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**UNITED STATES DISTRICT COURT**
**FOR THE DISTRICT OF ARIZONA**

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| WILDEARTH GUARDIANS,<br><br>Plaintiff,<br><br>v.<br><br>UNITED STATES FISH AND WILDLIFE SERVICE and UNITED STATES FOREST SERVICE,<br><br>Defendants. | CASE NO. 4:13-cv-151-RCC<br><br>**DEFENDANTS' MOTION TO ALTER THE COURT'S DECISION AND TO CLARIFY OR MODIFY THE COURT'S INJUNCTION**<br><br>**[EXPEDITED REVIEW REQUESTED]** |

## INTRODUCTION

Pursuant to Federal Rule of Civil Procedure ("Rule") 59(e), Defendants respectfully move the Court to alter its September 12, 2019 judgment regarding recovery in a Section 7(a)(2) analysis or, in the alternative, clarify or modify the scope of its injunction. *See* ECF No. 89. On the merits, with all due respect, the Court erred in creating a standard that the U.S. Fish & Wildlife Service's ("FWS") jeopardy analysis under Section 7(a)(2) of the Endangered Species Act ("ESA") must "provide a route to recovery [for the Mexican spotted owl ("owl")] or a way to accurately assess it." This judgment appears to hold – erroneously – that FWS cannot adequately address the owl's recovery unless or until it has reliable population trend data – data that, under the 2012 owl Recovery Plan, will not be available until 2023 *at the earliest*. This judgment not only misapplies the law but it results in ***manifest injustice*** in two important respects: (1) it provides no way for FWS, in reinitiated Section 7 consultation, to correct the alleged error found in the six 2012 biological opinions ("BiOps") until at least 2023; and (2) it results in the injunction of all the U.S. Forest Service's ("USFS") "timber management activities" in the Lincoln, Santa Fe, Cibola, Carson, Tonto, and Gila National Forests – management activities designed primarily to mitigate the risk of catastrophic wildfire to the owl and nearby communities until at least 2023, or potentially longer. To correct this legal error and resulting manifest injustice, Defendants respectfully ask this Court to alter its judgment to apply the appropriate legal standards and hold that FWS, using the best scientific data available at the time of its decision, appropriately addressed the owl's prospects for recovery. In the alternative, if the Court declines to alter its judgment on the merits, Defendants respectfully request that the Court modify its current injunction – enjoining all "USFS timber management actions" on the six affected National Forests, pending further consultation – and instead enter an injunction that addresses only specific irreparable harm that Plaintiff has demonstrated.

## STANDARD FOR FED. R. CIV. P. 59(e)

"In general, there are four basic grounds upon which a Rule 59(e) motion may be

granted: (1) if such motion is necessary to correct manifest errors of law or fact upon which the judgment rests; (2) if such motion is necessary to present newly discovered or previously unavailable evidence; (3) if such motion is necessary to prevent manifest injustice; or (4) if the amendment is justified by an intervening change in controlling law." *Allstate Ins. Co. v. Herron*, 634 F.3d 1101, 1111 (9th Cir. 2011) (citation omitted). "A court considering a Rule 59(e) motion is not limited merely to these four situations, however." *Id*. (citation omitted) (noting that under unusual circumstances an amendment outside the listed situations may be appropriate). "Since specific grounds for a motion to amend or alter are not listed in the rule, the district court enjoys considerable discretion in granting or denying the motion." *Id*. (citation omitted). Here, Defendants assert that alteration of the Court's judgment on the merits is necessary in order to correct errors of law and fact which currently result in manifest injustice.

## ARGUMENT

### I. The Court's standard regarding recovery in a Section 7(a)(2) analysis is a misapplication of the Endangered Species Act, its implementing regulations, and governing case law which results in manifest injustice.

The Court erred in creating a standard that FWS's jeopardy analysis under Section 7(a)(2) must "provide a route to recovery or a way to accurately assess it." *See* ECF No. 89 at 24. This judgment appears to hold – erroneously – that FWS cannot adequately address the owl's recovery unless or until it has reliable population trend data – data that, under the 2012 owl Recovery Plan, will not be available until 2023 *at the earliest*. This judgment not only misapplies the law but results in manifest injustice in two important respects: (1) it provides no way for FWS, in reinitiated Section 7 consultation, to correct the alleged error found in the six 2012 BiOps until at least 2023; and (2) it results in the injunction of all USFS "timber management activities" in the Lincoln, Santa Fe, Cibola, Carson, Tonto, and Gila National Forests – management activities designed primarily to mitigate the risk of catastrophic wildfire to the owl and nearby communities until at least 2023 (and maybe longer).

