrets, which rely on prairie dogs for food and their burrows for shelter, to a segment of their historic range. As part of its ongoing resource management planning effort, the Rio Grande del Norte National Monument is assessing the feasibility of reintroducing black-footed ferrets, as documented in its Resource Management Plan Scoping Report (see BLM 2014: 64). The Vermejo Park Ranch has collaborated with the U.S. Fish and Wildlife Service to reintroduce black-footed ferrets into Gunnison’s prairie dog colonies on its land. The CNF has an opportunity to contribute to the recovery of an endangered species.

*We agree that managing to control sylvatic plague (*Yersinia pestis*) in prairie dogs can prove difficult. However, management tools exist to limit plague mortality. Several studies have demonstrated that insecticide applications to limit plague-carrying fleas can successfully stave off epizootics (Seery et al. 2003; Hoogland et al. 2004; Biggins et al. 2010). The CNF could also serve as a site for field trials of a new plague vaccine for prairie dogs (Abbott et al. 2012; see Colorado Parks and Wildlife 2014).*

The Forest Service has the authority to manage, limit, or ban prairie dog poisoning and shooting on land under its jurisdiction. Additionally, relocating prairie dogs from areas where they would otherwise be removed into CNF suitable habitat is also a management option.

Carson NF Response: Gunnison Prairie Dog was reviewed and re-added as a Carson NF potential SCC.

New Mexico Department of Game and Fish (7/17/2015) and in-person meeting (8/19/2015)

Species of Conservation Concern

The Department recognizes the constraints placed on the Forest regarding the selection criteria used to determine whether or not a given taxa should be included on the SCC list. However, the Department recommends the following taxa be considered for inclusion in the list of sec to be utilized in forest plan development.

- *Bald eagle (Haliaeetus leucocephalus)*. This is a state-listed species that has nested in Colfax and Rio Arriba counties. Any body of water with surrounding large woody vegetation is a potential nesting location. The Department encourages re-evaluating including this taxon in the SCC list.

Carson NF Response: Bald eagles are considered occasional transients, possibly accidental on the Carson NF (Cartron 2010). The occurrence of resident or nesting bald eagles on the Carson NF is unlikely, since they generally require large open water areas as a source of food and none exist within the Carson NF (Cartron 2010 and USDA FS Carson NF 2014). An individual bald eagle is occasionally observed during the winter on the Carson NF (USDA FS Carson NF 2014), but does not stay on the forest the entire winter. The bald eagle appears secure within the Carson NF and its continued long-term persistence is not at risk. Additionally, the agency is required by law to protect bald eagle in accordance with the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c).

In-person meeting: New Mexico Department of Game and Fish (NMDGF) agreed with the Carson NF that there is no breeding habitat for this species on Carson NF, but is still concerned about foraging on Carson NF, especially with Gunnison's prairie dog as a prey base.

Discussion: Gunnison's prairie dog is a potential SCC for the Carson NF, which should cover foraging concerns. In addition, if there is a project that will impact bald eagle during the winter, the Carson NF is required to analyze under the Bald and Golden Eagle Protection Act. After this discussion, the NMDGF was satisfied with leaving bald eagle off as a potential SCC, as long as the Carson NF adheres to the requirements of the Bald and Golden Eagle Protection Act at the project level, if warranted.

- *Ferruginous hawk (Buteo regalis)*: This species is most likely a migrant within the wooded areas of the Forest, but also occurs as a breeding population near the Jicarilla District. The Department encourages re-evaluating including this taxon in the SCC list.

Carson NF Response: Ferruginous hawk are considered occasional transients, possibly accidental on the Carson NF (Cartron 2010). On rare occasions, an individual ferruginous hawk utilizes grasslands of the Carson NF during the winter months (USDA FS Carson NF 2014), but does not stay on the forest the entire winter. In the summer, this species is found in open grasslands at lower elevations than the Carson NF (Cartron 2010). In general, ferruginous hawks are mostly observed occasionally using the Carson NF during the winter and are not normally subject to impacts from management activities, which mainly occur during other times of the year. This species is a transient, possibly accidental and was removed from further evaluation.

In-person meeting: The Carson NF doesn't have any low elevation grasslands this species requires. This species may occasionally forage on the Jicarilla Ranger District. NMDGF agreed with the Carson NF that the primary habitat for this species is not on the Carson NF. Also agreed this species may be on rare occasion using Carson NF for foraging habitat, and based on transient, possibly accidental definition does not warrant being included on the forest's potential SCC list.

- *Golden Eagle (Aquila chrysaetos)*: Although population declines have slowed in the past 10 years, BBS data still shows a slight decline in numbers for this species. Energy development

activities add to the concern for this species across New Mexico and range-wide. The Department encourages re-evaluating including this taxon in the SCC list.

Carson NF Response: Golden eagle has been detected every year during Carson NF migratory bird surveys and is well-distributed within its associated habitats on the Carson NF (Beason et al. 2006, 2007; USDA FS Carson NF 2014). According to breeding bird surveys (Sauer et al. 2014), population trends for this species within New Mexico are stable or increasing. The agency is required by law to protect golden eagles in accordance with the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c) and this species appears secure within the Carson NF. Since golden eagle habitat is well-distributed across the forest and their populations are stable or increasing, they appear secure within the Carson NF and their continued long-term persistence is not at risk. The Carson NF migratory bird surveys were used, instead of other surveys, as the migratory bird surveys provide specific population data for this species on the Carson NF; whereas, other surveys provide population data for all of New Mexico.

In-person meeting: NMDGF was concerned with future energy development on the Carson NF, particularly on the Jicarilla Ranger District, with increased fracking and impacts to the golden eagle.

Discussion: No known energy projects, such as geothermal and solar, are planned for future development on the Carson NF at this time. Transmission line development and on-going oil and gas development on the Jicarilla Ranger District may occur. If there is a project that will impact the golden eagle, the Carson NF is required to analyze under the Bald and Golden Eagle Protection Act. After this discussion, the NMDGF was satisfied with leaving golden eagle off as a potential SCC, as long as the Carson NF adheres to the requirements of the Bald and Golden Eagle Protection Act at the project level, if warranted.

- *Band-tailed pigeon (Patagioenas fasciata): The overall conservation status of a species should not be determined by its status as a game species. Band-tailed pigeons are declining in some regions, particularly within the interior population, approximately 60% of which is contained in New Mexico. The Department encourages re-evaluating including this taxon in the SCC list.*

Carson NF Response: According to the NMDGF, the band-tailed pigeon is huntable within New Mexico (NMDGF 2014). According to breeding bird surveys (Sauer et al. 2014), the band-tailed pigeon is declining; however, there is still a hunting season for this bird. Also, according to NM Partners in Flight (2016a), population data for this species for New Mexico is unknown. For the Carson NF, there is no band-tailed pigeon population or abundance data. Furthermore, there are no analyses throughout its range on whether changes in land use, structural land changes, or agricultural practices have affected band-tailed pigeon populations or abundance (Poole 2014). Band-tailed pigeon are secure within the Carson NF and their continued long-term persistence is not at risk, because they are huntable species.

In-person meeting: NMDGF is concerned with the species' drastic population declines and that New Mexico contains 60% of the habitat for the interior population. This species only remains huntable because of the lack of information for this species and funding to conduct studies.

Discussion: Since the band-tailed pigeon remains a game species, NMDGF and the Forest Service agreed to reconsider it for the SCC list in the future, if and when hunting regulations change for this species and if forest plan components do not address concerns.

- *Gray vireo (Vireo vicinior): North American Breeding Bird Survey (BBS) data indicate a stable to increasing trend for this species in New Mexico. However, it remains listed as Threatened under the New Mexico Wildlife Conservation Act, and faces potential stressors, including a limited range and small population sizes, habitat modification on both breeding and wintering grounds, and cowbird parasitism. The Department encourages re-evaluating including taxon in the SCC list.*

Carson NF Response: Gray vireos have been detected every year during Carson NF migratory bird surveys and are well-distributed within their associated habitats on the Carson NF (Beason et al. 2006, 2007; USDA FS Carson NF 2014). According to breeding bird surveys (Sauer et al. 2014), population trends for this species within New Mexico are stable or increasing. Since gray vireo habitat is well-distributed across the forest and its populations are stable or increasing, they appear secure within the Carson NF and their continued long-term persistence is not at risk. The Carson NF migratory bird surveys were used, instead of other surveys, as the migratory bird surveys provide specific population data for this species on the Carson NF; whereas, other surveys provide population data for all of New Mexico.

In-person meeting: The NMDGF is concerned with maintaining a stable population trend and threats to winter grounds for the gray vireo. The NMDGF is also concerned with impacts on pinon-juniper woodlands from natural gas development on the Jicarilla Ranger District that may affect the gray vireo. NMDGF suggested thinning interior piñon-juniper woodlands, instead of thinning along encroaching edges where this species is found. These suggested are related to site-specific projects, not at the forest plan level. The NMDGF was satisfied with the Carson NF keeping the gray vireo off the potential SCC list.

- *Pinyon jay: Across its range, this species has declined by more than 80% since 1966, and New Mexico holds about 30% of its total population. Trends observed in New Mexico BBS data indicate declines of 4.0% per year from 2003-2013, making it one of the fastest declining forest obligate bird species. This is a species of conservation concern statewide and on the Forest. Even if the Forest population is considered stable, expansion of local populations may be necessary to serve as source populations to mitigate declines in surrounding areas. The Department strongly encourages consideration of more recent, broader-scale, and long-term data for this taxon relative to its inclusion on the SCC list.*

Carson NF Response: Based on the in-person discussions, pinyon jay was reviewed and re-added as a Carson NF Potential SCC.

In-person meeting: New Mexico has a high percent of habitat for the pinyon jay, with a 4% decline in the pinyon jay population. Behind the black swift, the pinyon jay is the fastest declining bird species in New Mexico. The NMDGF is concerned with habitat fragmentation for this species within the Carson NF, due to beetle kill and juniper encroachment.

- *Juniper titmouse (Baeolophus ridgwayi): New Mexico holds nearly 50% of the global population of this species, and slight declines are indicated by BBS data. Given the very high*

percentage of the global population for this species in New Mexico, and existing threats to piñon-juniper habitats, the Department recommends re-evaluating including this taxon in the SCC list.

Carson NF Response: Juniper titmouse has been detected during annual surveys on the Carson NF and is well-distributed within the Pinon-Juniper Woodland (PJO) ERU (Assessment p. 65)(Beason et al. 2006, 2007; USDA FS Carson NF 2014). According to the Carson NF migratory bird surveys, this species' population is stable (Beason et al. 2006, 2007). Juniper titmouse utilizes standing dead trees (snags), which are abundant in their preferred PJO across the Carson NF (Assessment p. 80). The future trend for PJO on the Carson NF is stable or increasing (Assessment p. 65). Juniper titmouse's habitat is stable and well-distributed across the forest, and its population trend on the Carson NF is increasing. Therefore, this species appears secure within the Carson NF and its continued long-term persistence is not at risk. The Carson NF migratory bird surveys were used, instead of other surveys, as the migratory bird surveys provide specific population data for this species on the Carson NF; whereas, other surveys provide population data for all of New Mexico.

In-person meeting: The NMDGF was concerned with the juniper titmouse population stabling off, but has real concerns with habitat fragmentation.

Discussion: Since there is evidence that this species population is stable, NMDGF agreed to keep juniper titmouse off the potential SCC list; however, encouraged pinyon jay to be included (see above).

