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UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF ARIZONA

WILDEARTH GUARDIANS, Plaintiff, v. UNITED STATES FISH AND WILDLIFE SERVICE and UNITED STATES FOREST SERVICE, Defendants.	CASE NO. 4:13-cv-151-RCC **DEFENDANTS' MOTION TO DISSOLVE THE COURT'S INJUNCTION RE THE CIBOLA NATIONAL FOREST** **[EXPEDITED REVIEW REQUESTED]**

INTRODUCTION

At issue is whether the U.S. Fish & Wildlife Service's ("FWS") completion of its reinitiated Section 7(a)(2) consultation under the Endangered Species Act ("ESA") regarding the Cibola forest plan and its issuance of a superseding biological opinion ("BiOp") for the Cibola National Forest satisfies this Court's prior order, dated September 12, 2019, and warrants dissolution of the Court's injunction insofar as it applies to the Cibola National Forest.[1] In its order, the Court ordered FWS to reinitiate consultation with the U.S. Forest Service ("USFS") and revisit the recovery determination in the Cibola BiOp's Section 7(a)(2) jeopardy analysis. ECF No. 89 at 36-39.[2] The Court also enjoined all timber management actions on the Cibola National Forest until the completion of reinitiated consultation and issued a superseding BiOp. *Id.* Both events have now occurred. Accordingly, because Defendants have fully complied with this Court's order, its injunction should, by its terms, be dissolved.

STANDARD FOR DISSOLUTION

A party seeking dissolution of an injunction may meet its initial burden by demonstrating "a significant change either in factual conditions or in law." *Rufo v. Inmates of Suffolk Cty. Jail*, 502 U.S. 367, 384 (1992); *see also Sharp v. Weston*, 233 F.3d 1166, 1170 (9th Cir. 2000) ("A party seeking modification or dissolution of an injunction bears the burden of establishing that a significant change in facts or law warrants revision or dissolution of the injunction"); *Univ. of Hawaii Prof'l Assembly v. Cayetano*, 125 F. Supp. 2d 1237, 1240 (D. Haw. 2000) ("[C]ourts have continuing jurisdiction to terminate, dissolve, vacate, or modify an injunction or an interlocutory order in the event that changed circumstances require it.") (citing *United States v. Oregon*, 769 F.2d 1410, 1416 (9th Cir. 1985), and *In re Detroit Auto Dealers Ass'n*, 84

[1] The superseding BiOps for the Carson, Lincoln, Tonto, Gila, and Santa Fe National Forests are not yet finalized.

[2] Citations to Court documents reference the page numbers generated by ECF.

F.3d 787, 789 (6th Cir. 1996)). "A significant change is one that pertains to the underlying reasons for the injunction." *Moon v. GMAC Mortgage Corp.*, No. C08-969Z, 2008 WL 4741492, at *2 (W.D. Wash. Oct. 24, 2008) (citing *United States v. Swift & Co.*, 189 F. Supp. 885, 905 (D. Ill. 1960), aff'd per curium, 367 U.S. 909 (1961)). Under a flexible standard based on Federal Rule of Civil Procedure 60(b)(5), "the Ninth Circuit has directed courts to 'take all the circumstances into account in determining whether to modify or vacate a prior injunction or consent decree.'" *Orantes-Hernandez v. Gonzales*, 504 F. Supp. 2d 825, 830 (C.D. Cal. 2007), *aff'd*, 321 F. App'x 625 (9th Cir. 2009) (quoting *Bellevue Manor Assocs. v. United States*, 165 F.3d 1249, 1256 (9th Cir. 1999)); *see also System Fed'n No. 91 v. Wright*, 364 U.S. 642, 648 (1961) (holding district court has "wide discretion" to modify injunctive relief upon changed circumstances or new facts).

ARGUMENT

I. Defendants Have Complied With This Court's Order Insofar As It Applies to the Cibola National Forest, and the Injunction Should Be Dissolved.

In its order dated September 12, 2019, this Court enjoined USFS's timber management activities in the Cibola National Forest pending the following: (1) the completion of reinitiated Section 7(a)(2) consultation and (2) the issuance of a new superseding BiOp. ECF No. 89 at 36-39. Both events have now occurred. The circumstances that originally necessitated injunctive relief are no longer present. Rather, the agencies' completion of their reinitiated consultation and FWS's new superseding BiOp – in compliance with this Court's order – constitute "significant changes" that directly address "the underlying reasons for the injunction." *Moon*, 2008 WL 4741492 at *2. Accordingly, Defendants have fully complied with the terms of the Court's order, and the Court's injunction against the agencies should be dissolved.[3] The injunction is no

[3] To the extent that Plaintiff intends to challenge the substance of this superseding BiOp, this BiOp is a new final agency action that must be challenged in a separate complaint based in

longer warranted and should be dissolved.

CONCLUSION

For all these reasons set forth above, Defendants' motion for dissolution of the injunction should be granted.

Dated: November 6, 2019

Respectfully Submitted,

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its own administrative record and subject to the appropriate notice requirements and standard of review.

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF ARIZONA

WILDEARTH GUARDIANS, Plaintiff, v. UNITED STATES FISH AND WILDLIFE SERVICE and UNITED STATES FOREST SERVICE, Defendants.	CASE NO. 4:13-cv-151-RCC **CERTIFICATE OF SERVICE**

I hereby certify that I electronically filed the foregoing with the Clerk of the Court using the CM/ECF system, which will send notification of such to the attorneys of record.

/s/ Rickey D. Turner, Jr.
RICKEY D. TURNER, JR.

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In reply refer to:
NMESO/SE
02ENNM00-2012-F-0050-R001/ 02E00000-2012-F-0003-R001

November 5, 2019

Mr. Steve Hattenbach, Forest Supervisor
Cibola National Forest
2113 Osuna Road Northeast
Albuquerque, NM 87113

RE: Reinitiation of Continued Implementation of the Land and Resource Management Plan (LRMP) for the Cibola National Forest

Dear Mr. Hattenbach:

This document transmits our biological opinion (BO) for the reinitiation of formal consultation pursuant to section 7 of the Endangered Species Act of 1973 (16 U.S.C. § 1531-1544), as amended (Act), for the Cibola National Forest's (NF) Land and Resource Management Plan (LRMP). The U.S. Fish and Wildlife Service (Service) and Forest Service are conducting this reinitiation in response to a September 12, 2019, court order in *WildEarth Guardians v. U.S. Fish and Wildlife Service*, 4:13-cv-00151-RCC. In response to this court order, as well as updated information regarding subjects in the BO, and current regulation and policy, we are updating the Status of the Species, Environmental Baseline, Effects of the Action, Cumulative Effects, and Incidental Take Statement sections of the March 30, 2012, Cibola NF LRMP BO (02ENNM00-2012-F-0050 or 02E00000-2012-F-0003). We received your updated Biological Assessment (BA) on October 20, 2019. We are consulting on effects to the threatened Mexican spotted owl (*Strix occidentalis lucida*) (spotted owl or owl) and its critical habitat from the Forest Service's continued implementation of the Cibola NF's LRMP.

Updates to the regulations governing interagency consultation (50 CFR part 402) were effective on October 28, 2019 [84 FR 44976]. This consultation was pending at that time, and we are applying the updated regulations to the consultation. As the preamble to the final rule adopting the regulations noted, "[t]his final rule does not lower or raise the bar on section 7 consultations, and it does not alter what is required or analyzed during a consultation. Instead, it improves clarity and consistency, streamlines consultations, and codifies existing practice." We have reviewed the information and analyses relied upon to complete this biological opinion in light of the updated regulations and conclude the opinion is fully consistent with the updated regulations.

This BO replaces the 2012 BO (02E00000-2012-F-0003 or 02E00000-2012-F-0003) for the Mexican spotted owl. We based this BO on information provided in the October 20, 2019, BA; the April 6, 2011, BA; past LRMP BOs; the final Recovery Plan for the Mexican spotted owl, First Revision (Service 2012); meetings, conversations and electronic correspondence with your staff; and, other sources of information found in the administrative record supporting this BO. Literature cited in this BO is not a complete bibliography of all literature available on the Mexican spotted owl or on other subjects considered in this opinion. A complete administrative record of this consultation is on file at the Arizona/New Mexico Ecological Services Field Office. The most recent 2012 LRMP BO and incidental take statement, as they relate to the Mexican spotted owl, are hereby withdrawn and no longer have any force and effect.

Consultation History

- September 12, 2019: In response to litigation (i.e., court order 4:13-cv-00151-RCC), the Service began to re-analyze the effects of the proposed action and our analysis of the proposed actions' effect on owl recovery to address the Court's findings.
- October 20, 2019: We received the updated BA from the Forest Service.
- October 28, 2019: We sent a draft BO to the Forest Service for your review.
- October 29, 2019: We received your comments on the draft BO and incorporated comments.

BIOLOGICAL OPINION

DESCRIPTION OF THE PROPOSED ACTION

The proposed action we are analyzing is the continued implementation of the Cibola NF's 1985 LRMP (including the 1996 Region-wide Amendment). Also included in this BA is an analysis of those Standards & Guidelines (S&Gs) that the Forest Service added through amendments to the LRMPs since the 2011 LRMP BA (See Appendix 4 in the 2011 BA for a complete list of S&Gs analyzed in the 2012 BO). This consultation will be in place until the Cibola NF finishes revising their LRMP, at which time they will re-initiate consultation with the Service. The target date for the revised LRMP is fall of 2020 or early 2021.

The LRMP directs how the Cibola NF will carry out current and future activities in the following Programs: Engineering; Fire Management; Forestry/Forest Health; Lands and Minerals; Rangeland Management; Recreation, Heritage and Wilderness; Watershed Management; and Wildlife, Fish, and Rare Plants (WFRP). We discuss the S&Gs related to these Programs in the Effects of the Action section of this BO.

The LRMPs and the 1996 Regional LRMP Amendment described long-range management strategies for the NFs and National Grasslands (NGs) in the U.S. Forest Service Southwestern Region. They provide a programmatic framework for future activities and emphasize the application of certain S&Gs in the undertaking of those activities on the land. The LRMPs do not make site-specific decisions about exactly how, when, and where the Forest Service will carry out these activities. However, all site-specific activities must conform to the programmatic

framework set up in the LRMP (S&Gs) and they must meet site-specific National Environmental Policy Act (NEPA) and Act requirements.

This consultation on the Cibola NF LRMP does not eliminate the requirement for site-specific BAs and the need for site-specific informal or formal section 7(a)(2) consultation with the Service for individual projects implemented under the LRMPs. Furthermore, it should be noted that amendment (i.e., deleting/changing S&Gs) for a site-specific project is allowed and can and does occur, although rarely. In this situation, we would consider the action outside of the scope of this consultation and it would require its own site-specific section 7(a)(2) consultation to address the effects of the specific proposed action implemented under a project specific amendment to the NF LRMP. Furthermore, we do not include wildfire and wildland fire use (managed fire) in this BO, as we would address suppression actions associated with these activities under separate emergency consultations.

Conservation Measures

- The Cibola NF conducts Service protocol Mexican spotted owl surveys prior to the implementation of projects. Permitted biologists conduct these surveys during the owl-breeding season in order to locate owls, determine breeding status, and locate nests/roosts prior to project implementation. These surveys address project-level effects to owls and ensure protection of individual owls. If owl detections meet the definition of an owl site per the Recovery Plan (Service 2012), then the Forest Service would establish a Protected Activity Center (PAC) per Recovery Plan recommendations.

Action Area

The action area is defined as all areas to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action (50 CFR § 402.02). In delineating the action area, we evaluated the farthest-reaching physical, chemical, and biotic effects of the action on the environment.

The Cibola NF is one of five NFs in New Mexico, occupying approximately 1.6 million acres within 10 counties; as such, it consists of large, but disjunct, sky islands with elevations ranging from 5,200 feet (ft) to over 11,300 ft. The Cibola NF has four Ranger Districts (RDs) (Magdalena, Mount Taylor, Mountainair, and Sandia). Within the Cibola NF, there are four designated wilderness areas: Sandia Mountain, Manzano Mountain, Withington, and Apache Kid. We define the Action Area for this BO as all lands that the Cibola NF ranger districts encompass, plus adjacent lands that the proposed action may affect.