Defendants respectfully request that the Court reconsider law and facts under the applicable standard. Instead of requiring that FWS "provide a route to recovery or a way to accurately assess it," it should analyze the requirements mandated by law and conduct the following analysis: (1) whether FWS appropriately analyzed if the programmatic forest plans for the six National Forests would appreciably reduce the owl's prospects for recovery; and (2) whether FWS used the best scientific data available in conducting that analysis. As explained in more details below, FWS appropriately addressed the owl's prospects for recovery and did so using the best scientific data available.

**A. The agencies are not required to "provide a route to recovery" in a Section 7(a)(2) analysis.**

The Court's ruling that a lawful jeopardy analysis must "provide a route to recovery" does not apply the relevant legal inquiry under Section 7(a)(2) of the ESA. It did so in two important respects.

First, the Court added its own requirement into the Section 7(a)(2) process. There is no requirement in the operative statutory provision, regulations, or controlling case law that requires to FWS to "provide a route to recovery." *See* 16 U.S.C. § 1536(a)(2) ("insure that any action authorized, funded, or carried out . . . is not likely to jeopardize the continued existence of any endangered species . . ."); 50 C.F.R. § 402.02 (prohibiting an agency action that would "reduce appreciably the likelihood of both survival and recovery of a listed species in the wild"). The requirement to actually "provide a route to recovery" is an additional element that the Court imposed onto the consultation process. The Ninth Circuit has explained that courts should not graft into the statute requirements that do not otherwise exist. *The Lands Council v. McNair*, 537 F.3d 981, 993 (9th Cir. 2008) (courts may not graft into the statute their "own notion of which procedures are 'best' or most likely to further some vague, undefined public good").

Second, there is no requirement that FWS's BiOps provide a "route to recovery" in order for a "no jeopardy" determination to pass legal muster. Such an interpretation would effectively mean that only proposed actions with potential beneficial effects can

move forward under the ESA. This is a mistaken interpretation, which is not supported by the statute or regulations.

Section 7(a)(2) is concerned with whether the action causes imminent harm; not whether it improves a species' status by providing a route to recovery. 16 U.S.C. § 1536(a)(2) (focusing on "continued existence"); *Nat'l Wildlife Fed'n v. Nat'l Marine Fisheries Serv.* ("*NWF v. NMFS*"), 524 F.3d 917, 929-30 (9th Cir. 2008) ("To 'jeopardize'—the action ESA prohibits—means to 'expose to loss or injury' or to 'imperil.' Either of these implies causation, and thus *some new risk of harm*.") (emphasis added). While Section 7(a)(2) places obligations on Federal agencies, achieving a species' recovery is not one of them. Neither the terms "recovery" nor "conserve" appear in Section 7(a)(2). 16 U.S.C. § 1536(a)(2). Instead, other ESA sections such as Section 4(f) address "recovery" of species. *Id*. § 1533(f)(4); *NWF v. NMFS*, 524 F.3d at 936 (stating that it is improper to import the "ESA's separate recovery planning provisions into the section 7 consultation process").

The Court's view is also inconsistent with the regulatory definition of "jeopardize", which is "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 C.F.R. § 402.02 (emphasis added). By definition, even a neutral action, never mind a largely beneficial proposed action like the programmatic forest plans here, is not a reduction in "the reproduction, numbers, or distribution of that species." Likewise, it is axiomatic that an increase in the likelihood of recovery, even if small, cannot at the same time "reduce appreciably" the likelihood of recovery. The Court's construct mistakenly re-writes the regulatory definition to replace "appreciably reduce" with "must provide a route to recovery."

Ninth Circuit case law comports with the plain reading of the regulation. *NWF v. NMFS*, 524 F.3d at 936 (the recovery prong inquiry asks whether NMFS properly determined that the reasonable prudent alternative "will not *appreciably* reduce the odds

of success for *future recovery planning*, by tipping a listed species too far into danger") (emphasis added); *Ctr. for Biological Diversity v. FWS*, 807 F.3d 1031, 1051–52 (9th Cir. 2015) (plaintiff's "objections to the BiOp . . . in this case can appropriately be characterized as claiming that the [action] does not do enough to ensure the survival . . . Adopting this position, however, would impermissibly broaden FWS's obligations, both as the action agency and as the consulting agency"); *Cascadia Wildlands v. Thrailkill*, 806 F.3d 1234, 1244 (9th Cir. 2015) ("The purpose of the Recovery Plan is evident—promote recovery of the spotted owl. Although they are not necessarily mutually exclusive, recovery and jeopardy are two distinct concepts."); *Salmon Spawning & Recovery All. v. NMFS*, 342 F. App'x 336, 338 (9th Cir. 2009) (Section 7(a)(2) therefore does not require that an action promote or otherwise "boost the [species'] chances of recovery."); *Southwest Center for Biological Diversity v. U.S. Bureau of Reclamation*, 143 F.3d 515, 522-23 (9th Cir. 1998) (holding that under the ESA a federal agency is "not . . . required to pick the best alternative or the one that would most effectively protect the [listed species] from jeopardy," especially to the exclusion of all other management and policy goals of the agency, but may pick any alternative that "complied with the jeopardy standard and which could be implemented by the agency").