- *Bendire's thrasher (Toxostoma bendire1): This is a species in serious decline, with a population trend of -4.6% per year from 1966 to 2013 based on BBS data, which makes it one of the fastest declining arid-land obligate bird species. The state of New Mexico holds approximately 30% of the population (according to Partners in Flight data), but very little is known about this species. Although most of the known habitats of these species in New Mexico occur at lower elevations than are found on the Forest, the lack of knowledge about specific threats or habitat needs is not sufficient reasoning to remove a species from consideration for the sec list. The Department is currently funding a graduate student project that will produce an initial set of best management practices for Bendire's thrasher. We expect best management practices for Bendire's thrasher to be available in a few years. The Department encourages re-evaluating including this taxon in the SCC list.*

Carson NF Response: Distribution of the Bendire's thrasher within New Mexico is spotty and in some areas, poorly understood (Poole 2014). This species inhabits extremely arid piñon-juniper/desert habitat, which does not exist within the Carson NF. This species was sighted once on the forest by e-bird observers; however, species identification was performed through a process of elimination instead of a positive identification of the individual. Specifically, this observation was only determined to be a Bendire's thrasher, because elevation was too high for curve-billed thrasher (eBird 2014). Currently, it is unknown whether this thrasher truly inhabits the Carson NF as there is no habitat; therefore it was removed from further evaluation.

Meeting Notes: NMDGF is concerned with population declines, but would agree the Carson NF probably doesn't have Bendire's thrasher. After this discussion, the NMDGF was satisfied with leaving Bendire's thrasher off as a potential SCC.

- *Sangre de Cristo peaclam (Pisidium sanguinichristi)*. The Department feels that the taxonomic validity of this species is still in question, and that further genetic study is warranted. The Department encourages re-evaluating including this taxon in the SCC list. Until the taxonomic validity of the Sangre de Cristo peaclam is established, the Department supports the continued protections of the Peaclam Zoological Area.

Carson NF Response: Sangre de Cristo pea clam (*Pisidium sanguinichristi*) will not be considered as potential SCC, as the pea clam has not been determined as a valid species (Lang 2013). However, the Sangre de Cristo pea clam Zoological Area that is currently designated on the Carson NF will be carried forward into the revised plan.

In-person meeting: NMDGF is concerned with protecting the pea clam habitat from disturbance around Middle Fork Lake for pea clams, in general. After this discussion, the NMDGF was satisfied with the Sangre de Cristo pea clam off as a potential SCC, but would like to see the current forest plan management direction for the Pea Clam Zoological Area be carried forward into the revised forest plan.

The Department also offers the following additional comments regarding species proposed for inclusion within the SCC list.

- *Northern goshawk (Accipiter gentilis)*: New Mexico is home to a very small percentage of the global population for this species (0.6%, according to Partners in Flight data), and this species has a broad range across much of North America. While the Department understands that significant guidance has been developed regarding goshawk habitat management, and that implementing this guidance may create habitat conditions that benefit multiple species, the Forest should be aware that the Department is in the process of removing this species as a SGCN through the State Wildlife Action Plan revision process, and would like this species removed as an SCC.

Carson NF Response: According to breeding bird surveys (Sauer et al. 2014), population trends for this species within New Mexico are stable, however their density across the landscape are lower than other species due to territory size (Reynolds et al. 2006). In addition, Ponderosa Pine Forest (PPF) this species is mainly associated with is highly at risk (Assessment p. 62). Fire suppression, historic unmanaged grazing, and logging have resulted in a lack of open canopy, lack of large tree dominated stands, and fewer snags. Beginning around the turn of the 19th century and continuing into the 1950s, high-grade logging on what is now Carson NF removed most of the merchantable timber from accessible PPF in the plan area and context landscape (Romme et al. 2009). What remains are even-aged, relatively young stands that did not exist in the reference condition. These stands are not desirable nesting habitat for this species. The combination of past unmanaged livestock grazing and fire suppression has drastically reduced the ability of fire to thin dense regrowth (Romme et al. 2009: p. 80). Moore and others (2004) recorded an average increased tree density in the Jemez Mountains of 62 to 171 trees per acre (+276%). Romme and others (2009) found a seven-fold increase in tree density in southwestern Colorado. Patch size has increased dramatically, as stands with multiple canopy layers and fine scale structural diversity have been replaced by predominantly similar aged forests with dense canopies. Also according to partners in flight (2014), less than 1% of this species range is in New Mexico which includes the Carson NF. Threats to this species on the Carson NF include large-

scale thinning (<5% of potential habitat impacted) and recreation (13% of potential habitat impacted, criterion #2).

In-person meeting: NMDGF felt northern goshawk should be excluded from the potential SCC list, since its population trends for the state are stable and NM has only a small portion of the bird's distribution range. After this discussion, the NMDGF was satisfied with including northern goshawk on the potential SCC list.

- *Wilson's warbler (Cardellina pusilla): New Mexico is home to a negligible proportion of the global population for this species, according to Partners in Flight data. While this species is declining rangewide, its extensive range and relatively large population size suggest that conservation efforts in New Mexico may do little to improve the overall conservation status for this species.*

Carson NF Response: According to breeding bird surveys (Sauer et al. 2014), population trends for this species within New Mexico are decreasing. Wilson's warbler utilizes mesic shrub communities, which on the Carson NF are highly depart with a high risk future trend. Most of the riparian ERUs on the forest are departed from reference condition, because of changes in vegetation composition and hydrology (Assessment p.118). Habitat degradation and sedimentation from wildfire, grazing (64% potential habitat affected), recreation (28% potential habitat affected), motorized travel (11% potential habitat affected), and changes in hydrology can negatively impact this species. Also according to Partners in Flight (2014), less than 1% of this species' range is in New Mexico, which includes the Carson NF. This species does not appear secure on the Carson NF.

In-person meeting: NMDGF felt Wilson's warbler should be excluded from the potential SCC list, since its population trends for the state are stable and NM has only a small portion of the bird's distribution range. The FS biologist agreed to reconsider removing as a potential SCC. After further review Wilson's warbler is remaining on the potential SCC list, since it does not appear to be secure on the Carson NF.

New Mexico Department of Game and Fish (10/01/2015)

After having an opportunity to review the Caron National Forest Species of Conservation Concern Draft that you distributed at the meeting, we have a few additional comments to offer.

Table 3 lists potential species of conservation concern that were removed from further analysis and the rationale for their removal. This table includes species that were removed based on a given rationale that the Spruce Fir Forest Ecological Response Unit has a stable to upward trend on the Carson NF. This includes species such as American marten and snowshoe hare that occur in, but are not restricted to, spruce/fir habitat types. Both species utilize other habitats include Mixed Conifer, which is listed in Table 9 as having a risk level of High. In addition, these species utilize some of the special habitat features listed in Table 11, particularly the feature described as "Tree features, cavities, snags, leaves, bark, downed logs, leaf or forest litter". Based on the information above, these species removed due to the rationale that the SFF ERU has a stable or upward trend should be reconsidered for inclusion.

Other species were removed from consideration with a rationale that rocky/talus slopes have not changed from historical condition, and are not affected by any threats, citing BISON-M. These

species include American pika and yellow-bellied marmot. However, BISON-M does actually list threats to species including, grazing and fire suppression in foraging areas for American pika, and climate change and associated habitat fragmentation and availability for both pika and yellow-bellied marmot. Both species also utilize special habitat features listed in

Table 11, including "rock features, canyons, cliffs, crevices, outcrops". Species eliminated for under this rationale should also be re-evaluated for inclusion.

Thanks for your efforts and willingness to keep us engaged in the forest plan revision process. Let me know if you have any questions or would like any additional information that we can provide.

Carson NF Response (10/01/2015): In lieu of including these species on the potential SCC list at this time, we ask that NMDGF wait to see if the habitat components for these species' associated habitat proposed in the draft proposed plan are adequate enough for these species to continue to persist in the plan area, without being an SCC (spring 2017). Once this has occurred, if the agency does not feel habitat components are adequate and these species still need to be included as SCC, the Carson NF will be pleased to discuss at that time. NMDGF agreed.

Carson NF Response (2/8/2017): State-wide and forest population and abundance data for American marten and snowshoe hare are unknown; however, these species have been observed within the Spruce-fir Forest (SFF) ecosystem response units (ERUs)(Assessment p. 46) throughout the Carson NF. Currently, there are 289,929 acres (18%) of SFF within the forest, of which 103,205 acres (36%) are in wilderness and inventoried roadless areas. The wilderness and inventoried roadless areas provide high quality, contiguous spruce-fir habitat that is less influenced by human activities. Currently, SFF is moderately departed from reference conditions at both the plan and context scales, mostly due to legacy timber harvests that removed old trees and built roads (Assessment p. 46). However, the current disturbance regime is not significantly different from that of reference condition (Schoennagel et al. 2004; Vankat 2013). Over the next 100 years, it is anticipated that spruce-fir habitat on the Carson NF will approach reference condition, because of natural levels of disturbance and proper management activities (Assessment p. 46); therefore, the future trend for SFF on the Carson NF is stable to increasing (Assessment p. 46). For the following reasons American marten and snowshoe hare are secure within the Carson NF and its continued long-term persistence is not at risk: (1) population and abundance of these species are unknown; (2) their preferred habitat (spruce-fir) is secure; (3) spruce-fir forest is well-distributed across the forest; and (4) habitat is not normally subject to impacts from management activities, due to habitat remoteness.

American pika and yellow-bellied marmot inhabit rocky outcrops and/or talus key ecosystem characteristics within various vegetation ERUs across the Carson NF that are relatively isolated, in remote areas, and not normally subject to impacts from management activities (BISON-M 2014). These key ecosystem characteristics are well-distributed throughout the Carson NF and have not changed from historic reference condition (Assessment pp. 31-34). Additionally, these species are generally found in the Alpine and Tundra (ALP) ERU (Assessment p. 34). ALP on the Carson NF is very susceptible to climate change, and given its current limited extent and elevation constraints is likely to decline in western mountain systems (USDA FS 2010). However, ALP's departure from reference condition is low on the Carson NF, and when intensified by

climate change is still only moderately departed into the future (Assessment p. 298). Also, 86% of ALP on the Carson NF already receives the highest level of protection, having been designated as wilderness. Designated wilderness areas provide high quality and contiguous alpine tundra habitat and are less influenced by human and management activities. There is no population or abundance distribution data for these species. Since the habitat is well-distributed across the forest, the key ecosystem characteristic trend is stable, and these species are not normally subject to impacts from management activities due to remoteness. American pika and yellow-bellied marmot appear secure within the Carson NF and their continued long-term persistence is not at risk.

Center for Biological Diversity, New Mexico Wilderness Alliance, Rio Grande Chapter of the Sierra Club, Amigos Bravos, Defenders of Wildlife, New Mexico Sportsmen, Back Country Horsemen of New Mexico, and WildEarth Guardians (11/20/2015)

Ferruginous Hawk (*Buteo regalis*)

The Forest Service removed the ferruginous hawk for consideration as an SCC, justifying this rationale by claiming the species to be a “[m]igrant” and citing Cartron (2010) to make this claim (Final Assessment 2015: 215). Ferruginous hawks do migrate, and they migrate to and from New Mexico (Cartron et al. 2010). However, Cartron et al. (2010, in Cartron 2010) stated that “[t]he Ferruginous Hawk can be found in New Mexico year-round” (emphasis added) and noted sightings and nesting records in Rio Arriba County. Cartron et al. (2010) stated that New Mexico provides breeding habitat for ferruginous hawks and that they breed “almost exclusively in the northern two-thirds of the state” (Cartron et al. 2010). Other BASI supports the contention that ferruginous hawks permanently reside in northern New Mexico (see map below) (see also Olendorff 1994; Collins and Reynolds 2005; Merola-Zwartjes 2005). But, again, “being migratory” is not a justifiable basis for removing a species from consideration.

Additionally, the BASI indicates that there is substantial concern about the long-term viability of the ferruginous hawk. The species is “imperiled” in New Mexico with a ranking of S2, according to NatureServe (CITE), and it is a Species of Greatest Conservation Need as designated by the New Mexico Department of Game and Fish Comprehensive Wildlife Conservation Strategy (NMDGF 2006).

Carson NF Response: Species considered “transient” are those that may utilize the Carson NF for brief periods of time as it migrates to or from wintering or breeding grounds, but does not overwinter or breed on the Carson NF. Ferruginous hawk are considered occasional transients, possibly accidental on the Carson NF (Cartron 2010). On rare occasions, an individual ferruginous hawk utilizes grasslands of the Carson NF during the winter months (USDA FS Carson NF 2014), but does not stay on the forest the entire winter. In the summer, this species is found in open grasslands within Rio Arriba County at lower elevations than the Carson NF (Cartron 2010 and NMDGF 2015). In general, ferruginous hawks are mostly observed occasionally using the Carson NF during the winter and are not normally subject to impacts from management activities, which mainly occur during other times of the year. This species is a transient, possibly accidental and was removed from further evaluation.