The Cibola NF also includes two NGs (Kiowa/Rita Blanca and Black Kettle/McClellan Creek) covering 263,954 acres in northeastern New Mexico, western Oklahoma, and northern Texas. The NGs do not provide habitat for the Mexican spotted owl and are not part of the action area for this consultation.

Vegetation on the Cibola NF within the action area ranges from pinyon-juniper to sub-alpine spruce and fir. The most predominant vegetation type on the Cibola NF is pinyon-juniper

woodland (about 42% of the forest). The remainder comprises primarily ponderosa pine forest (nearly 30%), mixed conifer forest (about 12%), and semi-desert grassland (about 7%). The Cibola NF is predominantly a dry forest ecosystem. The main vegetation system drivers on the forest are fire disturbances (or lack thereof), regional climate regime, insects, and natural vegetation succession. For the Mexican spotted owl, the most important habitat on the Cibola NF is the mixed conifer forest, which provides nesting, roosting, foraging, dispersal habitat, followed by the ponderosa pine forest, which likely is used more for foraging and dispersal. Therefore, spotted owls likely use approximately 40-42% of the Cibola NF's four ranger districts.

STATUS OF THE SPECIES AND CRITICAL HABITAT

Mexican spotted owl

In 1993, the Service listed the Mexican spotted owl (hereafter, referred to as Mexican spotted owl, spotted owl, and owl) as threatened under the Act (58 FR 14248) and designated critical habitat in 2004 (69 FR 53182). The Service appointed the Mexican spotted owl Recovery Team in 1993 (Service 1993), which produced the Recovery Plan for the Mexican spotted owl in 1995 (Service 1995). The Service released the final Mexican spotted owl Recovery Plan, First Revision (Recovery Plan) in December 2012 (Service 2012).

Description and Life History

The Mexican spotted owl is a medium-sized owl without ear tufts. They are mottled with irregular white spots on its brown abdomen, back, and head. Mexican spotted owls nest in caves, in stick nest built by other birds, on debris platforms in trees, and in tree cavities. Mexican spotted owls have distinct annual breeding periods, with courtship beginning in March. Eggs are typically laid in late March or early April, with eggs hatching approximately 30 days later. Nestling owls generally fledge in early to mid-June. A detailed account of the taxonomy, biology, and reproductive characteristics of the Mexican spotted owl is found in the Final Rule listing the owl as a threatened species (58 FR 14248), the original Recovery Plan (Service 1995), and in the revised Recovery Plan (Service 2012). We include the information provided in those documents by reference.

Habitat Requirements and Distribution

The spotted owl occurs in forested mountains and canyonlands throughout the southwestern United States and Mexico (Figure 1 in Gutiérrez *et al.* 1995). It ranges from Utah, Colorado, Arizona, New Mexico, and the western portions of Texas south into several states in Mexico. Although the owl's entire range covers a broad area of the southwestern United States and Mexico, it does not occur uniformly throughout its range. Instead, the owl occurs in disjunct localities that correspond to isolated forested mountain systems, canyons, and in some cases steep, rocky canyon lands. Known owl locations in forested habitats indicate that the species has an affinity for older, uneven-aged forests, and the species inhabits a physically diverse landscape in the southwestern United States and Mexico.

In the Recovery Plan (Service 2012), the Recovery Team defined specific forest cover types (mixed conifer and pine-oak) and rocky-canyon habitats that provide nesting, roosting, and foraging habitat for Mexican spotted owls (Service 2012). The availability of habitat used for nesting/roosting of Mexican spotted owls in forested and rocky-canyon environments limits owl distribution (meaning the nesting and roosting habitat is a limiting factor for spotted owls). Habitat used for nesting/roosting also provides adequate conditions for foraging and dispersal activities. Thus, sustaining nesting/roosting habitat meets other survival and recovery requirements. Based on the specific forest cover type and rocky-canyon definitions, the Recovery Plan (Service 2012) focuses management recommendations on two categories of owl habitat: PACs and "recovery habitat" (the Recovery Team previously called recovery habitat "restricted habitat" in the 1995 Recovery Plan; the terms are synonymous).

PACs are intended to sustain and enhance areas that are presently, recently, or historically occupied by breeding Mexican spotted owls (Service 2012). Minimum PAC area is 600 acres and is based on the median size of the adaptive kernel contour enclosing 75% of the foraging locations for 14 pairs of radio-marked owls (595 ac) (Ganey and Dick 1995). Thus, PACS protect activity centers used by owls rather than entire home ranges. Consequently, there is no upper limit for PAC sizes; managers may create larger PACs if appropriate. The Service and land managers establish PACs around owl sites (as defined in the Recovery Plan). All PACS should contain a designated 100-acre nest/roost core area, designed to offer additional protection to the nest or primary roost areas. The Recovery Plan (Service 2012) emphasizes protection of habitat used for nesting and roosting within PACs because the owls are most selective for such habitat (Ganey and Dick 1995, Service 2012 [Appendix B]) and these forest conditions are most limited across the landscape. These areas also provide resources to meet other life-history needs of the owl. Therefore, designating PACs protects and maintains occupied owl habitat.

Recovery habitat occurs in forest types and rocky canyons used by owls for roosting, foraging, dispersal, and other life history needs; however, recovery habitat occurs outside of PACs. Recovery habitat is intended to: 1) provide protection for areas that may be used by owls; 2) foster creation of nest/roost habitat; 3) simultaneously provide managers with greater management flexibility than is allowed in PACs; and, 4) facilitate development and testing of management strategies that could be applied in PACs (Service 2012). Areas not classified as either PACs or recovery habitats, are classified as "Other Forest and Woodland Types" and "Other Riparian Forest Types" (Service 2012). These areas, which nesting owls rarely use for foraging and dispersal, generally include pure ponderosa pine forest, pinyon-juniper woodland, or other habitat types. Given their relatively limited importance to nesting owls, the Recovery Plan (Service 2012) contains no owl-specific recommendations in "Other Forest and Woodland Types" and "Other Riparian Forest Types".

In addition to this natural variability in habitat influencing owl distribution, human activities also vary across the owl's range. The combination of natural habitat variability, human influences on owls, international boundaries, and logistics of implementation of the Recovery Plan necessitates subdivision of the owl's range into smaller management areas. The 1995 Recovery Plan subdivided the owl's range into 11 "Recovery Units" (RUs): six in the United States and five in Mexico. In the revision of the Recovery Plan (Service 2012), we renamed RUs as "Ecological Management Units" (EMUs) to be in accord with current Service guidelines. The Recovery

Team divided the owl's range within the United States into five EMUs: Colorado Plateau (CP), Southern Rocky Mountains (SRM), Upper Gila Mountains (UGM), Basin and Range-West (BRW), and Basin and Range-East (BRE) (Service 2012). Within Mexico, the revised Recovery Plan delineated five EMUs: Sierra Madre Occidental Norte, Sierra Madre Occidental Sur, Sierra Madre Oriental Norte, Sierra Madre Oriental Sur, and Eje Neovolcanico.

Threats

The Service cited two primary reasons for the original listing of the Mexican spotted owl in 1993: (1) the historical alteration of its habitat as the result of timber-management practices; and, (2) the threat of these practices continuing. We also identified the danger of stand-replacing fire as a looming threat at that time. Since publication of the original Recovery Plan (Service 1995), the Service and Recovery Team acquired new information on the biology, threats, and habitat needs of the owl. Threats to its population in the U.S. (but likely not in Mexico) have transitioned from commercial-based timber harvest to the risk of stand-replacing wildland fire (Service 2012). Recent forest management has moved away from a commodity focus, such as commercial-based timber harvest, and now emphasizes sustainable ecological function and a return toward pre-settlement fire regimes, both of which have potential to benefit the spotted owl. However, as stated in the revised Recovery Plan (Service 2012), there is much uncertainty regarding thinning and burning treatment effects and the risks to owl habitat with or without forest treatment as well.

Southwestern forests have experienced larger and more severe wildland fires from 1995 to the present, than prior to 1995 (Westerling 2016). Climate variability combined with unhealthy forest conditions (i.e., too many trees; high levels of insects and disease; excessive fuel loads; etc.) also synergistically result in increased negative effects to habitat from fire (Fulé *et al.* 2004, Littell *et al.* 2009). The intensification of natural drought cycles and the ensuing stress placed upon overstocked forested habitats could result in even larger and more severe fires in owl habitat (Jones *et al.* 2016, Ganey *et al.* 2017). Currently, high-severity, stand-replacing fires are influencing the persistence of ponderosa pine and mixed conifer forest types in Arizona and New Mexico. Wildland fire is likely the greatest threat to the Mexican spotted owl within the action area and fire severity and size have been increasing (Service 2012). Landscape level wildland fires, such as the Rodeo-Chediski Fire (2002), the Wallow Fire (2011), and the Whitewater-Baldy Complex (2012) have resulted in the loss of tens of thousands of acres of occupied and potential nest/roost habitat across significant portions of the owl's range. Although owls will forage in severely burned areas, habitat is often lacking for nesting and roosting in these areas, particularly when high severity fire affects large patches of habitat (Jones *et al.* 2016).

Fuels reduction treatments, though critical to reducing the risk of severe wildland fire, can have short-term adverse effects to owls through habitat modification and disturbance. As the human population grows in the southwestern United States, small communities within and adjacent to wildlands are being developed. This trend may have detrimental effects to spotted owls by further fragmenting habitat and increasing disturbance during the breeding season.

Global climate variability may also be a threat to the owl. Changing climate conditions may interact with fire, management actions, and other factors discussed above, to increase affects to

owl habitat. Studies have shown that since 1950, the snowmelt season in some watersheds of the western U.S. has advanced by about 10 days (Dettinger and Cayan 1995, Dettinger and Diaz 2000, Stewart *et al.* 2004). Researchers think such changes in the timing and amount of snowmelt are signals of climate-related change in high elevations (Smith *et al.* 2000, Reiners *et al.* 2003). The effect of climate change is the intensification of natural drought cycles and the ensuing stress placed upon high-elevation montane habitats (IPCC 2007, Cook *et al.* 2004, Breshears *et al*. 2005, and Mueller *et al.* 2005). The increased stress put on these habitats is likely to result in long-term changes to vegetation, and to invertebrate and vertebrate populations within coniferous forests and canyon habitats that affect ecosystem function and processes.

Historical and current anthropogenic uses of Mexican spotted owl habitat include both domestic and wild ungulate grazing, recreation, fuels reduction treatments, resource extraction (e.g., timber, oil, gas), and development. These activities have the potential to reduce the quality of owl nesting, roosting, and foraging habitat, and may cause disturbance during the breeding season. Livestock and wild ungulate grazing is prevalent throughout the range of the owl and can have a negative effect on the availability of grass cover for prey species. Recreation effects are increasing throughout the Southwest, especially in meadow and riparian areas. There is anecdotal information and research that indicates that owls in heavily used recreation areas are much more erratic in their movement patterns and behavior.

Several fatality factors have been identified as particularly detrimental to the Mexican spotted owl, including predation, starvation, accidents, disease, and parasites. For example, West Nile Virus also has the potential to effect the owl. We have not documented the virus in spotted owls in Arizona, New Mexico, and Colorado, but preliminary information suggests that owls may be highly vulnerable to this disease (Courtney *et al.* 2004). Unfortunately, due to the secretive nature of spotted owls and the lack of intensive monitoring of birds that we have banded, we will most likely not know when owls contract the disease or the extent of its effect to the owl range-wide.

Population Status and Process of Delisting

The recovery objective stated in the Recovery Plan (Service 2012) is "to support the Mexican spotted owl throughout its range into the foreseeable future, and to maintain the habitat conditions necessary to provide roosting and nesting habitat for the Mexican spotted owl." In addition, the Service and Recovery Team developed two recovery (or delisting) criteria (addressing listing factors A, C, and E) that must be met before the owl can be delisted. Those criteria are:

1. Owl occupancy rates must show a stable or increasing trend after 10 years of monitoring.

2. Indicators of habitat conditions (key habitat variables) are stable or improving for 10 years in roosting and nesting habitat.