Finally, it is important to fully appreciate that the proposed agency actions themselves – the six 2012 programmatic forest plans – are a net positive for the owl, even without population trend monitoring, and are likely to increase the owl's chances of survival *and recovery*. Indeed, USFS's forest management program activities taken pursuant to the 1996 standards and guidelines are designed primarily for the benefit and recovery of the owl. FWS concluded that USFS's continued implementation of the forest plans' protective management measures effectively addressed the primary threats that led to the owl's "threatened" listing and improved (and would continue to improve over time) the owl's pre-1996 habitat by protecting and recruiting old-growth, multilayered canopy forests. In other words, while expected to have minimal short-term adverse effects, USFS's continued commitment to implement an uneven-aged timber

management regime and to design projects to minimize the risk of high-severity, landscape-altering wildfire would not only avoid jeopardizing the owl and adversely modifying its habitat but would also likely result in long-term conservation benefits for the owl and move the owl closer to recovery. *See, e.g.*, FWS 8737-38 (Lincoln BiOp).

FWS properly applied the ESA, its implementing regulations, and applicable case law, and made the reasonable conclusion that the six programmatic forest plans are consistent with the owl's 1995 Recovery Plan and, even without population trend data, will *increase* – *i.e.*, not appreciably reduce – the owl's chances for survival *and recovery* and therefore the six 2012 programmatic forest plans do not jeopardize the owl's "*continued existence*." 16 U.S.C. § 1536(a)(2) (emphasis added). Therefore, the Court should alter its judgment to find that FWS appropriately determined that the six forest plans would not appreciably reduce the owl's prospects for recovery.

**B. FWS appropriately used the "best available science."**

The Court's ruling that a lawful jeopardy analysis must provide "a way to accurately assess" recovery in a Section 7(a)(2) – *i.e.*, must have population trend data – does not correctly apply the law as it elides the ESA's "best available science" standard.

Section 7 consultations, including FWS's analysis of recovery regardless of the particular species involved, must use the best data "available." 16 U.S.C. § 1536(a)(2). Rather than mandating population trend monitoring, this provision "'merely prohibits [an agency] from disregarding available scientific evidence that is in some way better than the evidence [it] relies on.' Essentially, [an agency] 'cannot ignore available biological information.'" *Kern County Farm Bureau v. Allen*, 450 F.3d 1072, 1080--81 (9th Cir. 2006); *see also Nw. Ecosystem Alliance v. FWS*, 475 F.3d 1136, 1147 (9th Cir. 2007) ("[A] rigorous, large-scale study . . . would be preferable, but in [its] absence . . ., credible anecdotal evidence represents the 'best scientific . . . data available' . . . ."); *Ctr. for Biological Diversity v. Babbit*, 215 F.3d 58, 60-61 (D.C. Cir. 2000) (Also, the "best available science" standard makes clear that consulting agencies are under no obligation

to create scientific data).

Here, the agencies did not ignore any data and have made clear that no reliable data exist regarding population trends. But, even in the face of this absence, the agencies must nonetheless make determinations relying on the best scientific and commercial data available. Without population trend data, the best available data was the following:

1. In 1993, due to a lack of population data, FWS listed the owl based *entirely*[1] on the loss of vast amounts of old-growth, multilayered canopy habitat (and the continuing threat of habitat loss) due to USFS' pre-1996 even-aged (shelterwood) timber management and catastrophic wildfire, USFS 20;
2. In 1995, FWS issued a recovery plan with specific protective management recommendations (*i.e.*, to manage for protected, restricted, and other woodland habitats) to protect and recruit old-growth, multilayered canopy habitat by eliminating the threat of even-aged timber management and designing projects to minimize risk of catastrophic wildfire, FWS 7918, FWS R 1;
3. In 1996, USFS amended its Forest Plans to incorporate, among other things, the 1995 recovery plan's protective forest management recommendations (*i.e.*, to manage for protected, restricted, and other woodland habitats) to protect and recruit old-growth, multilayered canopy habitat by implementing uneven-age, multiple-species silvicultural timber management and designing projects to minimize risk of catastrophic wildfire, FWS 7918, USFS 466-70;
4. USFS had implemented these protective management recommendations for 16 years (from 1996 to 2012) and would continue to do so, FWS 7918; and
5. Additional owl surveys have resulted in the discovery of more known owl nesting sites across a wider area throughout the owl's range, FWS 7905.

[1] No population trend data was available when FWS listed the owl as "threatened" under the ESA. While Plaintiff continually insists that a proper jeopardy analysis cannot occur without range-wide monitoring data, it has no problem with FWS having initially listed the owl based *purely* on the loss old-growth, multilayered canopy habitat – *i.e.*, no range-wide monitoring data.