Short-eared Owl (*Asio flammeus*)

*Short-eared owls migrate to New Mexico during the winter and stay during their non-breeding season (Avery and Keller 2010, cited in Cartron 2010). Avery and Keller (2010) emphasized that the birds require large tracts of land during the non-breeding season to help reduce mortality from threats such as vehicle strikes and shooting. The CNF can provide these large tracts of land and relatively remote area for the owls to inhabit, which may otherwise not exist. The species is rated imperiled (S2N) for New Mexico by NatureServe (2015, *Asio flammeus*).*

Carson NF Response: Short-eared owls are considered occasional transients, possibly accidental on the Carson NF (Cartron 2010). The short-eared owl has rarely been observed on Carson NF during the breeding season or during the winter; and breeding has not been confirmed within the Carson or the State of New Mexico (Cartron 2010). This species is a transient, possibly accidental and was removed from further evaluation.

Brown-capped Rosy Finch (*Leucosticte australis*)

NatureServe classifies this species as S1 (“critically imperiled”) within New Mexico. The bird is known to exist in Colorado, and has suitable habitat within the CNF. Because of the limited amount of data and research done to find this bird within New Mexico, it is premature for the Forest Service to exclude it from the SCC list before more research is completed.

Carson NF Response: Little is known about the brown-capped rosy finch within New Mexico, because this species inhabits high mountain meadows in the winter and alpine tundra in the summer, making detection difficult (Poole 2014). It is currently not known whether this species is breeding in the Alpine and Tundra (ALP) ecosystem response unit (ERU)(Assessment p. 34) on the Carson NF, but it has been observed on the forest during the winter months (USDA FS Carson NF 2014). ALP on the Carson NF is very susceptible to climate change, and given its current limited extent and elevation constraints, it is likely to decline in western mountain systems (USDA FS 2010). However, ALP’s departure from reference condition is low on the Carson NF, and when intensified by climate change it is still only moderately departed into the future (Assessment p. 298). Also, 86% of ALP on the Carson NF already receives the highest level of protection, having been designated as wilderness. Designated wilderness areas provide high quality and contiguous alpine tundra habitat and are less influenced by human and management activities. There are no population or abundance data for the species on the Carson NF or New Mexico (NMPIF 2016b). Because this species breeds in relatively isolated alpine habitat, especially in steep, rocky terrain, it is unlikely that human or management activities on its breeding grounds will occur or influence its status in the future (NMPIF 2016b; Poole 2014). There is insufficient population, abundance, and summer occurrence information, to accurately evaluate whether the brown-capped rosy finch’s long-term persistence is currently at risk on the Carson NF.

Marten (*Martes americana/caurina*)

The CNF Final Assessment stated the following reason for removing the marten as a SCC, “[t]he SFF ERU is common and has a stable to upward habitat trend on the Carson NF and most is in wilderness areas” (CNF Assessment 2015: 215). We assume the CNF is following the guidance of the forest planning directives (FSH 1909.12, ch. 10, 12.52c) that state,

If the species is secure and its continued long-term persistence in the plan area is not at risk based on knowledge of its abundance, distribution, lack of threats to persistence, trends in habitat, or responses to management that species cannot be identified as a species of conservation concern. [emphasis added]

The BASI indicates that the marten is not secure, and there is substantial concern about its viability in New Mexico.

The marten is distributed throughout North America, with populations expanding and contracting over the past several decades. It is not clear based on the information provided in the Assessment, as well as information available from state and federal agencies, whether the marten species present within the CNF is the American or Pacific marten species. For the purposes of forest planning, however, what is more important is that NatureServe has designated the marten as an S2 (“imperiled”) species within the state of New Mexico.

While the Forest Service has assigned the marten to the spruce-fir forest type, marten also find habitat within mixed-conifer forest type. Logging and intensive forest management in the areas where the marten are known to inhabit the Carson is a cognizable threat that the Forest Service can prevent and mitigate.

Older forests are rare both on the plan and landscape level contexts. Moreover, marten populations are negatively affected by logging in their habitat areas (Carroll 2007). The exact relationship between martens and unlogged forest habitat are unclear, but research suggests it may be due to marten’s need for high canopy cover to prevent predation and their use of woody debris and large trees for denning and foraging (Carroll 2007). Climate Change models show adverse effects for marten, exacerbating existing threats (Carroll 2007).

The Forest Service and other research provide a wealth of information for developing specific management strategies that can protect marten habitat on national forest lands. For instance, closure of meadows and open snowpack areas, which marten utilize for movement and forage in both summer and winter (Buskirk and Zielinski 1997), to motorized use would be beneficial. Likewise, Buskirk and Zielinski (1997) recommend habitat refugia “where no timber cutting is conducted” as a good management strategy. Importantly, marten’s need complex forest structure, meaning mechanical forest treatments that remove woody debris or create park-like stands would be contrary to marten habitat needs.

Carson NF Response: Population and abundance data for American marten is unknown state-wide and within the forest; however, American marten has been observed within the Spruce-fir Forest (SFF) ERU (Assessment p. 46) on the Carson NF. Currently there are 289,929 acres (18%) of SFF within the forest, of which 103,205 acres (36%) are in wilderness and inventoried roadless areas. The wilderness and inventoried roadless areas provide high quality, contiguous spruce-fir habitat that is less influenced by human activities. Currently, SFF is moderately departed from reference conditions at both the plan and context scales, mostly due to legacy timber harvests that removed old trees and built roads (Assessment p. 46). However, the current disturbance regime is not significantly different from that of reference condition (Schoennagel et al. 2004; Vankat 2013). Over the next 100 years, spruce-fir habitat on the Carson NF will approach reference condition, because of natural levels of disturbance and proper management activities (Assessment p. 46); therefore, the future trend for SFF on the Carson NF is stable to increasing

(Assessment p. 46). For the following reasons American marten are secure within the Carson NF and their continued long-term persistence is not at risk: (1) population and abundance of this species is unknown, (2) their preferred habitat (spruce-fir) is secure; (3) spruce-fir forest are well-distributed across the forest; and (4) habitat is not normally subject to impacts from management activities due to habitat remoteness.

Bendire's Thrasher (*Toxostoma bendirei*)

*The Forest Service has claimed that, "[t]here is insufficient information to evaluate whether or the species is at risk for persistence within the plan area" and cites Poole (2014) to make this claim. Poole (2014) is a general reference to the Cornell Lab of Ornithology website and lacks a specific reference to a specific source regarding the Bendire's Thrasher. It is unclear what science was used to make this claim. The BASI shows that the CNF overlaps with the species' range and contains suitable habitat (England and Laudenslayer 1993; NatureServe 2015, *Toxostoma bendirei*).*

Additionally, the BASI demonstrates a substantial concern over the species' viability. The Bendire's Thrasher is a New Mexico Species of Greatest Conservation Need (NMDGF 2006). It is a New Mexico Partners in Flight level 1 Species of Concern (New Mexico Partners in Flight 2007). Menke and Bushway (2015: 3) stated, According to Breeding Bird Survey (BBS) data and Appendix I of the New Mexico Comprehensive Wildlife Conservation Strategy (CWCS), the range of Bendire's Thrasher has been declining rapidly in recent years. Wayne Thogmartin (USGS) has calculated individual species extinction rates based on BBS data. His results show that in New Mexico Bendire's Thrasher will no longer be identified via BBS by 2025-2030 (Krueper 2013). Furthermore it has been estimated that New Mexico holds 40.7% of the global population of the species, and the rate of decline in New Mexico is higher than any other state (Sauer 2011).

Carson NF Response: Distribution of the Bendire's thrasher within New Mexico is spotty and in some areas, poorly understood (Poole 2014). This species inhabits extremely arid piñon-juniper/desert habitat, which does not exist within the Carson NF. This species was sighted once on the forest by e-bird observers; however, species identification was performed through a process of elimination, instead of a positive identification of the individual. Specifically, this observation was only determined to be a Bendire's thrasher, because elevation was too high for curve-billed thrasher (eBird 2014). Currently, it is unknown whether this thrasher truly inhabits the Carson NF as there is no habitat; therefore, it was removed from further evaluation.

Mountain Plover (*Charadrius montanus*)

*In an assessment report developed for the CNF, Vander et al. (2006), listed the Mountain Plover as a species occurring on the forest. NatureServe documents the species' distribution in Colfax, Mora, Rio Arriba, and Taos counties. NatureServe (2015) ranks the species as imperiled in New Mexico (S2B, S4N) and notes the species as having a declining trend (NatureServe 2015, *Charadrius montanus*). New Mexico Partners in Flight lists the species as a level 1 Species of Concern. It is a Species of Greatest Conservation Need in New Mexico (NMDGF 2006). Sauer et al. (2014) have documented a significant declining trend in Mountain Plover abundance in New Mexico (see graph below).*

Carson NF Response: There are no records of mountain plover occurring on the Carson NF. The only mountain plover occurrence recorded for Taos and Rio Arriba counties were on the BLM Taos Field Office (NM Audubon 2015; USDI BLM 2007).

Juniper Titmouse (*Baeolophus ridgwayi*)

Vander et al. (2006), listed the Juniper Titmouse as a species occurring on the forest. NatureServe documents the species' distribution includes Rio Arriba County. New Mexico Partners in Flight lists the species as a level 1 Species of Concern. It is a Species of Greatest Conservation Need in New Mexico. USGS (2014) have documented a significant declining trend in Juniper Titmouse abundance in New Mexico from 1966-2013.

Carson NF Response: Juniper titmouse has been detected during Carson NF migratory bird surveys on the Carson NF and is well-distributed within the Piñon-Juniper Woodland (PJO) ERU (Assessment p. 65)(Beason et al. 2006, 2007; USDA FS Carson NF 2014). According to the Carson NF migratory bird surveys, this species' population is stable (Beason et al. 2006, 2007). Juniper titmouse utilizes standing dead trees (snags), which are abundant in their preferred PJO across the Carson NF (Assessment p. 80). The future trend for PJO on the Carson NF is stable or increasing (Assessment p. 65). Juniper titmouse's habitat is stable and is well-distributed across the forest, and its population trend on the Carson NF is increasing; therefore, this species appears secure within the Carson NF and its continued long-term persistence is not at risk. The Carson NF migratory bird surveys were used, instead of other surveys, as the migratory bird surveys provide specific population data for this species on the Carson NF; whereas, other surveys provide population data for all of New Mexico.

Gray Vireo (*Vireo vicinior*)

Vander et al. (2006), listed the Gray Vireo as a species occurring on the forest. The species is listed as a threatened species under New Mexico's Wildlife Conservation Act (17-2-37 through 17-2-46 NMSA 1978) and is listed as a Species of Greatest Conservation Need in the state (NMDGF 2006). New Mexico Partners in Flight lists the species as a level 1 Species of Concern (NMPIF 2007).

Carson NF Response: Gray vireo have been detected every year during Carson NF migratory bird surveys and are well-distributed within their associated habitats on the Carson NF (Beason et al. 2006, 2007; USDA FS Carson NF 2014). According to breeding bird surveys (Sauer et al. 2014), population trends for this species within New Mexico are stable or increasing. Since gray vireo habitat is well-distributed across the forest and its populations are stable or increasing, they appear secure within the Carson NF and their continued long-term persistence is not at risk. The Carson NF migratory bird surveys were used, instead of other surveys, as the migratory bird surveys provide specific population data for this species on the Carson NF; whereas, other surveys provide population data for all of New Mexico.