Once the Service can show that these two criteria have been met across the range of the owl, the Service would then review the regulations and known distribution (the spatial arrangement across its range) of Mexican spotted owls to determine if the delisting process should proceed.

At this time, we cannot describe the future desired distribution of owls across their range because changes in the species' range may occur due to factors such as climate change, which could result in shifts in the owl population to the northern portion of its range. In addition to meeting the delisting criteria, to delist the Mexican spotted owl, the Service must be able to demonstrate, using the best scientific information, that Federal, state, and tribal land managers have moderated and/or regulated anthropogenic and non-anthropogenic threats to the Mexican spotted owl (Service 2012). We derive the best scientific information from research, management experiments, and monitoring conducted at the appropriate scales and intensity. The Service must also conduct an analysis of the five listing factors to verify that threat levels are acceptable for likely persistence of owl populations into the future.

In the Recovery Plan (Service 2012), the Recovery Team identified two types of monitoring recommended for the Mexican spotted owl. The first is surveying for individual owls by using the Service Mexican spotted owl survey protocol (Service 2012 [Appendix D]). These are surveys conducted to locate individual owls (which allows Service and land managers to designate PACs) and to monitor the status of owls associated with known PACs (to locate nests and roosts, and determine their reproductive status in a given year). Mexican spotted owl surveys conducted since the 1995 Recovery Plan have increased the Service's knowledge of owl distribution, but not necessarily of owl abundance. Population estimates, based upon owl surveys, recorded 758 owl sites from 1990 to 1993, and 1,222 owl sites from 1990 to 2004 in the United States. The Recovery Plan (Service 2012) lists 1,324 known owl sites in the United States. An owl site is an area used by a single owl or a pair of adult or subadult owls for nesting, roosting, or foraging. The increase in number of known owl sites is mainly a product of agencies completing new owl surveys within previously unsurveyed areas (e.g., several National Parks within southern Utah, Guadalupe National Park in West Texas; Guadalupe Mountains in southeastern New Mexico and West Texas; Dinosaur National Monument in Colorado; and the Cibola and Gila NFs in New Mexico). Thus, we cannot infer an increase in abundance in the species range-wide from these data (Service 2012). However, the Recovery Team and Service do assume that an increase in the number of occupied sites is a positive indicator regarding owl abundance.

In addition to this survey protocol for individual owls, the Recovery Team also developed and recommended a methodology for conducting Mexican spotted owl population monitoring, using an occupancy (presence/absence) model to determine the population trend (stable, increasing, decreasing) of owls range-wide (Service 2012 [Appendix E]). The Service is currently working with the Southwestern Region of the Forest Service to conduct the population monitoring recommended in the Recovery Plan (Service 2012 [Appendix E]) on National Forest System (NFS) lands in Arizona and New Mexico. The effort to conduct this work has occurred during the 2014-2019 breeding seasons (six years). The Recovery Team, Forest Service, Service, and the Bird Conservancy of the Rockies (BCR, contractor) are continuing to collect data on NFS lands. Of the 200 quadrats sampled on NFS lands in Arizona and New Mexico, 15 are located on the Cibola NF. The Service is developing a strategy for incorporating additional lands (e.g., National Park Service, Bureau of Land Management, and Department of Defense) into the monitoring. It is important to state that delisting criteria in the Recovery Plan (Service 2012) require that monitoring occur across the range of the owl, not just across an individual land management entity (e.g., must include lands managed by all entities, i.e., not just National Forest

System lands). Currently, based on the work conducted by the Forest Service and BCR, we have further developed the process for conducting rangewide population monitoring as described in Appendix E of the Recovery Plan (Service 2012).

It is important to note that the entire range of Mexican spotted owls covers area in five U.S. states (Arizona, Colorado, New Mexico, Texas, and Utah; Table 1) and a large area of Mexico. Within the United States, Region 3 (Southwestern) NFS lands are located in Arizona and New Mexico, which is only a portion of the range of the Mexican spotted owl. Occupancy monitoring conducted on NFs in Region 3 alone may not allow the Service to meet rangewide-delisting criteria, but it will allow the Service and Forest Service to assess population trends on Region 3 NFS lands in Arizona and New Mexico. The spatial scale at which this monitoring is occurring allows for interpretation of owl population trends for all Region 3 NFS lands. However, we (BCR, the Forest Service and the Service) did not design the current NFS occupancy sampling scheme to scale down to monitor owl occupancy trends on any individual NF within the Southwestern Region. We did not design it to meet this smaller scale objective because the objective is to develop a trend for all NFS lands in Region 3, not for each individual forest.

Table 1. Land management area by Ecological Management Unit (EMU) in the United States for the Mexican spotted owl (Service 2012). Not all acres within an EMU meet the definition of Mexican spotted owl habitat.

Land Management Authority	BRE (Acres)	BRW (Acres)	CP (Acres)	SRM (Acres)	UGM (Acres)
Federal Lands					
Bureau of Land Management	7,175,282.5	3,659,160	24,785,929.3	4,255,136.0	322,758.8
Forest Service	1,431,950.2	5,580,168.5	8,213,268.5	15,366,720.6	8,699,145.4
National Park Service	277,713.8	79,014.9	4,462,160.5	421,809.6	42,427.4
Total Federal	**8,884,946.5**	**9,318,343.5**	**37,461,358.3**	**20,043,666.2**	**9,064,331.5**
State Lands					
Arizona	0	5,241,674.7	2,407,042.0	0	47,039.7
Colorado	0	0	60,664.5	758,348.2	0
New Mexico	3,239,860.6	550,383.4	736,495.1	690,189.9	503,160.6
Utah	0	0	2,554,154.6	0	0
Total State	3,239,860.6	5,792,058.1	5,758,356.3	1,448,538.1	550,200.3
Tribal Lands	995,042.8	1,613,903.4	21,620,638.1	1,404,034.5	2,321,911.6
Private Lands	9,596,716.6	6,429,327.4	15,733,238.6	16,453,866.3	1,569,133.5
Other	2,909,784.5	239,686.5	336,922.0	552,410.7	29,283.8
TOTAL	**25,626,350.9**	**23,393,318.9**	**80,910,513.4**	**39,902,515.9**	**13,534,860.7**

Mexican spotted owl Critical Habitat

The Service designated critical habitat for the Mexican spotted owl in 2004 on approximately 8.6 million acres (3.5 million hectares) of Federal lands in Arizona, Colorado, New Mexico, and Utah (69 FR 53182). Critical habitat includes only those areas in designated critical habitat units

(CHUs) that meet the definition of protected (PAC and steep slopes, as defined) and restricted (now called "recovery") habitat (unoccupied owl foraging, dispersal, and future nest/roost habitat) as defined in the 1995 Recovery Plan (Service 1995). We determined the primary constituent elements (PCEs) for owl critical habitat from studies of their habitat requirements and information provided in the Recovery Plan (Service 1995). Since owl habitat can include both canyon and forested areas, we identified PCEs for both habitat types.

The PCEs identified for the owl within mixed-conifer, pine-oak, and riparian forest types that provide for one or more of the owl's habitat needs for nesting, roosting, foraging, and dispersing are:

- A range of tree species, including mixed conifer, pine-oak, and riparian forest types, composed of different tree sizes reflecting different ages of trees, 30 to 45 percent of which are large trees with diameter at breast height (dbh) (4.5 feet above ground) of 12 inches or more;
- A shade canopy created by the tree branches covering 40 percent or more of the ground;
- Large, dead trees (snags) with a dbh of at least 12 inches.
- High volumes of fallen trees and other woody debris;
- A wide range of tree and plant species, including hardwoods; and,
- Adequate levels of residual plant cover to maintain fruits and seeds, and allow plant regeneration.

The PCEs listed above usually are present with increasing forest age, but their occurrence may vary by location, past forest management practices or natural disturbance events, forest-type productivity, and plant succession. These PCEs may occur in younger stands, especially when the stands contain remnant large trees or patches of large trees. Certain forest management practices may also enhance tree growth and mature stand characteristics where older, larger trees persist.

Steep-walled rocky canyonlands occur typically within the Colorado Plateau EMU, but also occur in other EMUs. Owls use canyon habitat for nesting, roosting, and foraging, and includes landscapes dominated by vertical-walled rocky cliffs within complex watersheds, including many tributary side canyons. These areas typically include parallel-walled canyons up to 1.2 miles (2 kilometers) in width (from rim to rim), with canyon reaches often 1.2 miles (2 kilometers) or greater, and with cool north-facing aspects. The PCEs related to canyon habitat include one or more of the following:

- Presence of water (often providing cooler and often higher humidity than the surrounding areas);
- Clumps or stringers of mixed-conifer, pine-oak, piñon-juniper, and/or riparian vegetation;
- Canyon walls containing crevices, ledges, or caves; and,
- High percent of ground litter and woody debris.

Mexican spotted owl and Critical Habitat status summary

Overall, the status of the owl and its designated critical habitat has not changed significantly since listing range-wide in the U.S. (which includes Utah, Colorado, Arizona, New Mexico, and extreme southwestern Texas). This means the distribution of owls continues to cover the same

area, and critical habitat is continuing to provide for the life history needs of the Mexican spotted owl throughout all of the EMUs located in the U.S. We know this because project-level surveys continue to find Mexican spotted owls in the same locations across the range of the owl, and we continue to conduct section 7 consultations on federal agency actions and receive section 10(a)(1)(b) recovery reports that provide rangewide updates regarding owl and habitat status. We do not have detailed information regarding the status of the owl in Mexico, so we cannot make inferences regarding its overall status.

However, this is not to say that changes have not occurred within the owl's U.S. range. Wildland fire has resulted in the greatest loss of PACs and critical habitat relative to other actions (e.g., such as forest management, livestock grazing, recreation, etc.) throughout the U.S. range of the Mexican spotted owl. These wildland fire effects have mainly affected Mexican spotted owls within the UGM EMU (e.g., Slide and Schultz Fires on the Coconino NF, Rodeo-Chediski and Wallow Fires on the Apache-Sitgreaves NF and Whitewater-Baldy Complex on the Gila NF) and BRW EMU (e.g., Frye Fire and Horseshoe 2 Fire on the Coronado NF). However, wildfire effects have caused significant effects to owl habitat within other EMUs as well (e.g., SRM EMU by the Las Conchas Fire, CP EMU by the Warm Fire).

Previous Consultations

Given the wide range of this species, several Federal actions affect this species every year. A complete list of all formal consultations affecting this species in New Mexico is on our New Mexico Ecological Services website and the list of formal consultations in Arizona is located on our Arizona Ecological Services website.

ENVIRONMENTAL BASELINE

The environmental baseline includes past and present effects of all Federal, State, or private actions in the action area, the anticipated effects of all proposed Federal actions in the action area that have undergone formal or early section 7 consultation, and the effect of State and private actions that are contemporaneous with the consultation process. The environmental baseline defines the status of the species and its habitat in the action area to provide a platform to assess the effects of the action now under consultation.

Status of the Species and Critical Habitat within the Action Area

There are nine separate mountainous areas ("sky islands") scattered throughout central New Mexico that contain owl habitat on the Cibola NF (Figures 1-4). These sky islands include the Sandia Mountains, Manzano Mountains, Gallinas Mountains, Magdalena Mountains, San Mateo Mountains, Bear Mountains, Datil Mountains, Zuni Mountains, and Mt Taylor. These sky islands occur within the Upper Gila Mountains (UGM), Colorado Plateau (CP), and Basin and Range-East (BRE) Mexican spotted owl EMUs. On the Cibola NF, Mexican spotted owls use mixed-conifer forests on steep slopes, ponderosa pine-oak forest, and canyons with rocky outcroppings. As stated earlier in this document, there are two types of monitoring that the Recovery Plan (Service 2012) recommends for the Mexican spotted owl: surveys for individual

owls and population monitoring. The Cibola NF conducts surveys for individual owls as needed in order to find owls in habitat so that they can designate PACs and minimize effects of Forest Service actions. The Cibola NF has conducted this type of monitoring since the Service listed the owl in 1993. As a result of this monitoring, we now know that there are approximately 47,071 acres of PAC habitat and 337,503 acres of mixed conifer, pine-oak, and riparian recovery habitat on the Cibola NF (Table 2). As of 2019, the Forest Service and Service have delineated 65 Mexican spotted owl PACs on the Cibola NF. There are 23 designated PACs in the CP EMU, 5 PACs in the BRE EMU, and 37 PACs in the UGM EMU. The number of PACs on the Cibola NF increased by 9 since we issued the 2012 BO.