After considering this, the best available data, FWS concluded that USFS's continued implementation of the Forest Plans' protective management measures (1) effectively addressed the primary threats that led to the owl's "threatened" listing in the first instance and (2) improved (and would continue to improve over time) the owl's pre-1996 habitat by protecting and recruiting old-growth, multilayered canopy forests. In other words, while expected to have minimal short-term adverse effects, USFS's continued commitment to implement an uneven-aged timber management regime and to design projects to minimize the risk of high-severity, landscape-altering wildfire would not only avoid jeopardizing the owl and adversely modifying its habitat but would also likely result in long-term conservation benefits for the owl and move the owl closer to recovery. *See, e.g.*, FWS 7865-66 (Cibola BiOp). Given the best available data at the time, FWS's conclusions were reasonable. Therefore, Defendants respectfully request that the Court alter its judgment in light of the fact that FWS appropriately considered the best scientific data available at the time of its decision, and modify its determination requiring FWS to provide accurate population trend data for its 2012 BiOps.

**C. The Court's recovery standard creates manifest injustice.**

To be clear, USFS is able to meet their Section 7 obligations to protect and conserve the owl without population trend data. This type of monitoring, as explained in the 1995 recovery plan, must be implemented for a period *of at least 15 years* to be able to generate any meaningful data on population trends. FWS R 135. And, even after 15 years, there was still no guarantee that 1995 population trend monitoring regime would produce reliable and defensible data. Defs.' Exh. A, Shaula Hedwall Declaration ("Hedwall Decl.") ¶¶ 7-10. However, the recovery standard set forth in the Court's opinion would result in manifest injustice as it is entirely unworkable. Taking the Court's position to its logical extreme would mean that, even if the 1995 population monitoring regime was practical and implemented, USFS could not meet their Section 7 obligations with respect to the owl for 15 years. In other words, under the Court's decision, all post-

1996 USFS projects affecting the owl would be enjoined *for at least 15 years* – until the year 2011 (or longer, should the monitoring regime not end up providing reliable data) – because, without reliable population trend data, FWS cannot "provide a route to recovery or a way to accurately assess it" in its BiOps. That simply cannot be the case.

The Court's decision similarly affects the agencies' population trend monitoring efforts under the 2012 revised Recovery Plan for the owl. In 2012, FWS created a new population trend monitoring regime. Hedwall Decl. ¶¶ 7-10; Defs.' Exh. B, Karl Malcolm Declaration ("Malcolm Decl.") ¶ 26. FWS anticipated that this new effort would need to be implemented for at least 10 years to provide information that could be used with a reasonably high level of confidence (but could take longer if assumptions built into the monitoring regime are not met, such as a change in detection probabilities over time). Hedwall Decl. ¶¶ 7-10; Malcolm Decl. ¶¶ 26-27. USFS has now funded and conducted six years of region-wide occupancy surveying and will begin year seven in spring of 2020. Malcolm Decl. ¶ 24. USFS anticipates completing 10 years of monitoring in 2023. Malcolm Decl. ¶ 29. Again, taking the Court's position to its logical extreme would mean that the agencies cannot meet their Section 7 obligations with respect to the owl's future recovery until 2023. In other words, it appears that under the Court's decision, all USFS projects affecting the owl should be enjoined until 2023 (or longer should the 2012 Recovery Plan's monitoring regime not provide reliable data) because, without long-term population trend data, FWS cannot "provide a route to recovery or a way to accurately assess it" in its BiOps. This results in manifest injustice.

It is also unclear how the results of population trend data would help inform FWS decisions regarding jeopardy as it relates to the implementation of land management decisions on the six National Forests. Increasing, decreasing, or stable trends in owl population may be driven by factors outside of the control of FWS or USFS and independent of habitat manipulation (*e.g.*, climate change and drought). Malcolm Decl. ¶ 27. Regardless of long-term trends in owl population, it remains clear based on current science 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 reveal declining trends (which would preclude delisting), such results should not be construed as grounds for foregoing habitat management actions (*i.e.*, mechanical and managed fire treatments which mitigate risk of catastrophic wildfire) needed to safeguard key habitat elements for the owl.

In summary, the recovery requirement for a Section 7(a)(2) jeopardy analysis as set forth in the opinion represents an unworkable and impossible standard which would have the result of enjoining all USFS timber management projects until at least 2023 (or longer, if the population trend monitoring regime indicates a need to require more data). During this time, with the intensification of high-severity, landscape altering wildfires, USFS projects designed specifically to reduce the risk of wildfire appear to remain enjoined further endangering the owl and public health and safety.[2] This situation, resulting from a misapplication of law and fact, is manifest injustice. The Court, therefore, should revisit its judgment and uphold FWS's reasonable determination that, based on the best available science, the six programmatic forest plans at issue do not appreciably reduce the owl's prospects for recovery.