Boreal Owl (*Aegolius funereus*)

The CNF Final Assessment stated the following reason for removing the Boreal Owl as a SCC, "[t]he SFF ERU is common and has a stable to upward habitat trend on the Carson NF and most is in wilderness areas" (Assessment at 215). We assume the CNF is following the guidance of the forest planning directives (FSH 1909.12, ch. 10, 12.52c) that state,

If the species is secure and its continued long-term persistence in the plan area is not at risk based on knowledge of its abundance, distribution, lack of threats to persistence, trends in habitat, or responses to management that species cannot be identified as a species of conservation concern. [emphasis added]

The BASI indicates that the Boreal Owl is not secure, and there is substantial concern about its viability. The species is listed as a threatened species under New Mexico's Wildlife Conservation Act (17-2-37 through 17-2-46 NMSA 1978) and is listed as a Species of Greatest Conservation Need in the state. NatureServe (2015) ranks the species as imperiled (S2B, S2N) in New Mexico.

Vander et al. (2006), listed the Boreal Owl as a species occurring on the forest. NatureServe (2015) documents that the species occurs in Mora, Rio Arriba, and Taos counties.

Carson NF response: Population and abundance data for boreal owl is unknown state-wide and within the forest; however, these species have been observed within the Spruce-fir Forest (SFF) ERU (p. Assessment p. 46) throughout the Carson NF. Currently there are 289,929 acres (18%) of SFF within the forest, of which 103,205 acres (36%) are in wilderness and inventoried roadless areas. The wilderness and inventoried roadless areas provide high quality, contiguous spruce-fir habitat that is less influenced by human activities. Currently, SFF is moderately departed from reference conditions at both the plan and context scales, mostly due to legacy timber harvests that removed old trees and built roads (Assessment p. 46). However, the current disturbance regime is not significantly different from that of reference condition (Schoennagel et al. 2004; Vankat 2013). Over the next 100 years, spruce-fir habitat on the Carson NF will approach reference condition, because of natural levels of disturbance and proper management activities (Assessment p. 46); therefore, the future trend for SFF on the Carson NF is stable to increasing (Assessment p. 46). For the following reasons boreal owl is secure within the Carson NF and their continued long-term persistence is not at risk: (1) population and abundance of this species is unknown, (2) their preferred habitat (spruce-fir) is secure; (3) spruce-fir forest are well-distributed across the forest; and (4) habitat is not normally subject to impacts from management activities due to habitat remoteness.

Audubon New Mexico email (3/02/2016)

In a recent Audubon conference call, one issue surfaced about the rationale/guidance rule for not considering migrants. In particular, we talked about the importance of Rufous Hummingbird as a key pollinator along its extensive migratory route. Did you research Rufous Hummingbird as a SCC?

Carson NF Response (3/2/2016) Yes, rufous hummingbird was included in the list of 1,300 species used to develop the Carson NF's potential SCCs. According to NatureServe (2016), this species has a ranking of G5, N5B, and S3. As stated in the directives 12.52d, species in the following categories should be considered: "Species with status ranks of G1-3/T1-3 or S1 or S2 on the NatureServe ranking system. Population and abundance data for rufous hummingbird are unknown state-wide and within the forest. According to National Audubon Society (2016), this species is still widespread and very common, but surveys show slight declines in numbers in recent decades. International Union for Conservation of Nature (IUCN) has listed this hummingbird as a species of least concern. This species appears secure within the Carson NF and its continued long-term persistence is not at risk.

Folks also seemed impressed with the list of sources Carson FS used in its "elimination/filtering" process. I know I was! Does Carson ever consult NM Partners In Flight?

Carson NF Response (3/2/2016): Yes, NM Partners in Flight was used a great deal as a source.

Audubon New Mexico email (4/14/2016)

NM Forest Plan task force had our monthly conference call. I wanted to keep you in the loop regarding emerging concerns/issues.

1. *We are understanding that "habitat at risk" categorization may lead to inclusion of species in conservation concern category (i.e. Wilson's Warbler); whereas "habitat not at risk" may lead to exclusion of a species considered of high conservation concern (Juniper Titmouse).*
2. *Question of BASI: Birds of NA on-line (Poole) is source for exclusion of Loggerhead based on its broad range maps, whereas more focused data from New Mexico Partners in Flight/NM Avian Conservation Partners was not consulted and may have led to inclusion of Loggerhead Shrike.*

Carson NF E-mail Response (5/3/2016): In New Mexico, Loggerhead Shrike occurs in many lowland habitats statewide (NMPiF 2012). Loggerhead shrike is found within desert grasslands and shrublands that are generally at lower elevations than the Carson NF. Little is known about the loggerhead shrike population or abundance on the Carson NF, but this species has been observed rarely within open grassland habitats of the forest (USDA FS Carson NF 2014). This species population is declining across New Mexico; however, the cause is unknown (NMPiF 2012; Poole 2014; Sauer et al. 2014). There is insufficient evidence as to whether this species is established within the Carson NF, population information, and abundance information to accurately evaluate whether the loggerhead shrike's long-term persistence is currently at risk on the Carson NF.

3. *Inclusion of clarifying language about migrant and transient would be helpful. Migratory stepping stone habitat important for at-risk species, see Center for Biological Diversity.*

Carson NF E-mail Response (5/3/2016): Species considered "transient" are those that may utilize the Carson NF for brief periods of time as it migrates to or from wintering or breeding grounds, but does not overwinter or breed on the Carson NF. Species were not observed annually, nor were detected repeatedly, at the same location within the Carson NF.

4. *We are unclear about exclusion of some species, i.e. Grace's Warbler.*

Carson NF E-mail Response (5/3/2016): Carson NF Response on 5/3/2016: NatureServe Ranking of G and N 5. According to CWCS has a state ranking of S4. According to these ranking apparently secure.

5. *We'd like to respectfully request the list of Indicator Species as well as the list of 134 birds included in the Plan Area list of 1,384 species.*

Carson NF E-mail Response (5/3/2016): Audubon FIOA for information and lists were sent. Also Management Indicator species list (USDA FS 2011) can be found at:

http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5336081.pdf

6. *We would like, if possible, to take a closer look at the survey data for gray vireo. Three years of data were used (2006, 2007, 2014) whereas preponderance of data throughout state suggests gray vireo in steep decline.*

Carson NF E-mail Response (5/3/2016): The Monitoring the Birds of the Carson National Forest can be found online at <http://www.birdconservancy.org/resource-center/reports/> in 2004 and 2006. Also According to BBS (2014), gray vireo population is increasing for New Mexico ([NABBS](#)). During the summer of 2014, the wildlife biologist for the Jicarilla Ranger District observed this species on numerous occasions throughout the sagebrush and piñon-juniper habitat on that district (USDA FS Carson NF 2014).

Forgot to mention Flammulated Owl not making the species of conservation concern list.

Carson NF E-mail Response (5/3/2016): Carson NF Response 5/3/2016: NatureServe Ranking of G and N 4. State Ranking 3. According to these ranking apparently secure. Also, when a Forest Service biologist conducted Mexican spotted owl surveys, flammulated owls were regularly detected and on numerous occasions (Jay Gatlin, Camino Real Ranger District).

Audubon New Mexico (8/25/2016)

We submit that public engagement with the initial development of the SCC list on the part of the birding community, both locally in Northern New Mexico and statewide as represented by Audubon New Mexico, could have been more inclusive from the beginning.

While the Carson National Forest's Need to Change document, published Sept. 15, 2015, confirms (p.3) the need to update the SCC list, we could find no evidence of a time-line for public comment on the updating of the SCC list. In fact, by September, the initial development of the SCC on the part of foresters was well underway.

Carson NF Response: The draft Carson NF potential SCC list and documentation was released for public comment in the draft Assessment Report of Ecological, Social, and Economic Conditions, Trends, and Sustainability for the Carson NF in May 2015. After public comments were received and reviewed, Gunnison's prairie dog, burrowing owl, and pinyon jay were added to the potential SCC list and included in the final Assessment Report of Ecological, Social, and Economic Conditions, Trends, and Sustainability for the Carson NF, which was again available for public comment on September 30, 2015. A document called Potential Species of Conservation Concern, Carson National Forest was prepared in September 2015. It was reviewed by regional wildlife biologists and the regional forester. The [Potential SCC List and document](#) was approved by the regional forester and posted on the Carson NF's website in March 2016 for public review. The Carson NF will accept comments on potential SCCs until a final decision is issued for the revised forest plan. This response to comment on SCCs document provides Forest Service replies to all public comments made regarding SCCs, from the initiation of the assessment process to February 2017.

Species of Conservation Concern

1. *We argue for the inclusion of eight additional avian species and five butterfly species to the Potential Species of Conservation Concern List:*

- *Brown-capped Rosy Finch (Leucoticta australis)*

Carson NF Response: Little is known about the brown-capped rosy finch within New Mexico, because this species inhabits high mountain meadows in the winter and alpine tundra in the summer, making detection difficult (Poole 2014). It is currently not known whether this species is breeding in the Alpine and Tundra (ALP) ecosystem response unit (ERU)(Assessment p. 34) on the Carson NF, but it has been observed on the forest during the winter months (USDA FS Carson NF 2014). ALP on the Carson NF is very susceptible to climate change, and given its current limited extent and elevation constraints, it is likely to decline in western mountain systems (USDA FS 2010). However, ALP's departure from reference condition is low on the Carson NF, and when intensified by climate change it is still only moderately departed into the future (Assessment p. 298). Also, 86% of ALP on the Carson NF already receives the highest level of protection, having been designated as wilderness. Designated wilderness areas provide high quality and contiguous alpine tundra habitat and are less influenced by human and management activities. There are no population or abundance data for the species on the Carson NF or New Mexico (NMPIF 2016b). Because this species breeds in relatively isolated alpine habitat, especially in steep, rocky terrain, it is unlikely that human or management activities on its breeding grounds will occur or influence its status in the future (NMPIF 2016b; Poole 2014). There is insufficient population, abundance, and summer occurrence information, to accurately evaluate whether the brown-capped rosy finch's long-term persistence is currently at risk on the Carson NF.

- *Black-throated Gray Warbler (Dendroica nigrescens)*

Carson NF Response: According to NatureServe (2016), this species has a ranking of G5/N5B/S3. As stated in the directives 12.52d, species in the following categories should be considered: Species with status ranks of G1-3/T1-3 or S1 or S2 on the NatureServe ranking system. Also according to Carson NF migratory bird surveys (Beason et al. 2006, 2007), this species population trend on the Carson NF is increasing. This species is mostly found within Pinon-Juniper Woodlands (PJO), and on the Carson NF the future trend for PJO is stable or increasing (p.65 or assessment). Black-throated Gray Warbler habitat is stable and is well-distributed across the forest, and its population trend on the Carson NF is increasing; therefore, this species appears secure within the Carson NF and its continued long-term persistence is not at risk. The Carson NF migratory bird surveys were used, instead of other surveys, as the migratory bird surveys provide specific population data for this species on the Carson NF; whereas, other surveys provide population data for all of New Mexico.

- *Virginia's Warbler (Vermivora virginiae)*

Carson NF Response: Thank you for providing data on this species occurrence on the Carson NF. This species was review, and according to NatureServe (2016), this species has a ranking of G5/N5/S3. As stated in the directives 12.52d, species in the following categories should be considered: Species with status ranks of G1-3/T1-3 or S1 or S2 on the NatureServe ranking system. Also according to Carson NF migratory bird surveys (Beason et al. 2006, 2007), this

species population trend on the Carson NF is stable. This species is mostly found within Pinon-Juniper Woodlands (PJO), and on the Carson NF the future trend for PJO is stable or increasing (p.65 or assessment). Virginia's Warbler's habitat is stable and is well-distributed across the forest, and its population trend on the Carson NF is increasing; therefore, this species appears secure within the Carson NF and its continued long-term persistence is not at risk. The Carson NF migratory bird surveys were used, instead of other surveys, as the migratory bird surveys provide specific population data for this species on the Carson NF; whereas, other surveys provide population data for all of New Mexico.