The sky islands that make up the Cibola NF are likely an important element of landscape connectivity for the spotted owl. Keitt *et al.* (1995, 1997) attempted to identify habitat clusters most important to overall landscape connectivity for the owl, using maps based on forest and woodland cover to define habitat clusters. In their first analysis, the largely contiguous forest habitat of the Mogollon Rim (UGM EMU) emerged as most important overall for landscape connectivity, because of its large area. In the analysis emphasizing cluster position, the UGM EMU again emerged as important, due to its central location. However, a few small habitat clusters also emerged as particularly important. These included several locations on the Cibola NF (specifically the Mount Taylor and Zuni Mountains, CP EMU) that may serve as stepping-stones between other, larger habitat clusters. These small patches may be important to overall landscape connectivity despite supporting relatively few resident owls. Therefore, the continued management of these areas to provide habitat for the Mexican spotted owl, is likely important to recovery.

Six critical habitat units (CHUs CP-1, CP-2, UGM-2, UGM-3, BRE-5, and BRE-7) encompass the Cibola NF for a total of 434,892 acres within the four mountain units (USFS 2019). The area within these CHUs contains mixed conifer and ponderosa pine-oak forest types, canyons and cliff, and riparian areas. As stated earlier, we consider only areas identified as protected and restricted (recovery) habitat within these CHUs to be CH (Service 2004). Therefore, the actual amount of Mexican spotted owl habitat within these units is approximately 285,444 acres (65.6% of the area within the CHUs).

Table 2. Acres of Mexican spotted owl habitat and critical habitat on the Cibola NF.

Ranger District (RD)	Total Acres RD	PAC (acres)	Recovery Habitat Mixed Conifer (acres)	Recovery Habitat Pine-Oak (acres)	Recovery Habitat Riparian (acres)	Critical Habitat (acres PAC/Recovery Habitat within CHUs)
Magdalena	1,075,600	24,389	20,622	98,212	152	108,917
Mount Taylor	653,213	19,945	4,256	178,609	17	160,418
Mountainair	255,389	1,549	16,316	0	55	15,156
Sandia	121,508	1,188	19,099	0	166	953
Total (acres)	**2,105,710**	**47,071**	**60,293**	**276,821**	**390**	**285,444**

Factors Affecting the Mexican Spotted Owl and its Critical Habitat within the Action Area

The sky islands of the Cibola NF contain both frequent-fire adapted mixed conifer and mixed conifer with aspen (a less frequent fire adapted vegetation type). Frequent-fire mixed conifer occurs across all of the mountain ranges except the Bear Mountains, and mixed conifer with aspen occurs only in the Magdalena, San Mateo, Manzano, and Sandia mountains. The Forest Service currently considers the frequent fire mixed conifer to be "highly departed" from reference condition and the mixed conifer with aspen to be "moderately departed" from reference condition (USFS 2015). Historical timber harvest has been largely responsible for the overall decrease in large trees across Rocky Mountain forests since the reference period, while active fire suppression and passive fire suppression (roads, excessive removal of fine fuels by improper grazing, community development, etc.) have been largely responsible for reduced fire frequency (Schoennagel *et al.* 2004). A reduced fire frequency allows fuels to accumulate and tree canopies to close, facilitating insect and disease outbreaks, uncharacteristically severe fires, and increases in the early seral (grass/forb/shrub, seedling/sapling) states that follow fire.

In September 1996, the Forest Service amended the Cibola NF LRMP to incorporate Regional guidance for Northern Goshawk habitat and Mexican Spotted Owl recovery. As a result, the Cibola NF shifted emphasis from producing and selling timber products to wildlife habitat management and restoration. The forestry program developed a new mandate to integrate with the wildlife, watershed, and fuels management programs. From 2002–2008, timber management revolved around fuel reduction in both the wildland-urban interface (WUI) and non-WUI. Since 2008, Cibola NF timber management has primarily revolved around forest ecosystem restoration, which includes improving forest health, watershed condition, and wildlife habitat, while reducing fuels and providing wood products to local communities (USFS 2015).

The Collaborative Forest Landscape Restoration Program (CFLRP) encourages the collaborative, science-based ecosystem restoration of priority forest landscapes. The Collaborative Forest Restoration Project (CFRP) supports thirteen CFRP projects totaling 137,943 acres on the Cibola NF, including three projects within in the 210,000-acre Zuni Mountain CFLRP on the Mt. Taylor Ranger District.

In addition to CFRP projects noted above, the Mountainair RD conducted projects to improve forest health between 2001 and 2008 in the Gallinas and Manzano mountains. These projects have resulted in wildfire risk declines in the Gallinas Mountains of about 42% and 38% for the mixed conifer-frequent fire and ponderosa pine forest types, respectively (USFS 2015, pg. 49). The risk of wildfire in these same two forest types also declined by about 5% and 7%, respectively, in the Manzano Mountains. The Forest Service thinks this change is likely due to the high concentration of silvicultural activity in the mixed conifer-frequent fire and ponderosa pine forest types and the use of managed wildfire and prescribed fire (USFS 2015, pg. 49). However, wildfires continue to burn on the Cibola NF and since 2012, 25 wildfires burned 10,743 PAC acres, 68,096 recovery habitat acres, and 58,293 acres within CHUs (Table 3). It is likely that fire effects include a mix of positive low to moderate severity fire effects to habitat components (e.g., reduced risk of high severity fire, increase in snags), and potentially negative high severity fire effects within nesting/roosting habitat (e.g., loss of large, old trees; loss of large snags and logs).

Since 2012, the Cibola NF has implemented projects consistent with the LRMP. Some projects have affected the Mexican spotted owl and its designated critical habitat, but the Service determined that these projects resulted in insignificant and discountable effects. No formal section 7(a)(2) consultations have been conducted for activities in the Cibola NF since 2005 (i.e., the year of the original LRMP BO), other than the National Fire Retardant Consultation (Table 4). This consultation addressed the potential effects of emergency fire retardant drops to Mexican spotted owls, which is not an action analyzed in this consultation. Therefore, the environmental baseline for the owl and its forested CH within the action area of the Cibola NF has not changed appreciably since 2005. However, it is important to note that the forest management actions described above have likely resulted in positive effects (such as reduced high-intensity wildfire risk and improved forest health) for the Mexican spotted owl and its forested recovery and critical habitat.

Table 3. Approximate acres of Mexican spotted owl habitat affected by wildfire since 2012.

Wildfire Name	**Ranger District**	**PAC (acres)**	**Mixed Conifer Recovery Habitat (acres)**	**Pine-Oak Recovery Habitat (acres)**	**Riparian Recovery Habitat**	**Critical Habitat* (acres)**
Roberts	Magdalena	1,013	2,793	662		5,019
Taylor Canyon	Magdalena		115	2,011		
Deep	Magdalena		5	4		15
Holdup	Magdalena		80	24		171
North	Magdalena	4,671	15,060	7,691	17	26,225
Puertocito	Magdalena		99			106
Red Canyon	Magdalena	2,656	7,564	4,439		14,394
Sawmill	Magdalena		101			101
Teepee	Magdalena		24			24
Doghead	Mountainair		371	5,289		
Gallo Peak	Mountainair		192			197
Diener Canyon	Mt. Taylor	1,570	6,234	2,660		8,571
Triple Nickle	Mt. Taylor		66	7,624		1,096
Antelope	Mt. Taylor			125		
August Night	Mt. Taylor			10		
Bluewater	Mt. Taylor		79	2,793		2,302
Cuarenta	Mt. Taylor			44		
Escondida	Mt. Taylor			932		
La Mosca Tank	Mt. Taylor			11		11
Mariposa	Mt. Taylor	833	874			
Monahan	Mt. Taylor		12	5		17
Road 169	Mt. Taylor		35			35
Chimney	Sandia		4			20
David Canyon	Sandia			15		
Piedra	Sandia		32			
Total (acres)		**10,743**	**33,740**	**34,339**	**17**	**58,304***

*The total critical habitat acres is the number of acres within a CHU and includes PAC and recovery acres as well as acres that likely do not meet the definition of recovery or PAC habitat.

Table 4. Formal consultations on the Cibola NF from 2005 to 2019.*

Consultation Number	Date of Final BO	Project	Approximate # of Owls Anticipated Taken	Form of Take
22410-2008-F-0149-R001	*12/6/2011*	*National Fire Retardant Consultation*	*Incidental take will be tracked as it occurs per the BO*	*Harm & Harass*

*Projects in italics are fire suppression activities that are not included in the proposed action for this consultation.

EFFECTS OF THE ACTION

Effects of the action refer to the direct and indirect effects of an action on the species or critical habitat, together with the effects of other activities that are interrelated and interdependent with that action, which will be added to the environmental baseline. Interrelated actions are those that are part of a larger action and depend on the larger action for their justification. Interdependent actions are those that have no independent utility apart from the action under consideration. Indirect effects are those that are caused by the proposed action and are later in time, but are still reasonably certain to occur.

Federal agencies are required under section 7 of the ESA to "utilize their authorities for the furtherance of the purposes of this Act by carrying out programs for the conservation of endangered species and threatened species" and to "insure that any action authorized, funded, or carried out by such agency is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species". However, Federal agencies are not required by the Act, or any other federal statue or regulation, to incorporate recovery plan actions into their management plans. Therefore, our discussion of effects of the action will only include those actions for which the Federal agency (Forest Service) is required to consult on under the Act.

Background Information Regarding the Proposed Action

As described above, the proposed action under analysis in this BO is implementation of the Cibola NF LRMP and its amendments. The most important amendment in regards to Mexican spotted owl management is the June 5, 1996, Amendment of LRMPs in Arizona and New Mexico, for the Management of the Mexican spotted owl and northern goshawk. The amendment voluntarily incorporated many of the management recommendations from the 1995 Recovery Plan (Service 1995) into Forest Service site-specific actions.

An LRMP provides guidance and direction in the context of a broad management framework and provides direction for managing the NF in the form of the S&Gs. Because there is little operational difference between a "standard" and "guideline," neither the Forest Service nor the Service differentiated between the two for this analysis. The Service recognizes that some

differences in interpretation may exist on the part of forest managers at the project level in the implementation of LRMPs through the S&Gs. These differences in interpretation also add to the complexity of this consultation.

The Cibola NF has designated "management areas" based on such criteria as vegetation type, principal land use, and special management designations such as wilderness areas. The LRMP contains some S&Gs that apply Forest-wide and some that apply only to specific management areas. During the development of a project, each management program reviews Forest-wide and management area-specific S&Gs that either give direction to, or place constraints on, management activities (e.g., thinning, grazing, recreation, mining, etc.). The S&Gs that provide direction state what managers will accomplish to achieve specific resource goals. In many cases, the Forest Service developed the S&Gs to target management of a specific species (e.g., the 1996 Forest-wide amendment to include S&Gs for the Mexican spotted owl).

The LRMPs direct how managers carry out current and future activities in the following management programs: (1) Engineering, (2) Fire Management, (3) Forestry and Forest Health, (4) Lands and Minerals, (5) Rangeland Management, (6) Recreation, Heritage and Wilderness, (7) Watershed Management, and (8) Wildlife, Fish, and Rare Plants. Each of the Forest Service's eight resource programs were discussed in depth within the April 8, 2004, BA, the June 10, 2005, LRMP BO, the April 6, 2011, BA, the March 30, 2012, LRMP BO, and the October 20, 2019 BA.