## II. Plaintiff has not demonstrated irreparable injury necessary for an injunction.

In the alternative, if the Court declines to alter its judgment on the merits, Defendants respectfully request that the Court modify its current injunction – enjoining all "USFS timber management actions" on the Lincoln, Santa Fe, Cibola, Carson, Tonto, and Gila National Forests, pending further consultation – and instead enter an injunction that addresses only specific irreparable harm that Plaintiff has demonstrated. Plaintiff has made no showing of irreparable harm to its specific interests in the owl, and is not entitled to injunctive relief. *See Monsanto Co. v. Geertson Seed Farms*, 561 U.S. 139, 156–57 ("[A] plaintiff seeking a permanent injunction . . . must demonstrate: (1) that it

[2] This result also unnecessarily harms the local economy that also depend on forest resources. Malcolm Decl. ¶¶ 4, 30-32.

has suffered an irreparable injury . . . .") (quoting *eBay Inc. v. MercExchange, L.L.C.*, 547 U.S. 388, 391 (2006)).

The Court's reasoning for entering a broad injunction was based largely on *Cottonwood Envt'l Law Center v. USFS*, 789 F.3d 1075, 1088 (9th Cir. 2015), and *NWF v. NFMS*, 886 F.3d 803, 818 (9th Cir. 2018). In those cases, however, the Ninth Circuit acknowledged that a plaintiff "must show irreparable injury to justify injunctive relief" in ESA cases. *Cottonwood*, 789 F.3d at 1091. That requirement may be satisfied by showing irreparable harm to a listed species, if sufficiently connected to the plaintiff's own interests. *NWF*, 886 F.3d at 820. But even then, the "irreparable harm must be causally connected to the activity to be enjoined." *Id*. at 819. An injunction must be "no more burdensome to the defendant than necessary to provide complete relief to the plaintiffs." *Madsen v. Women's Health Center, Inc*., 512 U.S. 753, 765 (1994) (quoting *Califano v. Yamasaki*, 442 U.S. 682, 702 (1979)). The Court abuses its discretion if it enters an injunction that is overly broad. *NWF*, 886 F.3d at 823; *see also Cottonwood*, 789 F.3d at 1091 (the district court should "craft[] an injunction to remedy the precise harm").

Importantly, the Court does not have jurisdiction to grant relief based on "generalized harm to the forest or the environment," but may only grant relief based on the particular interest and potential harm to the parties before it. *Summers v. Earth Island Institute*, 555 U.S. 488, 494 (2009). In its evaluation of irreparable harm, the Court stated that "Courts in this district have found that timber harvesting 'constitutes *per se* "irreversible and irretrievable" commitment of resources' preventing further agency action until the completion of consultation." ECF No. 89 at 37-38 (quoting *Silver v. Babbitt*, 924 F. Supp. 976, 986, 989 (D. Ariz. 1995)). But the statement that "timber harvesting" constitutes a "*per se* irreversible and irretrievable commitment of resources" does not establish irreparable harm to the owl, let alone to Plaintiff's interests in the owl, as required by *Cottonwood*, based on more recent Supreme Court precedent. *See Cottonwood*, 789 F.3d at 1089-91 (analyzing *Monsanto* and *Winter v. Natural Resources Defense Council, Inc.*, 555 U.S. 7 (2008), to conclude that "there is no presumption of

irreparable injury where there has been a procedural violation in ESA cases," but "plaintiff must show irreparable injury to justify injunctive relief"). Indeed, since *Silver*, and based on *Winter*, the Ninth Circuit has expressly rejected the notion that "logging is *per se* enough to warrant an injunction because it constituted irreparable harm." *Earth Island Institute v. Carlton*, 626 F.3d 462, 474 (9th Cir. 2010) (citing *The Lands Council v. McNair*, 537 F.3d 981, 1005 (9th Cir. 2008) (*en banc*)).[3]

Rather than just presume that timber harvesting causes irreparable harm to the owl, and in turn to Plaintiff, *Cottonwood* establishes that Plaintiff must demonstrate – through competent evidence – that each timber harvesting activity that it seeks to enjoin harms its cognizable interests in the owl. *See Cottonwood*, 789 F.3d at 1092 (upholding the district court's denial on injunctive relief in an ESA case because the plaintiff had "failed to make an evidentiary showing that specific projects will likely cause irreparable damage to its members' interests"). Plaintiff has not offered any evidence that any specific projects will likely irreparably harms its members' interests. Therefore, as in *Cottonwood*, Plaintiff is not entitled to any injunction in this case, and this Court's judgment should be amended accordingly.

## III. Plaintiff cannot show that several categories of activities cause Plaintiff irreparable harm, and therefore should be excluded from any injunction.