- *Grace's Warbler (Dendroica graciae)*

Carson NF Response: According to NatureServe (2016), this species has a ranking of G5/N5B/S3B. As stated in the directives 12.52d, species in the following categories should be considered: Species with status ranks of G1-3/T1-3 or S1 or S2 on the NatureServe ranking system. According to Carson NF migratory bird surveys (Beason et al. 2006, 2007), this species were detected in high numbers every year within all suitable habitat and had a stable population trend. Also according to NMDGF (2016 and 2017), Grace's Warbler were one of the most commonly detected species during the surveys of Sandia, Manzano, Magdalena, San Mateo, Zuni, Jemez, San Juan, and Sangre de Cristo mountain ranges. This species appears secure within the Carson NF and its continued long-term persistence is not at risk.

- *Juniper Titmouse (Baeolophus ridgwayi)*

Carson NF Response: Juniper titmouse has been detected during annual surveys on the Carson NF and is well-distributed within the Piñon-Juniper Woodland (PJO) ERU (Assessment p. 65)(Beason et al. 2006, 2007; USDA FS Carson NF 2014). According to the Carson NF migratory bird surveys, this species' population is stable (Beason et al. 2006, 2007). Juniper titmouse utilizes standing dead trees (snags), which are abundant in their preferred PJO across the Carson NF (Assessment p. 80). The future trend for PJO on the Carson NF is stable or increasing (Assessment p. 65). Juniper titmouse's habitat is stable and is well-distributed across the forest, and its population trend on the Carson NF is increasing; therefore, this species appears secure within the Carson NF and its continued long-term persistence is not at risk. The Carson NF migratory bird surveys were used, instead of other surveys, as the migratory bird surveys provide specific population data for this species on the Carson NF; whereas, other surveys provide population data for all of New Mexico.

- *Lewis's Woodpecker (Melanerpes lewis)*

Carson NF Response: According to NatureServe (2016), this species has a ranking of G4/N4B/S3B. As stated in the directives 12.52d, species in the following categories should be considered: Species with status ranks of G1-3/T1-3 or S1 or S2 on the NatureServe ranking system. Also according to Carson NF migratory bird surveys (Beason et al. 2006, 2007), this species mainly occurs outside the Carson NF.

- *Flammulated Owl (Otus flammeolus)*

Carson NF Response: According to NatureServe (2016), flammulated owl has a ranking of G5/N5B/S3. As stated in the directives 12.52d, species in the following categories should be

considered: Species with status ranks of G1-3/T1-3 or S1 or S2 on the NatureServe ranking system. Also, according to a Carson NF wildlife biologist, when conducting Mexican spotted owl (MSO) surveys, flammulated owl was the most detected owl during these surveys. Detection of this owl has been documented on MSO forms for the last several years (personal communication with Jay Gatlin, Camino Real Ranger District, 2015-2016). According to NM Partners in Flight (2016c), population estimates for the state are unknown. Therefore, this species appears secure within the Carson NF and its continued long-term persistence is not at risk.

- *Band-tailed Pigeon (Columba fasciata)*

Carson NF Response: According to the NMDGF, the band-tailed pigeon is huntable within New Mexico (NMDGF 2014). According to breeding bird surveys (Sauer et al. 2014), the band-tailed pigeon is declining; however, there is still a hunting season for this bird. Also, according to NM Partners in Flight (2016a), population data for this species for New Mexico is unknown. For the Carson NF, there is no band-tailed pigeon population or abundance data. Furthermore, there are no analyses throughout its range on whether changes in land use, structural land changes, or agricultural practices have affected band-tailed pigeon populations or abundance (Poole 2014). Band-tailed pigeons are secure within the Carson NF and their continued long-term persistence is not at risk, because they are huntable species.

2. *CNF had argued that, with respect to the Brown-capped Rosy Finch, “there is insufficient information” for evaluation (Potential List SCC, p.14). We argue that with the PIF evaluation, sufficient information is now available.*

Carson NF Response: Little is known about the brown-capped rosy finch within New Mexico, because this species inhabits high mountain meadows in the winter and alpine tundra in the summer, making detection difficult (Poole 2014). It is currently not known whether this species is breeding in the Alpine and Tundra (ALP) ecosystem response unit (ERU)(Assessment p. 34) on the Carson NF, but it has been observed on the forest during the winter months (USDA FS Carson NF 2014). ALP on the Carson NF is very susceptible to climate change, and given its current limited extent and elevation constraints, it is likely to decline in western mountain systems (USDA FS 2010). However, ALP’s departure from reference condition is low on the Carson NF, and when intensified by climate change it is still only moderately departed into the future (Assessment p. 298). Also, 86% of ALP on the Carson NF already receives the highest level of protection, having been designated as wilderness. Designated wilderness areas provide high quality and contiguous alpine tundra habitat and are less influenced by human and management activities. There are no population or abundance data for the species on the Carson NF or New Mexico (NMPIF 2016b). Because this species breeds in relatively isolated alpine habitat, especially in steep, rocky terrain, it is unlikely that human or management activities on its breeding grounds will occur or influence its status in the future (NMPIF 2016b; Poole 2014). There is insufficient population, abundance, and summer occurrence information, to accurately evaluate whether the brown-capped rosy finch’s long-term persistence is currently at risk on the Carson NF.

3. *Omission of Virginia’s Warbler as a species occurring in CNF. The list of approximately 1,384 species (of which 134 are bird species) that formed the basis of the potential SCC list within the context area excludes Virginia’s Warbler, which is marked, instead, as*

*present neither in the four counties of CNF nor in the CNF itself. This warbler occurs in CNF as documented on three breeding bird survey routes:
<https://www.pwrc.usgs.gov/bbs/RouteMap/Map.cfm>*

60-003 (Cebolla) – Carson NF—Virginia’s Warbler is on the species list

60-004 (Ojo Sarco) – Carson NF—Virginia’s Warbler is on the species list

60-154 (Angel Fire) – Carson NF—Virginia’s Warbler is on the species list

There are numerous eBird sightings as well.

Carson NF Response: Thank you for providing data on this species occurrence on the Carson NF. This species was reviewed and according to NatureServe (2016), this species has a ranking of G5/N5/S3. As stated in the directives 12.52d, species in the following categories should be considered: Species with status ranks of G1-3/T1-3 or S1 or S2 on the NatureServe ranking system. Also according to Carson NF migratory bird surveys (Beason et al. 2006, 2007), this species population trend on the Carson NF is stable. This species is mostly found within Pinon-Juniper Woodlands (PJO), and on the Carson NF the future trend for PJO is stable or increasing (p.65 or assessment). Virginia’s Warbler’s habitat is stable and is well-distributed across the forest, and its population trend on the Carson NF is increasing; therefore, this species appears secure within the Carson NF and its continued long-term persistence is not at risk. The Carson NF migratory bird surveys were used, instead of other surveys, as the migratory bird surveys provide specific population data for this species on the Carson NF; whereas, other surveys provide population data for all of New Mexico.

- 4. Consistency of implementation of Planning Rule. There is wide divergence in the application of BASI with regard to both the inclusion and exclusion of species from the SCC list. An examination of both the initial list of 134 avian species from which the present SCC list was culled as well as the discussion notes in the Potential SCC List reveal these inconsistencies.*

The New Mexico Criterion (#3) is applied unevenly, especially with respect to Juniper Titmouse, Virginia’s Warbler, Flammulated Owl, Grace’s Warbler, Lewis’s Woodpecker, Band-tailed Pigeon, and Black-throated Gray Warbler. For example, we could find only one instance when New Mexico PIF (2012) was used, and then it was cited to eliminate the Loggerhead Shrike from consideration. According to NMPIF (2012), the above species are listed at the highest level of conservation concern. Based on NMPIF (2012), the above species warrant re-consideration.

CNF appears to have excluded species based on the conclusion that “no population or abundance” information was available (Band-tailed Pigeon) or substituted broader range maps (Poole, A., Flammulated Owl) when NMPIF (2012) was available.

Carson NF Response: According to the NMDGF, the band-tailed pigeon is huntable within New Mexico (NMDGF 2014). According to breeding bird surveys (Sauer et al. 2014), the band-tailed pigeon is declining; however, there is still a hunting season for this bird. Also, according to NM Partners in Flight (2016a), population data for this species for New Mexico is unknown. For the Carson NF, there is no band-tailed pigeon population or abundance data. Furthermore, there are no analyses throughout its range on whether changes in land use, structural land changes, or

agricultural practices have affected band-tailed pigeon populations or abundance (Poole 2014). Band-tailed pigeon are secure within the Carson NF and their continued long-term persistence is not at risk, because they are huntable species.

According to NatureServe (2016), flammulated owl has a ranking of G5/N5B/S3. As stated in the directives 12.52d, species in the following categories should be considered: Species with status ranks of G1-3/T1-3 or S1 or S2 on the NatureServe ranking system. Also, according to a Carson NF wildlife biologist, when conducting Mexican spotted owl (MSO) surveys, flammulated owl was the most detected owl during these surveys. Detection of this owl has been documented on MSO forms for the last several years (personal communication with Jay Gatlin, Camino Real Ranger District, 2015-2016). According to NM Partners in Flight (2016c), population estimates for the state are unknown. Therefore, this species appears secure within the Carson NF and its continued long-term persistence is not at risk.

In other instances, anecdotal evidence appears to out-weigh hard science: “numerous citizen-science observations” (Lewis’s Woodpecker) or “numerous numbers” (Flammulated Owl) or “recent reports” (Pinyon Jay). Anecdotal information should not be used in the decision-making process, particularly with the apparent exclusion of NMPIF (2012) data.

Carson NF Response: According to NatureServe (2016), Lewis’s woodpecker has a ranking of G4/N4B/S3B. As stated in the FS directives 12.52d, species in the following categories should be considered: Species with status ranks of G1-3/T1-3 or S1 or S2 on the NatureServe ranking system. Also, according to Carson NF migratory bird surveys (Beason et al. 2006, 2007), this species mainly occurs outside the Carson NF.

According to NatureServe (2016), flammulated owl has a ranking of G5/N5B/S3. As stated in the directives 12.52d, species in the following categories should be considered: Species with status ranks of G1-3/T1-3 or S1 or S2 on the NatureServe ranking system. Also, according to a Carson NF wildlife biologist, when conducting Mexican spotted owl (MSO) surveys, flammulated owl was the most detected owl during these surveys. Detection of this owl has been documented on MSO forms for the last several years (personal communication with Jay Gatlin, Camino Real Ranger District, 2015-2016). According to NM Partners in Flight (2016c), population estimates for the state are unknown. Therefore, this species appears secure within the Carson NF and its continued long-term persistence is not at risk.

Pinyon jay was added to the Carson NF’s potential SCC list after the issuance of the draft assessment report and is currently listed as a potential Carson NF SCC.

5. *Game Species that demonstrate scientific concerns about persistence-Band-tailed Pigeon. Clearly, the persistence of Band-tailed Pigeon is a serious concern. CNF argues unconvincingly that as a game bird under NMDGF, CNF is somehow released from its responsibility to protect this species. CNF was not persuaded (rightly, in our view) to not to list the Pinyon Jay, and thus could easily make a case for including the Band-tailed Pigeon as a SCC.*

Carson NF Response: According to the NMDGF, the band-tailed pigeon is huntable within New Mexico (NMDGF 2014). According to breeding bird surveys (Sauer et al. 2014), the band-tailed pigeon is declining; however, there is still a hunting season for this bird. Also, according to NM

Partners in Flight (2016a), population data for this species for New Mexico is unknown. For the Carson NF, there is no band-tailed pigeon population or abundance data. Furthermore, there are no analyses throughout its range on whether changes in land use, structural land changes, or agricultural practices have affected band-tailed pigeon populations or abundance (Poole 2014). Band-tailed pigeon are secure within the Carson NF and their continued long-term persistence is not at risk, because they are huntable species.

6. *Species not reviewed consistently across forests. Some species that occur on Cibola, Santa Fe, and Carson National Forests in similar habitats and that face similar threats appear to have been evaluated inconsistently. Lewis's Woodpecker is listed as SCC on Cibola and Santa Fe NF; Juniper Titmouse and Grace's Warbler are listed as SCC on Cibola NF.*

Carson NF Response: Selection of SCC is based on the risk of persistence on each individual forest, and the resource condition and activities vary from forest to forest. As such the below responses are about Lewis's woodpeckers, Juniper titmouse, and Grace's warblers capability to persist on the Carson NF based on the Carson's resource condition and activities.