We evaluated effects to the Mexican spotted owl in the 2005 BO, and we include this analysis herein by reference (see Service 2005). We considered the majority of the S&Gs within the Cibola NF LRMP as positive in the sense that they would maintain habitat for the Mexican spotted owl or provide for recovery habitat. However, we did determine that there might be potential adverse effects resulting from actions implemented by the following programs: Engineering (e.g., disturbances from road construction); Fire Management Program; Forestry and Forest Health; Lands and Minerals (e.g., the potential for using herbicides or other chemicals); Rangeland Management; Recreation, Heritage and Wilderness; Watershed Management; and Wildlife, Fish, and Rare Plants. The Fire Management Program combines elements of fire prevention, prescribed fire, wildland fire, and fire suppression. However, wildland fire, including fire suppression and wildland fire use for resource benefit, are not included in the proposed action (and therefore, this consultation does not cover suppression actions) and consultation on these actions will continue to be handled under emergency section 7(a)(2) consultation procedures.

Effects of the Action on the Mexican spotted owl

Fire Management Program: Using fire management to reintroduce fire into frequent-fire forest types is appropriate forest management and in the long-term would result in positive effects to owls by reducing the risk of high-severity fire in Mexican spotted owl habitat. High-severity, landscape level fire that results in the removal of the key habitat components owls need to successfully survive, nest, and reproduce (such as large live trees; live tree canopy cover; large, old snags) is becoming more and more of a threat (Service 2012; Jones *et al*. 2016). The Recovery Plan (Service 2012) recommends implementing fuels reduction and prescribed fire to

reduce the threat of these large-scale, high-severity, stand-replacing fires. The 1996 LRMP Amendment recommends (S&G 1455) managers use combinations of thinning trees less than nine inches diameter-at-breast height (dbh), mechanical fuel removal, and prescribed fire, to reduce the threat of stand-replacing fires.

Thinning and/or prescribed burning activities in PAC and recovery habitat may indirectly affect Mexican spotted owls by affecting the habitat structure including snags, downed logs, woody debris, multi-storied canopies, and dense canopy cover. Under the proposed action, the Forest Service would design all treatments in PAC and recovery habitats to move toward the desired conditions as identified in the Recovery Plan and to focus removal on small-diameter trees. We expect these actions to be beneficial to reducing the threat of high severity fire in owl habitat, and we know Forest Service fire managers will use best management practices to ensure they achieve low severity fire effects in owl habitat. In addition, burning also increases vegetative diversity, which may result in a more diverse and productive prey base for owls. However, when conducting burning in areas with high levels of coarse woody debris that have not burned in a long time, there is a likelihood that rare key habitat components (i.e., snags, logs, large trees) will be unintentionally lost to fire and that this could result in short-term adverse effects to Mexican spotted owls. We expect that low intensity prescribed fire will remove far fewer key habitat components than a high intensity wildfire; therefore, the positive long-term effects of this program will provide a route to recovery for Mexican spotted owls.

Recreation, Heritage, and Wilderness Program: The Service ranked all S&Gs for actions within this program as either maintaining or providing recovery potential for Mexican spotted owl habitat. Use of buffers, minimal road densities, and protection of listed species were some of the management goals mentioned in S&Gs within the Cibola NF's LRMP.

Watershed Management Program: Many S&Gs we evaluated within this program were either positive or were overall positive, but we determined some actions that are subject to S&Gs could result in short-term adverse effects to owls. Standard and Guideline 269 states that road management would be applied to obliterate poorly located or constructed roadways to improve watershed condition and reduce soil loss. Thus, short-term adverse effects, such as disturbance during the breeding season or loss of key habitat components (snags, large trees) could occur to the Mexican spotted owls. The 1996 LRMP Amendment provides a Standard (1433) that limits human activity in PACs during the breeding season. (LRMP Pg. 71-1), which would reduce disturbance to breeding owls and provide a route to recovery.

Wildlife, Fish, and Rare Plants Program: The majority of S&Gs within the Wildlife Program ranked as positive for the Mexican spotted owl. Standard and Guideline 228 provides guidance to apply technology and manage habitat to help recover threatened and endangered species, including owls. Standard and Guideline 250 specifically states that NFs should implement recovery projects (actions) identified in approved recovery plans and to manage listed species to achieve delisting in a manner consistent with the goals established by the Service.

In summary, the overall assessment of the Cibola NF's LRMP is positive for the Mexican spotted owl and its habitat. However, we expect short-term adverse effects to occur from site-specific actions in form of short-term disturbance (i.e., harassment) due to either noise

disturbance to owls during the breeding season and/or effects to key habitat components (i.e., loss of some snags, large trees, and logs) of PAC and recovery habitat from actions implemented under the existing Cibola NF LRMP.

In addition, while we do not yet have any reliable population trend data for the Mexican spotted owl, we do note that the number of known owl nesting sites remain stable and additional Mexican spotted owl surveys continue to discover additional Mexican spotted owl-nesting sites across a wider area of the range. Although a number of different factors outside the Cibola NF may affect the Mexican spotted owl's distribution, this data does, at least in a small part, suggest that the last 23 years of this same management practice has not limited or reduced the distribution of the Mexican spotted owl across its range.

Effects of the Action on Mexican spotted owl Critical Habitat

Below we describe the PCEs related to forest structure and maintenance of adequate prey species and the effects from implementation of the LRMP.

Primary Constituent Elements related to forest structure:

PCE: A range of tree species, including mixed conifer, pine-oak, and riparian forest types, composed of different tree sizes reflecting different ages of trees, 30 percent to 45 percent of which are large trees with a dbh of 12 inches or more.

Effect: We expect that actions implemented under the LRMP would retain the range of tree species (i.e., conifers and hardwoods associated with owl habitat) and would not reduce the range of tree sizes needed to create the diverse forest and multi-layered forest canopy Mexican spotted owls use. Some loss of trees, of all types and dbh size classes, would occur from actions such as hazard tree removal, prescribed fire, and forest thinning (as implemented under the Fire Management and Forest and Forest Health Programs). However, we expect that actions implemented under the LRMP would maintain a range of tree species and sizes needed to maintain this PCE in PACs and recovery habitat across the NF. The Forest Service would implement Recovery Plan guidelines (Service 1995 and 2012) such as retaining large trees, providing appropriate canopy cover levels, and managing for a diverse range of tree species (such as oak in pine-oak forests and several conifer species in mixed conifer forest. Removal of trees and various tree species may also occur as part of the Recreation (e.g., development or maintenance of recreation sites) and Engineering Programs (e.g., creation, maintenance of roads). The Service expects that these effects would be small in extent and intensity because recreation and engineering projects tend to be small scale (e.g., removal of one or a few snags near a road or trail for safety). The proposed action would not compromise the function and recovery role of this PCE.

PCE: A shade canopy created by the tree branches covering 40 percent or more of the ground.

Effect: We expect that hazard tree removal, thinning, and burning treatments implemented under the LRMP in the Fire Management and Forest and Forest Health Programs would reduce tree

shade canopy. However, we do not expect tree thinning to reduce canopy cover in Mexican spotted owl forested habitat below 40 percent, because the proposed action adopted the 1995 Recovery Plan (Service 1995) recommendations, which include managing for higher basal area and denser canopy cover in owl habitat versus pure ponderosa pine or other forest and woodland habitats. We would expect that some small reduction in existing canopy cover (5 to 10 percent) might actually aid in increasing understory herbaceous vegetation and forb production, which will benefit spotted owl prey species by providing more food for prey, thus potentially increasing prey populations. The proposed action would not compromise the function and recovery role of this PCE.

PCE: Large, dead trees (snags) with a dbh of at least 12 inches.

Effect: Large snags would most likely be reduced following proposed prescribed burning and hazard tree removal conducted under the Fire Management and Forest and Forest Health Programs. Currently, large snags are rare across the action area, and any loss of this habitat component may be significant in terms of maintaining Mexican spotted owls and prey habitat. Prescribed burning may create some snags, which could benefit the owl. However, snags currently used by Mexican spotted owls for nesting are typically very old, large dbh, highly decayed snags with cavities. In individual burning projects, the Forest Service would attempt to minimize loss of these large snags through conservation measures (such as lining or using lighting techniques to avoid snags). It is likely that following burning treatments, approximately 20 percent of these existing snags may be lost within treated (i.e., burned) PAC and recovery habitat, resulting in short-term adverse effects to this PCE (Randall Parker and Miller 2000). This is why conservation measures that the Forest Service implements to protect the largest and oldest snags (particularly those with nest cavities) are so important. As such, the proposed action would not compromise the function and recovery role of this PCE.

Primary Constituent Elements related to maintenance of adequate prey species:

PCE: High volumes of fallen trees and other woody debris.

Effect: Prescribed burning treatments (broadcast, piling, and maintenance burning) would likely reduce fallen trees and woody debris as part of the Fire Management Program. Based on past research, we expect prescribed burning to reduce logs by approximately 50 percent in forested Mexican spotted owl habitat (Randall Parker and Miller 2000). This loss of large logs would result in short-term adverse effects to this PCE and could result in localized effects to prey species habitat. However, over the long-term, we would expect the proposed action to maintain this PCE across the landscape, but at a more sustainable level. As such, the proposed action would not compromise the function and recovery role of this PCE.

PCE: A wide range of tree and plant species, including hardwoods.

Effect: The Fire Management, and Forest and Forest Health Programs would positively affect this PCE. Plant species richness would likely increase following thinning and/or burning treatments that result in small, localized canopy gaps. Individual projects conducted under the LRMP typically propose conservation measures that focus on retaining oaks and other

hardwoods, but some level of short-term loss could occur at the individual project level. However, prescribed fire results in increased plant species diversity by creating openings in the canopy and reducing small diameter conifer density. In frequent-fire forests (that are the focus of Cibola NF fire management), herbaceous understory response and plant regeneration tends to be positive following tree removal and prescribed fire (Springer *et al.* 2001). As such, the proposed action would not compromise the function and recovery role of this PCE.

PCE: Adequate levels of residual plant cover to maintain fruits and seeds, and allow plant regeneration.

Effect: Short-term decrease in plant cover will result from prescribed burning conducted under the Fire Management Program. We expect long-term increases in residual plant cover because treatments would provide conditions suitable for increased herbaceous plant growth by removing a thick layer of dead plant debris within treated areas. We expect that the mosaic effect created by burned and unburned areas and by opening up small patches of forest within protected habitat to increase herbaceous plant species diversity and, in turn, assist in the production and maintenance of the Mexican spotted owl prey base. The combination of low-intensity prescribed burns during restoration projects most likely resulted in short-term adverse effects to the owl with regard to modifying prey habitat within treatment areas. There is the potential for the Rangeland Program to have adverse effects on the production of plant cover post-burning. However, typically the Forest Service includes measures in its allotment (livestock) management plans to maintain healthy levels of forage and the Fire Program recommends removing livestock temporarily following prescribed and wildland fire. As such, the proposed action would not compromise the function and recovery role of this PCE.

Effects of the Action on Survival and Recovery of the Mexican spotted owl

The continued implementation of the Cibola NF's LRMP provides for active forest management to maintain and protect existing and future nest/roost habitat, which aids in the survival and recovery of the Mexican spotted owl. As stated in the Status of the Species section, the Service's specific recovery objective for the Mexican spotted owl (Service 2012) is to support the Mexican spotted owl throughout its range into the foreseeable future, and to maintain habitat conditions necessary to provide roosting and nesting habitat for the Mexican spotted owl. We know that Mexican spotted owl distribution is limited within forested and rocky canyon environments because the availability of nest/roost habitat is limited (Service 2012). In addition, prey availability and competition for nest habitat by other raptors may also limit owl distribution. The Cibola NF LRMP directs forest managers to protect and maintain existing nest/roost habitat and provide adequate conditions for foraging and dispersal activities. By sustaining nesting/roosting habitat, the Cibola NF is meeting owl survival requirements. In addition, the Forest Service is conducting surveys in suitable habitat to locate owl sites on the Cibola NF, and identifying suitable, but currently unoccupied, recovery habitat to manage for future nest/roost habitat. By conducting these actions, the Cibola NF is maintaining the habitat conditions necessary to provide roosting and nesting habitat for the Mexican spotted owl within the action area and providing a route to recovery by supporting the Mexican spotted owl throughout its range into the foreseeable future

Continued implementation of the LRMP includes many actions that are recommended in the Recovery Plan (both the 1995 and the superseding 2012 Recovery Plan). These actions include conducting individual owl surveys, establishing and protecting PACs (occupied owl sites), managing for replacement nest/roost habitat, minimizing disturbance to Mexican spotted owls during the breeding season, as well as other specific Recovery Plan recommendations (retaining large diameter trees and snags; focusing conifer removal on small diameter trees; and conducting low intensity prescribed burns in PACs, and recovery and critical habitats). The 1996 Forest Plan Amendment lists all of the owl guidelines the Cibola NF incorporated from the 1995 Recovery Plan. The Mexican spotted owl Recovery Team identified these actions, particularly those designed to reduce the threat of high-severity fire, as necessary to recover the Mexican spotted owl. The Cibola NF is implementing these actions in and adjacent to PACs, in recovery habitat, and in designated critical habitat. Besides supporting resident Mexican spotted owls, the habitat on the Cibola NF is important for providing connectivity for spotted owl dispersal between three owl EMUs (CP, BRE, and UGM). As stated in the environmental baseline, the sky-islands that make up the Cibola NF likely provide critically important dispersal habitat for Mexican spotted owls. By implementing the LRMP and conducting forest management, the Cibola NF is ensuring the persistence of these critically important landscape habitat patches needed for owl dispersal and movement (Keitt *et al.* 1995, 1997). Therefore, we think that continued implementation of the Cibola NF LRMP is aiding in the survival of and providing a route to recovery for the Mexican spotted owl.