As discussed above, the Ninth Circuit has rejected the proposition that "timber harvesting" – let alone the much broader "timber management actions" – constitute *per se* irreparable harm to endangered species, based on recent Supreme Court and Ninth Circuit *en banc* decisions on the proper analyses for determining the proper scope of

[3] The reason why "timber management actions" are no longer considered *per se* irreparable harm is because these actions have advanced in recent years to significantly improve wildlife habitat conditions in the long run, as compared to the types of "timber harvests" in the 1990s, as cited by this Court in the *Silver* case. *See, e.g., Swan View Coal. v. Weber*, No. CV 13-129-M-DWM, 2019 WL 952329, at *1–2 (D. Mont. Feb. 27, 2019) (rejecting general claims of *per se* irreparable harm due to timber harvest when Plaintiffs failed to identify specific harms to their members, especially in light of the fact that the project at issue was aimed at benefitting protected species, improving forest health, and mitigating risk of catastrophic wildfire).

injunctive relief. In addition, before an injunction can issue for an ESA violation, Plaintiff must also show that the relief they seek is "narrowly tailored to avoid the irreparable harm that the district court identifie[s]" based on Plaintiff's evidentiary showing of "a 'sufficient causal connection' between the alleged irreparable harm and the activity to be enjoined." *NWF v. NMFS*, 886 F.3d 803, 823 (9th Cir. 2018).

And, under *Winter* and *Cottonwood*, Plaintiff must "demonstrate that irreparable injury [to its interests in the owl] is *likely* in absence of an injunction." *Cottonwood*, 789 F.3d at 1089 (quoting *Winter*, 555 U.S. at 22; emphasis added). Thus, even if Plaintiff could establish that some injunction is warranted here, that injunction must exclude projects and activities that will have "no effect" or are "not likely to adversely affect" the owl or its critical habitat.[4] Plaintiff acknowledged as much in asking this Court to exclude the timber management activity of personal fuelwood cutting and gathering – without specificity to owl critical habitat or recovery habitat – from the Court's injunction. *See* ECF No. 99 at 2 (citing *Cottonwood*, and stating that Plaintiff "does not believe that personal firewood cutting and gathering on national forest lands is associated with any possibility of irreparable harm to the Mexican spotted owl or its habitat").

While it is not Defendants' burden to demonstrate a lack of likely irreparable harm, the agencies have compiled a list of categories of projects and activities that could fall under the injunction's "timber management activities" but that are not likely to irreparably harm the owl (and, hence, any interest that Plaintiff may establish in the owl). Malcolm Decl. ¶¶ 3-23. For example, many areas affected by the Court's injunction have no biological significance for the owl. In 2004, FWS designated *critical habitat* for

[4] These terms are part of the overall Section 7(a)(2) consultation process. If an action agency first determines that a proposed action will have "no effect" on an endangered or threatened species, the consultation requirements are not triggered. *Pac. Rivers Council v. Thomas*, 30 F.3d 1050, 1054 n.8 (9th Cir. 1994). Also, as part of the informal consultation process, if the agencies reach a "not likely to adversely affect" determination, the consultation process is concluded and no further action is necessary. *See* 50 C.F.R. §§ 402.13(a), 402.14(b)(1). The important point here is that both of these bars – "no effect" and "not likely to adversely affect" – are significantly lower and nowhere near the "likelihood of irreparable harm" bar.

Mexican spotted owl. The 2012 revised Recovery Plan further defines additional *recovery habitat*. Protected Activity Centers ("PACs") outside of critical habitat have also been identified. While "timber management actions" within these habitat areas may affect the owl, actions outside these areas will have no effect and are therefore not likely to irreparably harm the owl. Thus, even if the Court's injunction remains in place, the Court should modify its injunction to exclude all areas outside recognized owl habitat areas.

Likewise, many projects and other activities that occur in, or partially in, owl habitat areas are not likely to irreparably harm the owl and should be excluded from any injunction, for the same reason Plaintiff sought to exclude personal fuelwood cutting and gathering. Indeed, many actions in owl habitat areas are designed to protect or improve habitat conditions for the owl, such that enjoining them under the current injunction actually harm the owl. The Court should modify any injunction to exclude activities that are not likely to irreparably harm the owl, including any actions that may adversely affect the owl in the short-term while protecting or enhancing conditions in the long-term.

The need to narrow the scope of the injunction is particularly important where the Court is apparently considering, and has ordered, long-term programmatic restraints on activities across six National Forests, which, as discussed above, might not be resolved to the Court's satisfaction until several more years (or more) of population trend data are available (approximately 2023). Apart from the detrimental effect on the owl's conservation and the safety of nearby communities, an overbroad injunction is particularly problematic here because it unnecessarily harms economically repressed and depressed communities that depend on the National Forests. Malcolm Decl. ¶¶ 4, 30-32. Therefore, even if the Court believes that such programmatic restraints are necessary to protect Plaintiff's interest here, it should also be wary of shackling USFS's ability to carry out its statutory mission of administering and protecting the National Forests.