According to NatureServe (2016), Lewis's Woodpecker has a ranking of G4/N4B/S3B. As stated in the directives 12.52d, species in the following categories should be considered: Species with status ranks of G1-3/T1-3 or S1 or S2 on the NatureServe ranking system. Also according to Carson NF migratory bird surveys (Beason et al. 2006, 2007), this species mainly occurs outside the Carson NF. The Carson NF migratory bird surveys were used, instead of other surveys, as the migratory bird surveys provide specific population data for this species on the Carson NF; whereas, other surveys provide population data for all of New Mexico.

Juniper titmouse has been detected during annual surveys on the Carson NF and is well-distributed within the Piñon-Juniper Woodland (PJO) ERU (Assessment p. 65) (Beason et al. 2006, 2007; USDA FS Carson NF 2014). According to the Carson NF migratory bird surveys, this species' population is stable (Beason et al. 2006, 2007). Juniper titmouse utilizes standing dead trees (snags), which are abundant in their preferred PJO across the Carson NF (Assessment p. 80). The future trend for PJO on the Carson NF is stable or increasing (Assessment p. 65). Juniper titmouse's habitat is stable and is well-distributed across the forest, and its population trend on the Carson NF is increasing; therefore, this species appears secure within the Carson NF and its continued long-term persistence is not at risk. The Carson NF migratory bird surveys were used, instead of other surveys, as the migratory bird surveys provide specific population data for this species on the Carson NF; whereas, other surveys provide population data for all of New Mexico.

According to NatureServe (2016), Grace's warbler has a ranking of G5/N5B/S3B. As stated in the FS directives 12.52d, species in the following categories should be considered: Species with status ranks of G1-3/T1-3 or S1 or S2 on the NatureServe ranking system. According to Carson NF migratory bird surveys (Beason et al. 2006, 2007), this warbler was detected in high numbers every year within all suitable habitats and had a stable population trend. Also according to NMDGF (2016 and 2017), Grace's warbler was the most commonly detected species during the surveys of Sandia, Manzano, Magdalena, San Mateo, Zuni, Jemez, San Juan, and Sangre de Cristo mountain ranges. This species appears secure within the Carson NF and its continued long-term persistence is not at risk.

Grace's Warbler, for example, is designated a SCC on the Cibola NF due to rare and declining habitat because of disrupted fire regimes, current vegetation management projects, fire suppression and stand replacing fires. We submit these same habitat conditions and management activities exist on the CNF and justify inclusion as SCC.

Carson NF Response: Selection of SCC is based on the risk of persistence on each individual forest, and the resource condition and activities vary from forest to forest. As such the below responses are about Grace's warblers capability to persist on the Carson NF based on the Carson's resource condition and activities.

According to NatureServe (2016), Grace's warbler has a ranking of G5/N5B/S3B. As stated in the FS directives 12.52d, species in the following categories should be considered: Species with status ranks of G1-3/T1-3 or S1 or S2 on the NatureServe ranking system. According to Carson NF migratory bird surveys (Beason et al. 2006, 2007), this species was detected in high numbers every year within all suitable habitats and had a stable population trend. Also according to NMDGF (2016 and 2017), Grace's Warbler were the most commonly detected species during the surveys of Sandia, Manzano, Magdalena, San Mateo, Zuni, Jemez, San Juan, and Sangre de Cristo mountain ranges. This species appears secure within the Carson NF and its continued long-term persistence is not at risk.

The Pinon-Juniper (PJ) dependent species- Juniper Titmouse- is not considered SCC by CNF despite SFNF's contention that "PJ habitats are predicted to have the greatest variation amongst zones when it comes to climate change Vulnerability." (Assessment I, p. 227). We argue climate change vulnerability will affect both these neighboring forest.

Carson NF Response: Selection of SCC is based on the risk of persistence on each individual forest, and the resource condition and activities vary from forest to forest. As such the below responses are about Juniper titmouse capability to persist on the Carson NF based on the Carson's resource condition and activities.

Juniper titmouse has been detected during annual surveys on the Carson NF and is well-distributed within the Piñon-Juniper Woodland (PJO) ERU (Assessment p. 65) (Beason et al. 2006, 2007; USDA FS Carson NF 2014). According to the Carson NF migratory bird surveys, this species' population is stable (Beason et al. 2006, 2007). Juniper titmouse utilizes standing dead trees (snags), which are abundant in their preferred PJO across the Carson NF (Assessment p. 80). The future trend for PJO on the Carson NF is stable or increasing (Assessment p. 65). Juniper titmouse's habitat is stable and is well-distributed across the forest, and its population trend on the Carson NF is increasing; therefore, this species appears secure within the Carson NF and its continued long-term persistence is not at risk. The Carson NF migratory bird surveys were used, instead of other surveys, as the migratory bird surveys provide specific population data for this species on the Carson NF; whereas, other surveys provide population data for all of New Mexico.

Additionally, since CNF considers the persistence of the Pinyon Jay a concern, it should also re-consider another PJ dependent species whose persistence is at risk: Black-throated Gray Warbler. CNF needs to take into account the predicted effects of climate change on the vulnerable PJ woodland and reevaluate its contention that risk to the ERU PJO is low.

Carson NF Response: According to NatureServe (2016), the black-throated gray warbler has a ranking of G5/N5B/S3. As stated in the FS directives 12.52d, species in the following categories should be considered: Species with status ranks of G1-3/T1-3 or S1 or S2 on the NatureServe ranking system. Also according to Beason and others (2006, 2007), this species' population trend on the Carson NF is increasing. The black-throated gray warbler is mostly found within Piñon-Juniper Woodlands (PJO). On the Carson NF, the future trend for PJO is stable or increasing (Assessment p. 65). Black-throated gray warbler habitat is stable and is well-distributed across the Carson NF, and its population trend on the forest is increasing; therefore, this species appears secure within the Carson NF and its continued long-term persistence is not at risk. The Carson NF migratory bird surveys were used, instead of other surveys, as the migratory bird surveys provide specific population data for this species on the Carson NF; whereas, other surveys provide population data for all of New Mexico.

8. *Important pollinator species should be included. One of the key ecosystem processes is pollination. Although many forest tree species are wind-pollinated, close to 75% of the flowering plants on earth rely to some degree on pollinators in order to set seed and reproduce. In the Southwest, almost all of the shrubs and smaller trees are pollinated by bees. The fruits and seeds which result from that pollination provide food for wildlife as well as sustain the vegetative diversity of the forest. Pollinators, particularly invertebrate pollinators, are clearly important components of ecosystem function.*

Knowledge of the status of many pollinators, particularly of native bees, is largely lacking on the Forest. Guidelines for Bumble Bee¹³, and Mason Bee¹⁴ management are available and should be incorporated into management guidelines and standards for vegetation treatments on CNF.

Carson NF Response: Plan components for pollinators have been incorporated into the Preliminary Draft Carson Forest Plan.

There are a number of butterfly species that have been identified by Nature Serve and local experts as being present and at risk on CNF.

*The Monarch butterfly (*Danaus plexippus*) is considered critically imperiled globally (G1). As a migratory species that breeds in migration it is widespread across Great Plains grassland, wetlands and/cienegas, montane grasslands, and open Piñon Juniper woodlands. The direct threats to the Monarch are varied and not completely understood, but the paucity of milkweed breeding habitat (*Asclepias* spp.) is one threat that is amenable to management actions. Restoration and maintenance of natural fire regimes and particular attention to milkweed patches should be incorporated into vegetation management for this species.*

Carson NF Response: Monarch butterflies are considered transient, possibly accidental on the Carson NF (Lotts and Naberhaus 2014). The monarch butterfly has been observed once during the spring on the Carson NF in 1950, as this species was migrating between summer and winter ranges. Breeding and occurrence of this species during the summer has not been documented on the Carson NF (Lotts and Naberhaus 2014). Currently, it is unknown whether monarch butterflies truly inhabit the Carson NF, and there is no population or abundance data for this species on the Carson NF or for New Mexico. There is insufficient population, abundance, and

summer occurrence information to accurately evaluate whether the monarch butterfly's long-term persistence is currently at risk on the Carson NF.

Spalding's Blue (Euphilotes spaldingi pinjuna) is globally assessed as vulnerable to apparently secure (G3, G4) although expert opinion considers this species imperiled to vulnerable (N2, N3) in New Mexico. Spalding's Blue depends on Ponderosa Pine, Great Basin/Colorado Plateau Grassland and Steppe vegetation systems and is threatened by livestock grazing and the disruption of natural fire cycles.

Carson NF Response: At this time, Spalding's blue butterfly has not been determined as a valid subspecies (NatureServe 2016, Lotts and Naberhaus 2016).

In addition, the Dotted Skipperling (Piruna polingii), the Great Basin Silverspot, and the Colorado Rita Blue (Euphilotes rita coloradensis) are believed to be present on the CNF. The Dotted Skipperling and Great Basin Silverspot both depend on wetlands/cienegas within gallery coniferous riparian forest vegetation systems and are threatened by climate warming, livestock grazing, loss of wetland habitat, and catastrophic fire and its hydrologic consequences. The Colorado Rita Blue depends on Piñon Juniper woodlands and is threatened by livestock grazing and disruption of the natural fire regime in that vegetation type.

Carson NF Response: According to Butterflies and Moths of North America (2016), the dotted skipperling butterfly is known only to occur in southern New Mexico. The Great Basin silverspot butterfly is already listed as a potential SCC for the Carson NF.

According to New Mexico Butterflies (1992) and Butterflies and Moths of North America (2016), Colorado rita blue butterfly does not occur on the Carson NF.

9. *Migratory birds. Under 219.9(b)(2) of the planning rule, "being migratory" is not a justifiable basis for not considering a species as an SCC or removing a species from consideration. It may be argued by CNF, for example, that the Brown-capped Rosy Finch only uses the CNF during the winter months, migrating northward into Colorado and Wyoming in the summer. We submit this is not an argument for excluding this extremely vulnerable species from inclusion on the SCC list.*

Carson NF Response: Species considered "transient" are those that may utilize the Carson NF for brief periods of time as it migrates to or from wintering or breeding grounds, but does not overwinter or breed on the Carson NF. Little is known about the brown-capped rosy finch within New Mexico, because this species inhabits high mountain meadows in the winter and alpine tundra in the summer, making detection difficult (Poole 2014). It is currently not known whether this species is breeding in the Alpine and Tundra (ALP) ecosystem response unit (ERU)(Assessment p. 34) on the Carson NF, but it has been observed on the forest during the winter months (USDA FS Carson NF 2014). ALP on the Carson NF is very susceptible to climate change, and given its current limited extent and elevation constraints, it is likely to decline in western mountain systems (USDA FS 2010). However, ALP's departure from reference condition is low on the Carson NF, and when intensified by climate change it is still only moderately departed into the future (Assessment p. 298). Also, 86% of ALP on the Carson NF already receives the highest level of protection, having been designated as wilderness. Designated wilderness areas provide high quality and contiguous alpine tundra habitat and are less

influenced by human and management activities. There are no population or abundance data for the species on the Carson NF or New Mexico (NMPIF 2016b). Because this species breeds in relatively isolated alpine habitat, especially in steep, rocky terrain, it is unlikely that human or management activities on its breeding grounds will occur or influence its status in the future (NMPIF 2016b; Poole 2014). There is insufficient population, abundance, and summer occurrence information, to accurately evaluate whether the brown-capped rosy finch's long-term persistence is currently at risk on the Carson NF.

Klingel (12/29/2016)

The Regional Forester's SCC list includes 24 species that occur on the CNF, excluding federal TES species. The CNF on-line list includes only 17 species.