As stated above, the Cibola NF conducts surveys for individual Mexican spotted owls as part of the continued implementation of their LRMP. In addition, the Southwestern Region of the Forest Service, which includes the Cibola NF, has funded implementation of Recovery Plan population monitoring (Service 2012) across NFS lands in Arizona and New Mexico from 2014 to present, and intends to fund at least four more years of occupancy monitoring. This population level monitoring, after a minimum of 10 years, will allow us to assess the trend (stable, increasing, or decreasing) of Mexican spotted owl on NFS lands. This will contribute to recovery of the species because we will be able to assess the status of Mexican spotted owls on NFS lands and evaluate the effectiveness of Recovery Plan (Service 2012) management recommendations on those lands. However, the Forest Service cannot fund or carry out surveys on non-NFS lands. Therefore, data from this monitoring would only be applicable for determining trends at the spatial scale across which it was conducted. While monitoring itself does not promote recovery per se because it has no tangible effects on Mexican spotted owls or their habitat, it does satisfy recovery (delisting) criteria number 1 (see this document, Status of Species) Rangewide monitoring is essential to determining whether delisting the owl is warranted. However, rangewide monitoring is not essential to ensuring an agency action is not impeding the survival and recovery of a listed species. Furthermore, the results of population trend data would not likely inform our decisions regarding the survival or recovery as it relates to the continued implementation of the Cibola NF LRMP. The fact is that increasing, decreasing, or stable trends in owl population may be driven by factors outside of the control of land management agencies and independent of habitat manipulation (*e.g.*, climate change and drought). Regardless of long-term trends in owl population, it remains clear, based on the 2012 Recovery Plan, that safeguarding and promoting habitat features needed to support the owl through uneven-aged stand management is a priority for the conservation of the species. Therefore, even if long-term population trends revealed declining trends (which would preclude

delisting), we would not construe such results as grounds for foregoing habitat management actions as proposed by the Cibola NF (*e.g.*, mechanical and managed fire treatments, which mitigate risk of high-severity wildfire) needed to safeguard key habitat elements for the owl.

The action under consultation is the continued implementation of the existing Cibola NF LRMP. The actions the LRMP guides only occur on the Cibola NF and it is not within the purview of the Cibola NF to provide for the rangewide recovery of the Mexican spotted owl. There are many Federal, and state land management entities with responsibilities under applicable Federal and state laws to contribute to Mexican spotted owl survival, recovery, and ultimately delisting (Table 2). In addition, we have other partners, such as tribes, which are voluntarily working with the Service to manage for the owl. The delisting criteria for the Mexican spotted owl apply to the entire range of the owl, not just the Cibola NF.

Based on the aspects of the proposed action described above, the Service concludes that the continued implementation of the Cibola NF LRMP would not appreciably reduce the likelihood of Mexican spotted owl survival and recovery on the Cibola NF. We make this conclusion for the following reasons:

- The Cibola NF continues to designate 600 acre PACs surrounding known Mexican spotted owl nesting and roosting sites. We establish PACs around known owl sites to protect and maintain occupied nest/roost habitat. Nesting and roosting habitat is a limiting factor across the range of the Mexican spotted owl and by identifying these areas for increased protection, the Forest Service is aiding in the survival of and providing a route to recovery for owls. Maintaining nest/roost habitat is the primary recovery objective of the Recovery Plan (Service 2012). There are 65 PACs on the Cibola NF covering approximately 47,071 acres (approximately 2.9 percent of the 1.6 million acre NF).

- The Cibola NF has identified and is managing for future Mexican spotted owl nest/roost habitat in pine-oak and mixed-conifer forests that have potential for becoming replacement nest-roost habitat, or is currently providing habitat for spotted owl foraging, dispersal, and wintering habitats. As stated above, nesting and roosting habitat is a limiting factor for the Mexican spotted owl throughout its range, so Cibola NF's management of pine-oak and mixed-conifer forests to support nest-roost habitat for owls is providing a route to recovery.

- The Cibola NF is conducting fuels management and forest restoration actions that will increase the sustainability and resiliency of Mexican spotted owl critical habitat. Therefore, we expect that continued implementation of the Cibola NF LRMP would not diminish the conservation contribution of critical habitat to Mexican spotted owl recovery.

- The Cibola NF conducts surveys for individual owls. Conducting this monitoring will contribute to recovery of the species by allowing the Service and FS to know where individual owls are nesting and roosting so that they can designate PACs to protect and manage for individual Mexican spotted owls.

Based on those reasons alone, we conclude that the Cibola NF LRMP is not appreciably reducing the Mexican spotted owl's survival and recovery, but, according to the data available, is in fact promoting its recovery. While not the basis of our Section 7 "survival and recovery" determination, another encouraging conservation measure undertaken by the Cibola NF to further advance the data needed for any possible future delisting analysis under Section 4 of the ESA is the following:

- The Cibola NF participates in Recovery Plan population monitoring (Service 2012), which will contribute to recovery of the species by allowing the Service to assess the status of Mexican spotted owls on NFS lands and evaluate the effectiveness of the Recovery Plan (Service 2012) management recommendations on those lands.

CUMULATIVE EFFECTS

Cumulative effects include the effects of future State, tribal, local or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future Federal actions that are unrelated to the proposed action we do not consider in this section because they require separate consultation pursuant to section 7 of the Act. Since the USFS almost exclusively manages the land within the action area, most activities that could potentially affect listed species are Federal activities and subject to additional section 7(a)(2) consultations. These activities include forest and fuels management, prescribed burning, recreation (trail construction and designation), road construction and maintenance, and all of the management actions on the Cibola NF that could affect Mexican spotted owls or their designated critical habitat.

State Actions

The State of New Mexico manages game animals on all jurisdictions in the State including the Cibola NF. The species that has the potential to affect the Mexican spotted owl and its critical habitat on NFS lands is elk (*Cervus canadensis*). Within the action area, the New Mexico Department of Game and Fish manages elk in Management Units 8, 9, 10, 13, 14, 17, and 38. Grazing by large ungulates may affect habitat for prey species for the Mexican spotted owl by reducing herbaceous and woody vegetation that small mammals use for food and cover. The effect varies across the action area. However, elk numbers within the management units on the Cibola NF are stable and at a size that does not result in significant effects (*e.g.*, loss of herbaceous understory or woody plant species) to owl prey habitat (USFS 2019).

The New Mexico Game and Fish Department is active, both directly and indirectly, in species conservation and recovery, which includes the Mexican spotted owl.

Private and Tribal Actions

Actions on private lands occur on multiple inholdings and adjacent to the administrative boundary of the Cibola NF. Actions include livestock grazing, mining, residential and commercial developments, water developments, and recreation. Tribal lands also occur within and adjacent to the administrative boundary of the Cibola NF. Similar activities occur on tribal

lands as the private lands, which may result in effects to Mexican spotted owls within the action area. The effects of these actions most likely affect owl foraging habitat through effects from livestock grazing on herbaceous plant cover and the removal of coarse woody debris, snags, and trees from localized development and construction.

Climate Change

Warming of the earth's climate is unequivocal, as is now evident from observations of increases in average global air and ocean temperatures, widespread melting of glaciers and the polar ice cap, and rising sea level (Intergovernmental Panel on Climate Change [IPCC] 2007, 2014). The IPCC (2007) describes changes in natural ecosystems with potential widespread effects on many organisms. The potential for rapid climate change poses a significant challenge for fish and wildlife conservation. Species abundance and distribution is dynamic, and dependent on a variety of factors, including climate (Parmesan and Galbraith 2004). Typically, as climate changes, the abundance and distribution of fish and wildlife will also change. Highly specialized or endemic species are likely to be most susceptible to the stresses of changing climate. Based on these findings and other similar studies, the Department of the Interior requires agencies under its direction to consider potential climate change effects as part of their long-range planning activities.

The Southwest is the hottest and driest region in the United States (Garfin *et al*. 2014). The IPCC (2007) stated that there would be an increase in the frequency of hot extremes, heat waves, and heavy precipitation events. Climate forecasts predict a northward shift in the jet stream and winter-spring storm tracks, which are consistent with observed trends over recent decades (Trenberth 2007). This would likely result in future drier conditions for the Southwest and an increasing probability of drought for the region (Trenberth 2007). Seager *et al*. (2007) show that there is a broad consensus among climate models that the Southwest will get drier in the 21st century and that the transition to a more arid climate is already under way. Only one of 19 models has a trend toward a wetter climate in the Southwest (Seager *et al*. 2007).

The following are the likely future effects of climate change in New Mexico and the Southwest (Frankson *et al*. 2017):

1. Average annual temperature has increased by almost 2 degrees Fahrenheit since the 1970s, and the number of hot days and warm nights has increased. Historically unprecedented future warming is likely.
2. The summer monsoon rainfall, which provides much needed water for agricultural and ecological systems, varies greatly from year to year and future trends in such precipitation are highly uncertain.
3. Droughts are a serious threat in this water-scarce state. Experts predict that drought intensity will increase and snowpack accumulation will decrease, which will pose a major challenge to New Mexico's environmental, agricultural, and human systems. Models project that wildfire frequency and severity will increase in New Mexico.

Climate change has and will continue to affect the Mexican spotted owl, particularly as high intensity wildfire frequency and size increase. In addition, prolonged drought is killing large, old

trees and modifying forest structure. Currently, the best adaptation strategy we have for addressing the effects of climate change is to reduce the vulnerability of mixed conifer and pine-oak forest to drought, wildfire, and insect outbreaks by reducing tree density, protecting large trees and snags, and reintroducing low intensity prescribed fire into frequent-fire adapted forests.

JEOPARDY AND ADVERSE MODIFICATION ANALYSIS

Section 7(a)(2) of the ESA requires that federal agencies ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of designated critical habitat. As stated above, Federal agencies are not required by the Act, or any other federal statue or regulation, to incorporate recovery plan actions into their management plans. Therefore, our jeopardy and adverse modification analysis will be based only on those actions for which the Federal agency (Forest Service) is required to consult under the Act.

Jeopardy Analysis Framework

Our jeopardy analysis relies on the following:

"Jeopardize the continued existence of" means to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species (50 CFR 402.02). The following analysis relies on four components: (1) Status of the Species, which evaluates the range-wide condition of the listed species addressed, the factors responsible for that condition, and the species' survival and recovery needs; (2) Environmental Baseline, which evaluates the condition of the species in the action area, the factors responsible for that condition, and the relationship of the action area to the survival and recovery of the species; (3) Effects of the Action (including those from conservation measures), which determines the direct and indirect effects of the proposed federal action and the effects of any interrelated or interdependent activities on the species; and (4) Cumulative Effects, which evaluates the effects of future, non-federal activities in the action area on the species. The jeopardy analysis in this BO emphasizes the range-wide survival and recovery needs of the listed species and the role of the action area in providing for those needs. We evaluate the significance of the proposed Federal action within this context, taken together with cumulative effects, for the purpose of making the jeopardy determination.