**A. Timber management activities outside owl habitat.**

Timber management activities outside owl habitat should be allowed to continue.

USFS's timber management activities, like mechanical thinning, are designed to reduce wildfire effects, provide vibrant habitat for native wildlife species, protect water sources, and safeguard communities. Malcolm Decl. ¶ 4. The long-term outcomes of these treatments benefit the owl by reducing forest stocking to improve tree vigor and restore stand resiliency. *Id*. In turn, these goals proactively address uncharacteristic disturbance from insects, disease, wildfire, invasive vegetation, and changing climate. *Id*. In general, Plaintiff appears amenable to allowing these activities to proceed.

There are no adverse effects from these types of timber management activities outside owl habitat – *i.e.*, designated critical habitat, recovery habitat, and protected activity centers. Hedwall Decl. ¶ 4; Malcolm Decl. ¶ 8. In fact, Section 7 consultation is not required for projects that occur outside owl habitat. Hedwall Decl. ¶ 4. In the six enjoined forests, USFS has 22 timber management projects spanning 12,553 acres entirely outside of owl critical habitat, recovery habitat, and known PACs. Malcolm Decl. ¶ 5. There are an additional 5 timber management projects which are partially outside of owl critical habitat, recovery habitat, and PACs. Malcolm Decl. ¶ 6. These specific projects span 3,252 acres in total, of which 2,240 acres are outside of owl habitat. The Court should allow timber management activities to proceed in portions of project areas outside of owl habitat and outside of PACs where project-level consultation has occurred.

**B. Timber management activities involving small-scale, incidental cutting.**

Timber management activities involving small-scale, incidental tree cutting should be allowed to continue. These types of activities include, but are not limited to, the following: (1) the cutting of hazard trees; (2) routine maintenance for infrastructure (e.g., power lines, recreation sites, trails, etc.) (3) the cutting of the U.S. Capitol Christmas tree; (4) personal Christmas tree cutting; (5) the harvest and removal of personal use forest products; and, (6) special product collections by tribes for ceremonial purposes. Malcolm Decl. ¶ 9. In general, with perhaps the exception of certain hazard tree removals, Plaintiff appears amenable to allowing these activities to proceed.

There are no adverse effects from these types of timber management activities to

owl habitat. These activities are limited in their scope, scale, and timing as to have virtually no effect on the owl. Malcolm Decl. ¶ 10. Additionally, these activities occur outside of the spring / summer owl breeding season within owl habitat, have broadly dispersed effects throughout the National Forest System, and are often outside of owl habitat. Malcolm Decl. ¶ 10. In contrast to larger scale commercial timber harvesting projects, these activities affect small numbers of trees in limited spatial extents. Malcolm Decl. ¶ 9. The products harvested are generally small diameter, and do not constitute key habitat elements for owl (i.e., large and old trees). Malcolm Decl. ¶ 10. The Court, therefore, should allow these activities to proceed.

**C. Timber management activities – prescribed burns.**

Timber management activities, such as prescribed fire, should be allowed to continue. Prescribed fire is vital to the owl's conservation and specifically designed to address the owl's primary threat – catastrophic (high-severity, stand-replacing) wildfire. Malcolm Decl. ¶ 11; Hedwall Decl. ¶ 6. The use of managed low to moderate intensity fire, including prescribed burning, is an important tool available to USFS to improve habitat quality for frequent-fire forests that the owl occupies and to protect owl habitat from catastrophic, stand-replacing wildfires. Malcolm Decl. ¶ 12. In general, with certain conditions, Plaintiff appears amenable to allowing these activities to proceed.

The long-term benefits and protections are vital. There are currently 33 prescribed fire projects partially or completely within owl habitat halted in the region, and another 30 located entirely outside of owl critical habitat. Malcolm Decl. ¶ 13. Delaying these projects increases the threat of future large and severe fires which undermines USFS's conservation efforts – not to mention the health and safety benefits to surrounding communities. Malcolm Decl. ¶ 13. The Court should allow these projects to proceed.

**D. Timber management projects with project-specific forest plan amendments and supporting, stand-alone Section 7 consultation.**

Timber management projects with project-specific forest plan amendments and supporting, stand-alone Section 7 consultation should be allowed to continue. These

independent projects have or will have project-specific Forest Plan amendments that contain updated owl standards and guidelines that align with the 2012 Recovery Plan. Malcolm Decl. ¶ 14. These specific projects also have their own stand-alone Section 7 consultation – *i.e.*, the consultations are not tiered to the now invalidated 2012 programmatic BiOps. Malcolm Decl. ¶ 15. Currently there are two signed projects falling under this category – the Rio Tusas-Lower San Antonio Landscape Restoration Project (Carson National Forest) and Southwest Jemez Mountains Landscape Restoration Project (Santa Fe National Forest). These projects contain project-specific forest plan amendments for the protection and management of the owl. Malcolm Decl. ¶ 18. The Court should allow these projects (and others that follow this model) to proceed. Plaintiff has not yet provided a position on these particular activities.