Carson NF Response: The current Regional Forester's Sensitive Species List is not the same as Species of Conservation Concern (SCC) list. In revising its forest plan, each forest is required to develop its own SCC list that is approved by the regional forester. Once the revised forest plan is signed, the Forest SCC list will replace the Regional Forester's Sensitive Species List. The criteria for identifying SCC are also the criteria for identifying potential SCC, which are identified in the Forest Service's directives for the 2012 planning regulations (FSH 1909.12, 12.52c):

1. The species is native to, and known to occur in, the plan area.

A species is known to occur in a plan area if, at the time of plan development, the best available scientific information indicates that a species is established or is becoming established in the plan area. A species with an individual occurrences in a plan area that are merely "accidental" or "transient," or are well outside the species' existing range at the time of plan development, is not established or becoming established in the plan area. If the range of a species is changing so that what is becoming its "normal" range includes the plan area, an individual occurrence should not be considered transient or accidental.

2. The best available scientific information about the species indicates substantial concern about the species' capability to persist over the long term in the plan area. See FSH 1909.12, zero code, section 07, for guidance on best available scientific information.

If there is insufficient scientific information available to conclude there is a substantial concern about a species' capability to persist in the plan area over the long-term that species cannot be identified as a species of conservation concern.

If the species is secure and its continued long-term persistence in the plan area is not at risk based on knowledge of its abundance, distribution, lack of threats to persistence, trends in habitat, or responses to management that species cannot be identified as a species of conservation concern.

However, when developing the Carson NF Potential SCC list, the Regional Sensitive species list was reviewed of which 23 are Carson NF Potential SCCs.

The list needs to be revised and expanded. Species on the Regional list that do occur on CNF, but are not on the CNF list include:

boreal owl

Carson NF Response: Population and abundance data for boreal owl is unknown state-wide and within the forest; however, these species have been observed within the Spruce-fir Forest (SFF) ERU (p. Assessment p. 46) throughout the Carson NF. Currently there are 289,929 acres (18%) of SFF within the forest, of which 103,205 acres (36%) are in wilderness and inventoried roadless areas. The wilderness and inventoried roadless areas provide high quality, contiguous spruce-fir habitat that is less influenced by human activities. Currently, SFF is moderately departed from reference conditions at both the plan and context scales, mostly due to legacy timber harvests that removed old trees and built roads (Assessment p. 46). However, the current disturbance regime is not significantly different from that of reference condition (Schoennagel et al. 2004; Vankat 2013). Over the next 100 years, spruce-fir habitat on the Carson NF will approach reference condition, because of natural levels of disturbance and proper management activities (Assessment p. 46); therefore, the future trend for SFF on the Carson NF is stable to increasing (Assessment p. 46). For the following reasons boreal owl is secure within the Carson NF and their continued long-term persistence is not at risk: (1) population and abundance of this species is unknown, (2) their preferred habitat (spruce-fir) is secure; (3) spruce-fir forest are well-distributed across the forest; and (4) habitat is not normally subject to impacts from management activities due to habitat remoteness.

gray vireo

Carson NF Response: Gray vireos have been detected every year during Carson NF migratory bird surveys and are well-distributed within their associated habitats on the Carson NF (Beason et al. 2006, 2007; USDA FS Carson NF 2014). According to breeding bird surveys (Sauer et al. 2014), population trends for this species within New Mexico are stable or increasing. Since gray vireo habitat is well-distributed across the forest and its populations are stable or increasing, they appear secure within the Carson NF and their continued long-term persistence is not at risk. The Carson NF migratory bird surveys were used, instead of other surveys, as the migratory bird surveys provide specific population data for this species on the Carson NF; whereas, other surveys provide population data for all of New Mexico.

Sangre de Cristo pea clam

Carson NF Response: Sangre de Cristo pea clam (*Pisidium sanguinichristi*) is not be considered as potential SCC, as the pea clam has not been determined to be a valid species (Lang 2013). However, the Sangre de Cristo pea clan Zoological Area that is currently designated on the Carson NF will be carried forward into the revised plan.

roundtail chub

Carson NF Response: The roundtail chub (*Gila robusta*) is found in the Colorado River Basin, including the San Juan River that flows through the Four Corners area of New Mexico. The Jicarilla Ranger District of the Carson NF lies on the eastern edge of the San Juan Basin, but does not support perennial water (streams or lakes); therefore, roundtail chub is not found on the Carson NF.

black-tailed prairie dog (likely occurs on eastern edge of Valle Vidal but not coded to CNF on Regional list)

Carson NF Response: There is no record of this species occurring on the Carson NF; therefore, this species was not included on the Carson NF's potential SCC list.

Canada lynx (federal threatened, see notes below)

Carson NF Response: As required by the Endangered Species Act (Act; 16 U.S.C. Sec. 1531-1544), the Carson NF will always analyze the impacts to federally listed species. However, in regards to the SCC list, a species of conservation concern is defined in the 2012 Planning Rule 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(c)).

American marten (current common name is Pacific marten, hereafter marten)

Carson NF Response: Population and abundance data for American marten is unknown state-wide and within the forest; however, American marten has been observed within the Spruce-fir Forest (SFF) ERU (Assessment p. 46) on the Carson NF. Currently there are 289,929 acres (18%) of SFF within the forest, of which 103,205 acres (36%) are in wilderness and inventoried roadless areas. The wilderness and inventoried roadless areas provide high quality, contiguous spruce-fir habitat that is less influenced by human activities. Currently, SFF is moderately departed from reference conditions at both the plan and context scales, mostly due to legacy timber harvests that removed old trees and built roads (Assessment p. 46). However, the current disturbance regime is not significantly different from that of reference condition (Schoennagel et al. 2004; Vankat 2013). Over the next 100 years, spruce-fir habitat on the Carson NF will approach reference condition, because of natural levels of disturbance and proper management activities (Assessment p. 46); therefore, the future trend for SFF on the Carson NF is stable to increasing (Assessment p. 46). For the following reasons American marten are secure within the Carson NF and their continued long-term persistence is not at risk: (1) population and abundance of this species is unknown, (2) their preferred habitat (spruce-fir) is secure; (3) spruce-fir forest are well-distributed across the forest; and (4) habitat is not normally subject to impacts from management activities due to habitat remoteness.

American pika

Carson NF Response: American pika inhabit rocky outcrops and/or talus key ecosystem characteristics within various vegetation ERUs across the Carson NF that are relatively isolated, in remote areas, and not normally subject to impacts from management activities (BISON-M 2014). These key ecosystem characteristics are well-distributed throughout the Carson NF and have not changed from historic reference condition (Assessment pp. 31-34). Additionally, these species are generally found in the Alpine and Tundra (ALP) ERU (Assessment p. 34). ALP on the Carson NF is very susceptible to climate change, and given its current limited extent and elevation constraints is likely to decline in western mountain systems (USDA FS 2010). However, ALP's departure from reference condition is low on the Carson NF, and when intensified by climate change is still only moderately departed into the future (Assessment p. 298). Also, 86% of ALP on the Carson NF already receives the highest level of protection, having been designated as wilderness. Designated wilderness areas provide high quality and contiguous alpine tundra habitat and are less influenced by human and management activities. There is no population or

abundance distribution data for these species. Since the habitat is well-distributed across the forest, the key ecosystem characteristic trend is stable, and these species are not normally subject to impacts from management activities due to remoteness. American pika appears secure within the Carson NF and its continued long-term persistence is not at risk.

Currently, the Rio Grande National Forest of Region 2 (RGNF), partly adjacent to the CNF on the north, has lost essentially all of its mature and old growth S-F forest (90+% of Engelmann spruce greater than 5-6" dbh; 500,000 acres) and losses are spreading to other Colorado Forests! The RGNF is in Region 2, has considerably more land suitable for S-F than the CNF because it is farther north and higher elevation. Possibly CNF staff were unaware of conditions on the RGNF in Region 2, which demonstrates the importance of coordination beyond an individual Forest boundary as emphasized in the planning rule [219.3/219.4/219.6].

Carson NF Response: Conditions of spruce-fir on the Rio Grande National Forest were discussed in the Carson NF Assessment on p. 50. When developing the Carson NF potential SCC list, Region 2 Sensitive Species List and the Colorado BLM Sensitive Species List were included for review as SCC.

The planning rule requires the responsible official to encourage participation by State Wildlife agencies [219.4 (a)(1)(iv)]. I asked NM Department of Game & Fish (DGF) officials if they were aware of the CNF list and if they had commented. They said they had provided comments. It appears their comments were ignored. Some species not on the CNF list that are serious omissions are discussed below.

Carson NF Response: Prior to issuing potential SCC list to public in May 2015, the Forest Plan Revision (FPR) Team Wildlife Lead met with NMDGF on 10/1/2014 and 4/2/2014 to discuss the potential list and solicit their feedback. In addition, the Carson NF received a comment letter from NMDGF on 7/17/15 regarding the potential SCC list and assessment report. On 8/19/15, the (FPR) Team Wildlife Lead had an in-person meeting with NMDGF to discuss their comments on the SCC list. Based on this meeting, pinyon jay was reconsidered and added to the potential SCC list. NMDGF sent another comment letter by email regarding the potential SCC list on 10/1/15. The FPR Team Wildlife Lead responded to the comment letter on 10/05/15 by email. The NMDGF is a cooperating agency and member of the FPR Government Working Group. Chuck Hayes and Jeff Ogburn represent NMGF at Government Working Group meetings and provide input and edits as we are revising the forest plan.

Marten are a species dependent on un-fragmented old growth S-F with an abundance of snags and Course Woody Debris. Openings between stands of S-F are detrimental to marten (i.e., habitat fragmentation). Red-backed voles are a prime food and also dependent on this habitat type. Marten will use some mixed conifer forest, but only as long as there is good quality S-F habitat nearby or adjacent. In NM, marten are State listed threatened and included on the Regional SCC list, but not the CNF list. Almost all of the marten in NM are on the CNF, on the Questa and Tres Piedras Districts in the Sangre de Cristo and San Juan mountains. Some occur on the Camino Real District and on private land in these mountain ranges. Marten also occur on the Santa Fe National Forest in the Pecos Wilderness but are rare. The best population in NM is on the CNF in the Twining (Taos Ski Valley) area. Survival of marten in NM depends on the continued existence of high quality old growth S-F forest on the CNF. Marten need to be on the CNF SCC list.

Carson NF Response: Population and abundance data for American marten is unknown state-wide and within the forest; however, American marten has been observed within the Spruce-fir Forest (SFF) ERU (Assessment p. 46) on the Carson NF. Currently there are 289,929 acres (18%) of SFF within the forest, of which 103,205 acres (36%) are in wilderness and inventoried roadless areas. The wilderness and inventoried roadless areas provide high quality, contiguous spruce-fir habitat that is less influenced by human activities. Currently, SFF is moderately departed from reference conditions at both the plan and context scales, mostly due to legacy timber harvests that removed old trees and built roads (Assessment p. 46). However, the current disturbance regime is not significantly different from that of reference condition (Schoennagel et al. 2004; Vankat 2013). Over the next 100 years, spruce-fir habitat on the Carson NF will approach reference condition, because of natural levels of disturbance and proper management activities (Assessment p. 46); therefore, the future trend for SFF on the Carson NF is stable to increasing (Assessment p. 46). For the following reasons American marten is secure within the Carson NF and its continued long-term persistence is not at risk: (1) population and abundance of this species are unknown; (2) its preferred habitat (spruce-fir) is secure; (3) spruce-fir forest is well-distributed across the forest; and (4) habitat is not normally subject to impacts from management activities due to habitat remoteness.

Boreal owls are dependent on old growth S-F with a high density of snags and are listed State of NM Threatened. They are listed on the Regional SCC list but not on the CNF list. Adverse impacts to S-F on the CNF and Santa Fe National Forest, which is likely, will impact and possibly extirpate boreal owls from NM. Maintaining high quality S-F and it's key components is critical to the long term survival of this species in NM. Standards and/or Guidelines will be necessary for maintaining sustainability and integrity of S-F [219.8] and maintaining viable populations of this native species in NM [219.9]. Boreal owls need to be on the CNF SCC list.