Destruction/Adverse Modification Analysis Framework

The final rule revising the regulatory definition of "destruction or adverse modification of critical habitat" became effective on March 14, 2016 (81 FR 7214). The revised definition states: "Destruction or adverse modification means a direct or indirect alteration that appreciably diminishes the value of critical habitat for the conservation of a listed species. Such alterations may include, but are not limited to, those that alter the physical or biological features essential to the conservation of a species or that preclude or significantly delay development of such features."

Similar to our jeopardy analysis, our adverse modification analysis of critical habitat relies on the following four components: (1) the Status of Critical Habitat, which evaluates the range-wide condition of designated critical habitat in terms of PCEs, the factors responsible for that condition, and the intended recovery function of the critical habitat overall; (2) the Environmental Baseline, which evaluates the condition of the critical habitat in the action area, the factors responsible for that condition, and the recovery role of the critical habitat in the action area; (3) the Effects of the Action, which determine the direct and indirect effects of the proposed federal action and the effects of any interrelated or interdependent activities on the PCEs and how they will influence the recovery role of affected critical habitat units; and (4) Cumulative Effects, which evaluate the effects of future, non-federal activities in the action area on the PCEs and how they will influence the recovery role of affected critical habitat units.

Conclusion

After reviewing the current status of the Mexican spotted owl and its designated critical habitat, the environmental baseline for the action area, the effects of the proposed action and the cumulative effects, it is our biological opinion that continued implementation of the Cibola NF's LRMP will not jeopardize the continued existence of the Mexican spotted owl, and will not destroy or adversely modify its designated critical habitat. We base our conclusions on the following:

1. The proposed action requires the Forest Service to manage for Mexican spotted owl survival and recovery on the Cibola NF. It is required because the Cibola NF LMRP explicitly directs the Forest Service to protect PACs (occupied owl sites) and to manage for future nest/roost replacement habitat. This meets the recovery objective as defined in the Recovery Plan for the Mexican spotted owl, First Revision (Service 2012).

2. Standards and guidelines in the Cibola NF LMRP will aid in reducing the risk of high-severity, stand-replacing, landscape level fire in mixed conifer and pine-oak forests that the Mexican spotted owl occupies on the Cibola NF. These efforts to improve forest condition and sustainability should reduce the risk of high severity wildfire and subsequently, reduce the loss of owl habitat, specifically nest/roost habitat, which is a limiting factor for the owl. The protection and maintenance of Mexican spotted owls and their critical habitat will aid in the survival of and provide a route to recovery for Mexican spotted owls.

3. While some short-term adverse effects may occur as part of site-specific actions carried out under the LRMP, the S&Gs will help to minimize those effects over the long-term by minimizing disturbance to breeding Mexican spotted owls (*i.e.*, not conducting actions in or immediately adjacent to PACs during the breeding season). By implementing the proposed action the Forest Service will also improve the sustainability and resiliency of forested owl habitat through tree thinning, prescribed burning, and other forest management actions.

4. Based on the discussion provided in the Effects to Mexican Spotted Owl Critical Habitat section above, the six CHUs affected by the continued implementation of the LRMP will continue to serve the function and recovery role of critical habitat for the Mexican spotted owl. The Forest Service is conducting forest thinning and prescribed burning that will improve the forest structure (reducing number of trees), function (ability of forest to withstand stochastic events), and processes (reintroduction of fire to frequent fire forests). These actions will provide a route to recovery by increasing the forests' ability to withstand long-term drought and disease and still provide nesting, roosting, foraging, and dispersal habitat for owls.

We based the conclusions of this biological opinion on full implementation of the project as presented in the Description of the Proposed Action section of this document, including any Conservation Measures that the Forest Service incorporated into the project design.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act and Federal regulations pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. "Take" is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. "Harm" is further defined (50 CFR § 17.3) to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. "Harass" is defined (50 CFR § 17.3) as intentional or negligent actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding or sheltering. "Incidental take" is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with the terms and conditions of this Incidental Take Statement.

Programmatic Consultations

The proposed action described above is a "framework programmatic action" as defined in 50 CFR 402.02. In accordance with 50 CFR 402.14(i)(6), an incidental take statement is not required at the programmatic level for a framework that does not authorize future actions; incidental take resulting from any action subsequently authorized, funded, or carried out under the program will be addressed in subsequent section 7(a)(2) consultation, as appropriate. This BO provides a broad-scale examination of the proposed action's potential effects on the Mexican spotted owl, but we lack reasonable certainty of where, when, and how much incidental take may occur. Therefore, we have not quantified the amount and extent of incidental take that may result from the proposed action and have not exempted such take in this BO.

We provide reasonable and prudent measures to minimize the effects, i.e., amount or extent, of incidental take. [50 CFR §402.02]. However, since there is no incidental take anticipated

because of this action, there are no reasonable and prudent measures or implementing terms and conditions included in this BO.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs Federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information.

1. We recommend that the Cibola NF work with the Service to monitor high severity wildfire effects on the key habitat components of Mexican spotted owl habitat.

2. We recommend that the Cibola NF work with the Service to monitor forest thinning and prescribed burning effects on the key habitat components of Mexican spotted owl habitat.

In order for the Service to be kept informed of actions minimizing or avoiding adverse effects or benefiting listed species or their habitats, the Service requests notification of the implementation of any conservation recommendations.

REINITIATION NOTICE

This concludes formal consultation on for the proposed action. As provided in 50 CFR 402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

In keeping with our trust responsibilities to American Indian Tribes, we encourage you to continue to coordinate with the Bureau of Indian Affairs in the implementation of this consultation. By copy of this BO, we are notifying the Acoma Pueblo, Hopi Tribe, Isleta Pueblo, Laguna Pueblo, Mescalero Apache Tribe, Navajo Nation, White Mountain Apache Tribe, and Zuni Pueblo of its completion. We also encourage you to coordinate the review of this project with the New Mexico Department of Game and Fish.

We appreciate the Cibola NFs efforts to identify and minimize effects to Mexican spotted owls from continued implementation of the LRMP, as amended. Please refer to the consultation

number, 02ENNM00-2012-F-0003-R001 in future correspondence concerning this project. Should you require further assistance or if you have any questions, please contact Jodie Mamuscia (505) 761-4762 or me at (505) 761-4781.

Sincerely,

Susan S. Millsap
Field Supervisor

cc (electronic):
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Director, New Mexico Department of Game and Fish, Santa Fe, NM (Attn: Michael Sloane)
Director, New Mexico Energy, Minerals, and Natural Resources Department, Forestry Division, Santa Fe, NM (Attn: Laura McCarthy)
Natural Resources Director, Acoma Pueblo, Acoma, NM (Attn: Franklin Martinez)
Natural Resources Director, Hopi Tribe, Kykotsmovi, AZ (Attn: Darren Talayumptewa)
Natural Resources Director, Isleta Pueblo, Isleta, NM (Attn: Mark Dickson)
Natural Resources Director, Laguna Pueblo, Laguna, NM (Attn: Steven Etter)
Natural Resources Director, Mescalero Apache Tribe, Mescalero, NM (Attn: Gregory Mendez)
Director, Division of Natural Resources, Navajo Nation, Window Rock, AZ (Attn: Rudolph Sheeabla)
Natural Resources Director, White Mountain Apache Tribe, Whiteriver, AZ (Attn: Stuart Leon)
Natural Resources Director, Zuni Pueblo, Zuni, NM (Attn: Nelson Luna)
Environmental Protection Officer, Environmental Quality Services, Western Regional Office, Bureau of Indian Affairs, Phoenix, AZ

FIGURES

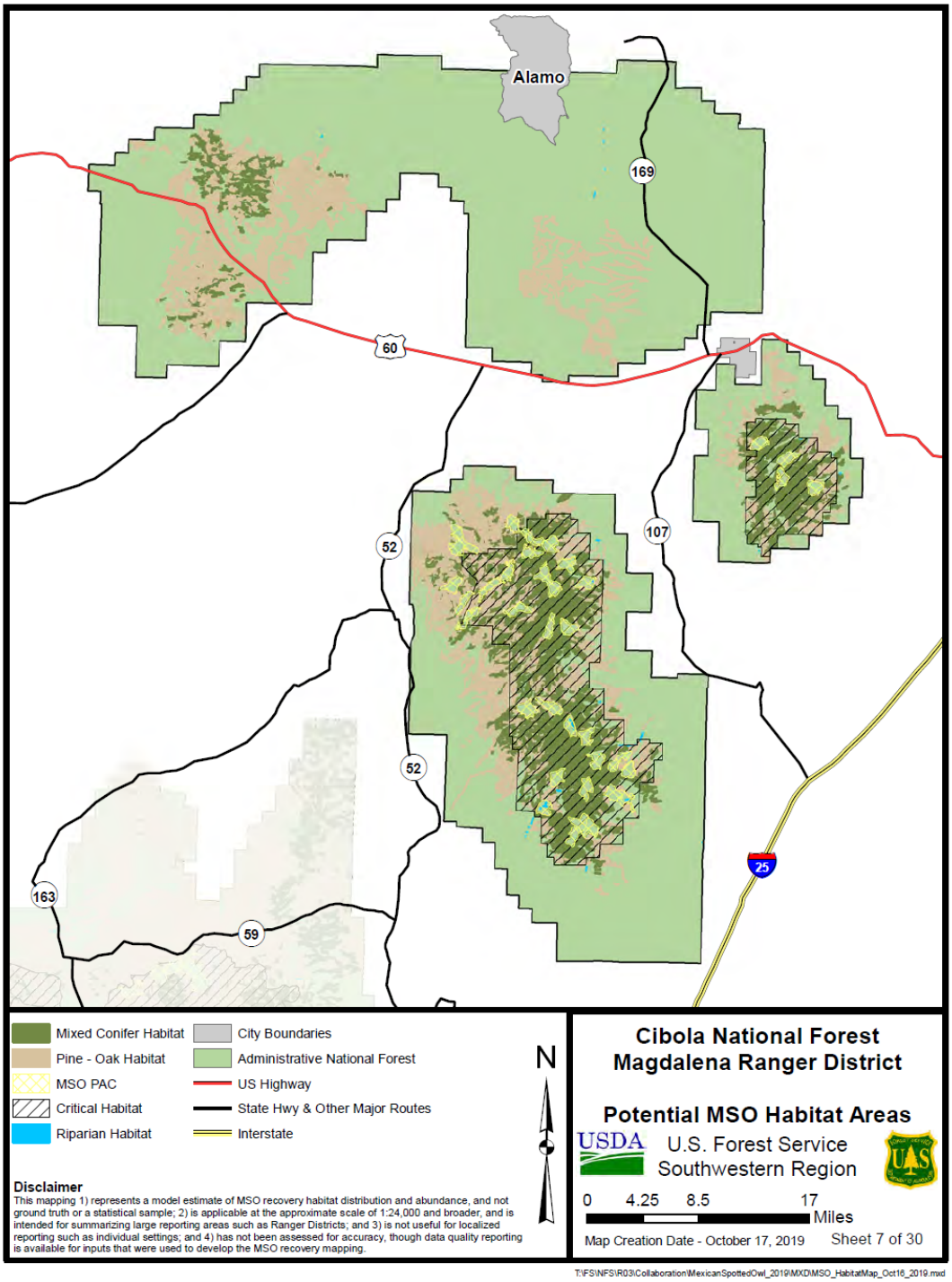

Figure 1. Mexican spotted owl PAC, recovery habitat, and critical habitat on the Magdalena RD, Cibola NF.

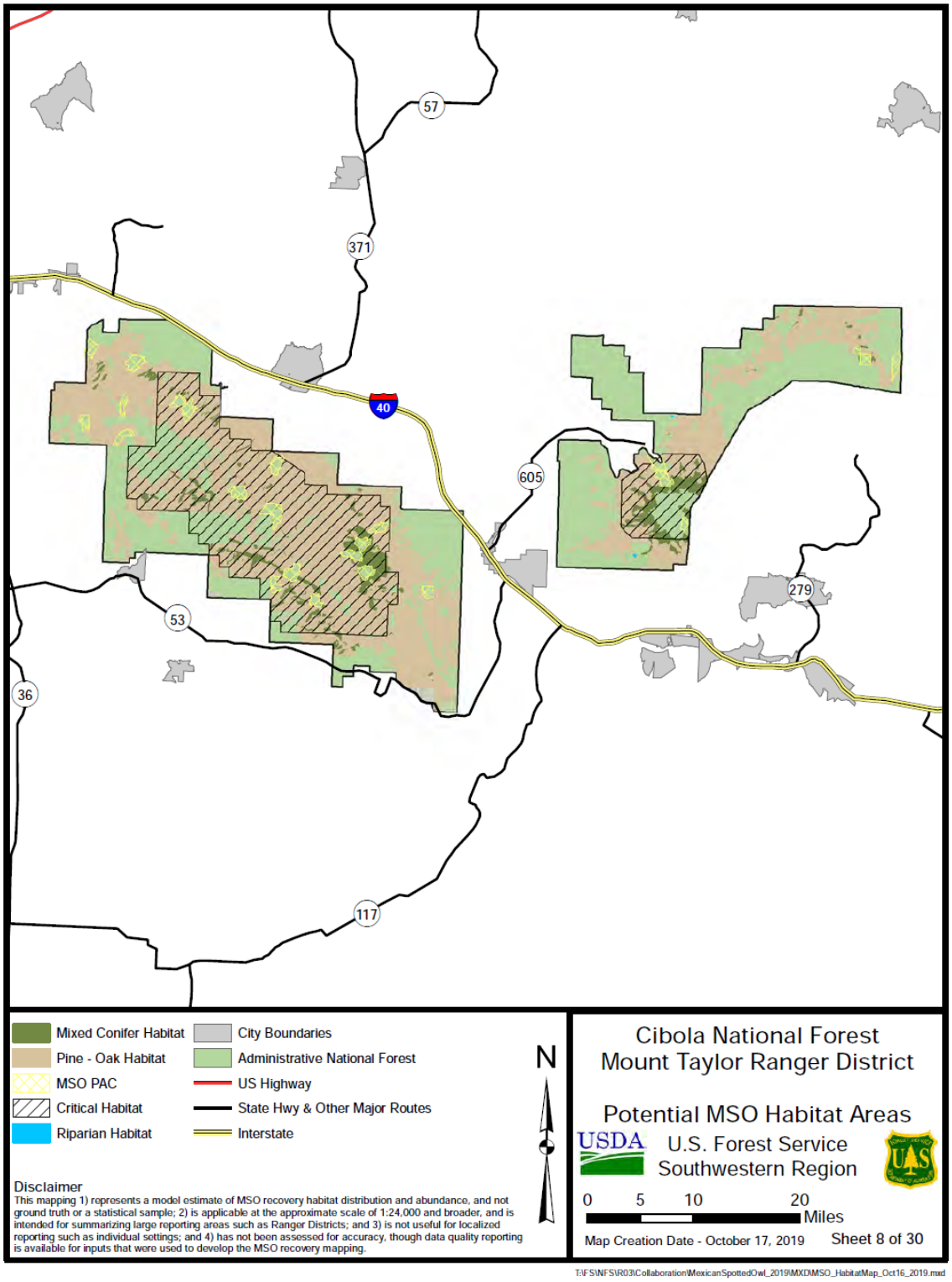

Figure 2. Mexican spotted owl PAC, recovery habitat, and critical habitat on the Mount Taylor RD, Cibola NF.

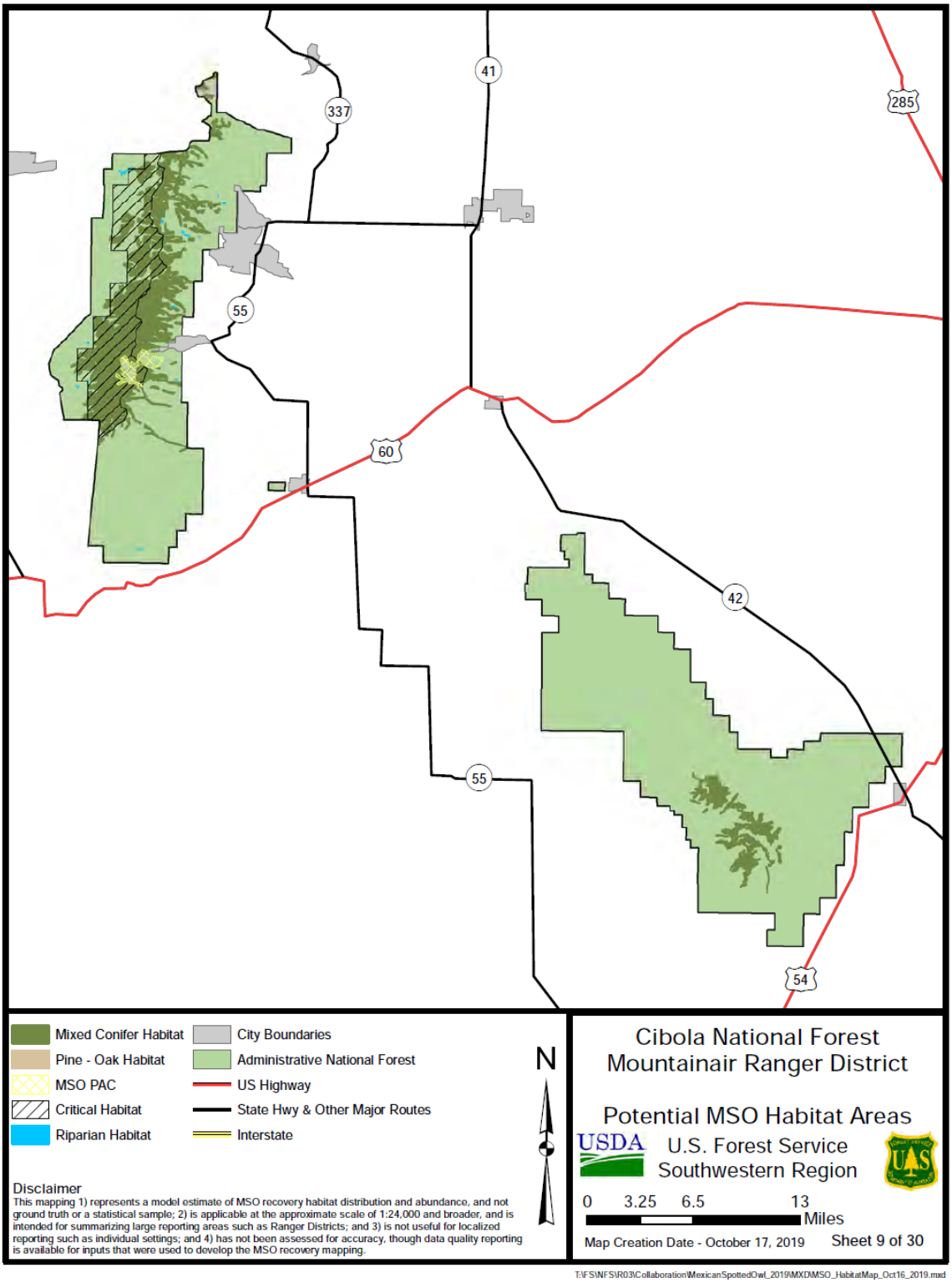

Figure 3. Mexican spotted owl PAC, recovery habitat, and critical habitat on the Mountainair RD, Cibola NF.

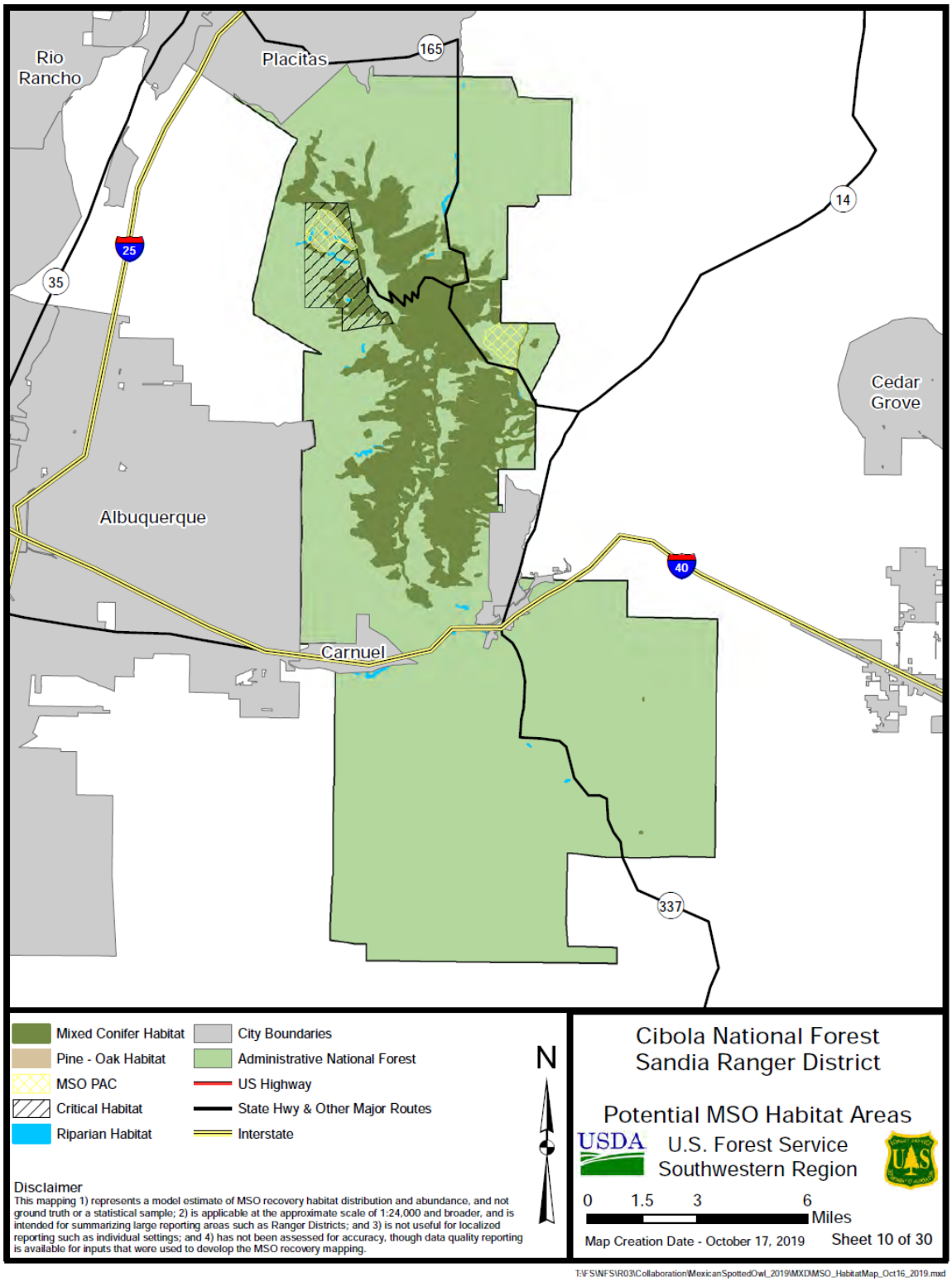

Figure 4. Mexican spotted owl PAC, recovery habitat, and critical habitat on the Sandia RD, Cibola NF.

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UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF ARIZONA

WILDEARTH GUARDIANS, Plaintiff, v. UNITED STATES FISH AND WILDLIFE SERVICE; UNITED STATES FOREST SERVCE, Defendants.	CASE NO. 4:13-cv-151-RCC **[PROPOSED] ORDER GRANTING DISSOLUTION OF INJUNCTION RE THE CIBOLA NATIONAL FOREST**

Having considered Defendants' motion to dissolve the injunction re the Cibola National Forest, the Court hereby grants the motion. The Court's September 12, 2019 injunction is lifted from the Cibola National Forest.

Dated: _____ _____

Hon. Raner C. Collins