Carson NF response: Population and abundance data for boreal owl is unknown state-wide and within the forest; however, these species have been observed within the Spruce-fir Forest (SFF) ERU (p. Assessment p. 46) throughout the Carson NF. Currently there are 289,929 acres (18%) of SFF within the forest, of which 103,205 acres (36%) are in wilderness and inventoried roadless areas. The wilderness and inventoried roadless areas provide high quality, contiguous spruce-fir habitat that is less influenced by human activities. Currently, SFF is moderately departed from reference conditions at both the plan and context scales, mostly due to legacy timber harvests that removed old trees and built roads (Assessment p. 46). However, the current disturbance regime is not significantly different from that of reference condition (Schoennagel et al. 2004; Vankat 2013). Over the next 100 years, spruce-fir habitat on the Carson NF will approach reference condition, because of natural levels of disturbance and proper management activities (Assessment p. 46); therefore, the future trend for SFF on the Carson NF is stable to increasing (Assessment p. 46). For the following reasons boreal owl is secure within the Carson NF and their continued long-term persistence is not at risk: (1) population and abundance of this species are unknown; (2) its preferred habitat (spruce-fir) is secure; (3) spruce-fir forest are well-distributed across the forest; and (4) habitat is not normally subject to impacts from management activities due to habitat remoteness.

Canadian lynx are federal Threatened and occur on the CNF in the Sangre de Cristo and San Juan mountains. Snowshoe hares are the primary food of lynx and are limited to the S-F ecosystem in these mountain ranges on the CNF and Santa Fe National Forest, and are State listed as a SGCN.

Survival of lynx in NM is dependent on the survival of snowshoe hares. Standards and/or guidelines to insure a healthy S-F ecosystem will be important for survival of snowshoe hare and lynx as required in the planning rule at 219.8 and 219.9. Snowshoe hare should be a SCC on the Regional list and the CNF list.

Carson NF Response: State-wide and forest population and abundance data for snowshoe hare are unknown; however, this species has been observed within the Spruce-fir Forest (SFF) ecosystem response units (ERUs)(Assessment p. 46) throughout the Carson NF. Currently, there are 289,929 acres (18%) of SFF within the forest, of which 103,205 acres (36%) are in wilderness and inventoried roadless areas. The wilderness and inventoried roadless areas provide high quality, contiguous spruce-fir habitat that is less influenced by human activities. Currently, SFF is moderately departed from reference conditions at both the plan and context scales, mostly due to legacy timber harvests that removed old trees and built roads (Assessment p. 46). However, the current disturbance regime is not significantly different from that of reference condition (Schoennagel et al. 2004; Vankat 2013). Over the next 100 years, it is anticipated that spruce-fir habitat on the Carson NF will approach reference condition, because of natural levels of disturbance and proper management activities (Assessment p. 46); therefore, the future trend for SFF on the Carson NF is stable to increasing (Assessment p. 46). For the following reasons snowshoe hare is secure within the Carson NF and its continued long-term persistence is not at risk: (1) population and abundance of this species are unknown; (2) its preferred habitat (spruce-fir) is secure; (3) spruce-fir forest is well-distributed across the forest; and (4) habitat is not normally subject to impacts from management activities, due to habitat remoteness.

The Sangre de Cristo peaclam is another species on the Regional SCC list but missing from the CNF SCC list, which concerns me. This species is listed State of NM Threatened, a SGCN and endemic to Middle Fork Lake on the CNF. The species occurs nowhere else in the world. The lake is mostly surrounded by wilderness but there is a road to the lake. Projects or activities that might adversely affect the lake would jeopardize the existence of the species, which would be contrary to the direction of the planning rule at 219.8 and 219.9. The species should be included on the CNF SCC and Standards to protect the lake included in the plan.

Carson NF Response: Sangre de Cristo pea clam (*Pisidium sanguinichristi*) is not be considered as potential SCC, as the pea clam has not been determined to be a valid species (Lang 2013). However, the Sangre de Cristo pea clan Zoological Area that is currently designated on the Carson NF will be carried forward into the revised plan.

NM and the CNF do not have a lot of alpine tundra habitat, and with the warming climate loss of some alpine habit is likely. Loss the entire ecosystem is possible. Rocky Mountain bighorn sheep utilize alpine tundra on the CNF in the Sangre de Cristo Mountains. There needs to be a careful assessment of risks to this native game species. It may need to be added to the CNF SCC list and standards or guidelines included in the plan [219.8 and 219.9].

Carson NF response: According to the NMDGF, Rocky Mountain bighorn sheep are huntable within New Mexico (NMDGF 2014). Population trends for Rocky Mountain bighorn sheep within the Carson NF have been increasing since 2004 (Rominger 2015). Additionally, Rocky Mountain bighorn sheep are generally found in the Alpine and Tundra (ALP) ERU (Assessment p. 34). ALP on the Carson NF is very susceptible to climate change, and given its current limited extent and elevation constraints, it is likely to decline in western mountain systems (USDA FS 2010).

However, ALP's departure from reference condition is low on the Carson NF, and when intensified by climate change it is still only moderately departed into the future (Assessment p. 298). Also, 86% of ALP on the Carson NF already receives the highest level of protection, having been designated as wilderness. Designated wilderness areas provide high quality and contiguous alpine tundra habitat and are less influenced by human and management activities. Rocky Mountain bighorn sheep are secure within the Carson NF and their continued long-term persistence is not at risk, since their population trend is increasing and habitat is not normally subject to impacts from management activities, due to habitat remoteness.

American pika is listed on the Regional SCC list but not on the CNF list. The species occurs in high elevation talus slides, but not low elevation talus, and apparently needs the cold frost heaving to occur within the talus for survival. The warming climate appears to be reducing habitat for the species putting its long term survival in NM at risk. The species should be on the CNF SCC list and standards or guidelines included in the plan to avoid exacerbating the problem, as required by the planning rule at 219.8 and 219.9. The yellow-bellied marmot uses habitat similar to the pika and is likely also at risk for the same reasons including loss of alpine habitat due to warming and drying climate. American pika and yellow-bellied marmot should be on the CNF SCC list.

Carson NF Response: American pika and yellow-bellied marmot inhabit rocky outcrops and/or talus key ecosystem characteristics within various vegetation ERUs across the Carson NF that are relatively isolated, in remote areas, and not normally subject to impacts from management activities (BISON-M 2014). These key ecosystem characteristics are well-distributed throughout the Carson NF and have not changed from historic reference condition (Assessment pp. 31-34). Additionally, these species are generally found in the Alpine and Tundra (ALP) ERU (Assessment p. 34). ALP on the Carson NF is very susceptible to climate change, and given its current limited extent and elevation constraints is likely to decline in western mountain systems (USDA FS 2010). However, ALP's departure from reference condition is low on the Carson NF, and when intensified by climate change is still only moderately departed into the future (Assessment p. 298). Also, 86% of ALP on the Carson NF already receives the highest level of protection, having been designated as wilderness. Designated wilderness areas provide high quality and contiguous alpine tundra habitat and are less influenced by human and management activities. There is no population or abundance distribution data for these species. Since the habitat is well-distributed across the forest, the key ecosystem characteristic trend is stable, and these species are not normally subject to impacts from management activities due to remoteness. American pika and yellow-bellied marmot appear secure within the Carson NF and their continued long-term persistence is not at risk.

S-F species which need to be added to the CNF SCC list include: marten, boreal owl, snowshoe hare, and southern Red-backed vole.

Carson NF Response: Population and abundance data for American marten, boreal owl, snowshoe hare, and southern red-backed vole are unknown state-wide and within the forest; however, these species have been observed within the Spruce-fir Forest (SFF) ERU (Assessment p. 46) throughout the Carson NF. Currently there are 289,929 acres (18%) of SFF within the forest, of which 103,205 acres (36%) are in wilderness and inventoried roadless areas. The wilderness and inventoried roadless areas provide high quality, contiguous spruce-fir habitat that is less influenced by human activities. Currently, SFF is moderately departed from reference

conditions at both the plan and context scales, mostly due to legacy timber harvests that removed old trees and built roads (Assessment p. 46). However, the current disturbance regime is not significantly different from that of reference condition (Schoennagel et al. 2004; Vankat 2013). Over the next 100 years, spruce-fir habitat on the Carson NF will approach reference condition, because of natural levels of disturbance and proper management activities (Assessment p. 46); therefore, the future trend for SFF on the Carson NF is stable to increasing (Assessment p. 46). For the following reasons, American marten, boreal owl, snowshoe hare, and southern red-backed vole are secure within the Carson NF and their continued long-term persistence is not at risk: (1) population and abundance of these species is unknown, (2) their preferred habitat (spruce-fir) is secure; (3) spruce-fir forest is well-distributed across the forest; and (4) habitat is not normally subject to impacts from management activities, due to habitat remoteness.

Other species that should be on the CNF SCC list include: Sangre de Cristo Pea Clam, American pika and yellow-bellied marmot.

Carson NF Response: Sangre de Cristo pea clam (*Pisidium sanguinichristi*) is not be considered as potential SCC, as the pea clam has not been determined to be a valid species (Lang 2013). However, the Sangre de Cristo pea clan Zoological Area that is currently designated on the Carson NF will be carried forward into the revised plan.

American pika and yellow-bellied marmot inhabit rocky outcrops and/or talus key ecosystem characteristics within various vegetation ERUs across the Carson NF that are relatively isolated, in remote areas, and not normally subject to impacts from management activities (BISON-M 2014). These key ecosystem characteristics are well-distributed throughout the Carson NF and have not changed from historic reference condition (Assessment pp. 31-34). Additionally, these species are generally found in the Alpine and Tundra (ALP) ERU (Assessment p. 34). ALP on the Carson NF is very susceptible to climate change, and given its current limited extent and elevation constraints is likely to decline in western mountain systems (USDA FS 2010). However, ALP's departure from reference condition is low on the Carson NF, and when intensified by climate change is still only moderately departed into the future (Assessment p. 298). Also, 86% of ALP on the Carson NF already receives the highest level of protection, having been designated as wilderness. Designated wilderness areas provide high quality and contiguous alpine tundra habitat and are less influenced by human and management activities. There is no population or abundance distribution data for these species. Since the habitat is well-distributed across the forest, the key ecosystem characteristic trend is stable, and these species are not normally subject to impacts from management activities due to remoteness. American pika and yellow-bellied marmot appear secure within the Carson NF and their continued long-term persistence is not at risk.

However, considering the apparent weakness of the CNF SCC list, it really needs a complete and thorough analysis to include all appropriate species. Taking a close look at the DGF list of SGCN might be useful and appropriate.

Carson Response: The following species lists were included and evaluated for the Carson NF's potential SCC list: (1) species records from NatureServe for all species occurring in New Mexico that had status ranks of G or T 1, 2, or 3 and S 1 and 2; (2) species that are identified as recently delisted or have a positive 90-day finding in New Mexico by the USFWS (77 FR 69994); (3)

species listed as threatened or endangered by New Mexico Department of Game and Fish (NMDGF) (BISON-M 2014) and State Forestry Division (NM EMNRD 2006); (4) species on the Southwestern Regional Forester's Sensitive Species List (USDA FS 2013); (5) species listed as sensitive species on adjacent federal agency lands (SLV Public Land Center 2013, which includes San Luis Valley BLM and Region 2 Forest Service Rio Grande NF and San Juan NF)(USDI BLM 2009, Taos BLM Sensitive Species); (6) species listed as threatened or endangered by adjacent Tribes (Navajo Nation 2008, Taos Pueblo, Jicarilla, and Picuris Pueblo); (7) species identified as those of greatest conservation need by the New Mexico Comprehensive Wildlife Conservation Strategy (NMDGF 2006); (8) rare plants as identified by the New Mexico Rare Plants Technical Council (NMRPTC 1999); and (9) Migratory Birds List by the USFWS (USDI FWS 2014).

Additional Information

SCCs can also be changed throughout the life of the forest plan without an amendment based on new scientific information. As such, these species will be reviewed periodically and as new information is available for inclusion to the Carson NF Species of Conservation Concern List. These species will also be reviewed as potential species for monitoring during the forest plan revision process. Thank you for all your comments, time, and information regarding the Carson National Forest's Potential Species of Conservation Concern List.

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