**E. Timber management activities – commercial fuelwood gathering.**

Finally, commercial fuelwood cutting and gathering on the six enjoined forests should be allowed to continue. This timber management activity is vitally important to communities as they prepare for the upcoming winter season. Malcolm Decl. ¶ 23. This particular activity will not adversely affect the owl. By and large, commercial firewood cutting occurs in pinyon/juniper woodland types, outside of mixed-conifer, pine-oak, and riparian forest types (primary constituent elements for the owl). Malcolm Decl. ¶ 22. Although termed "commercial," this designation is used to distinguish the type of permit issued. Malcolm Decl. ¶ 22. These operators tend to be small scale, single truck cutters that service local communities and cater to those unable to gather firewood on their own accord (*e.g.* the elderly, disabled, and others who do not have the means to gather their primary source of wood for heating and cooking). Malcolm Decl. ¶ 22. Plaintiff opposes this activity in owl habitat. But, given the explanation above, the Court should allow this activity to proceed regardless of location.

## CONCLUSION

For the reasons outlined above, the Court should alter and modify its judgment.

Dated: October 10, 2019

Respectfully Submitted,

JEAN E. WILLIAMS,
Deputy Assistant Attorney General
SETH M. BARSKY, Section Chief
S. JAY GOVINDAN,
Assistant Section Chief

*/s/ Rickey D. Turner, Jr.*
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*Attorneys for Defendants*

**UNITED STATES DISTRICT COURT**
**FOR THE DISTRICT OF ARIZONA**

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

**Defendants' Exhibit A**

IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF ARIZONA

| | | |
|---|---|---|
| WildEarth Guardians,<br>Plaintiff,<br><br>v.<br><br>U.S. Fish and Wildlife Service, *et al*.,<br>Defendants. | ) | No. CV-13-00151-RCC |

DECLARATION OF SHAULA J. HEDWALL

I, Shaula J. Hedwall, Senior Fish and Wildlife Service Biologist, U.S. Fish and Wildlife Service, Arizona Ecological Services Office, Southwest Region, declare as follows:

1. As a Fish and Wildlife Biologist in the Arizona Ecological Services Field Office, Southwest Region of the U.S. Fish and Wildlife Service ("FWS" or "Service"), I primarily work with fish and wildlife species listed under the Endangered Species Act of 1973 (16 U.S.C. §1531-1544), as amended (ESA). I am the FWS species lead for the Mexican spotted owl and am a member of the Mexican Spotted Owl Recovery Team. I hold a Bachelor of Science degree in Natural Resource Sciences, Wildlife Ecology and Fisheries Science from Washington State University (1993), and a Master of Science degree in Forestry with a Wildlife Ecology emphasis from Northern Arizona University (2000). I have spent almost 20 years working for FWS on ESA issues, including listing and recovery activities pursuant to section 4, recovery activities

pursuant to section 6, section 7(a)(2) interagency consultations, and incidental take permitting pursuant to section 10.

2. I played a significant role in writing the 2012 Biological Opinions (BiOps) for the continued implementation of the Land and Resource Management Plans for the 11 National Forests in Region 3 of the U.S. Forest Service (USFS).

3. I am familiar with the litigation involving the 11 BiOps. I am also aware of recent court orders modifying and clarifying the recent decision in this matter that enjoined forest management activities in six national forests in USFS Region 3. Those national forests are the Carson, Cibola, Gila, Lincoln, Santa Fe, and Tonto National Forests. I will be drafting modifications to those BiOps pursuant to this Court's recent order.

4. Designated critical habitat for the Mexican spotted owl occurs on all of these national forests. Each of these national forests also include Protected Activity Centers (PAC) for Mexican spotted owls. These are areas designated to protect occupied Mexican spotted owl habitat. Most, but not all, of the PACs are within designated critical habitat. We know that some forest management activities, such as mechanical thinning and prescribed burning, occur partially in and partially outside of critical habitat. In those cases, those activities outside of critical habitat could continue without adversely affecting Mexican spotted owls and their critical habitat. By definition, actions conducted outside of owl habitat cannot affect the key habitat components of owl PACs, recovery habitat, or the primary constituent elements of designated critical habitat. Section 7(a)(2) consultation is not required for projects that occur outside of Mexican spotted owl habitat.

5. Removal of forest products for personal use and hazardous tree removal are forest management activities that occur on the six national forests. The ability to allow commercial firewood cutting and gathering is vitally important to communities in Arizona and New Mexico as the upcoming winter season approaches. This activity is limited in scope and scale, meaning that these activities occur in easily accessible areas (near roads) across a relatively small area. Typically, individual operators provide this service to their local communities for those that do not have the means to gather wood necessary for heating and cooking. In addition, hazard tree removal is needed to protect life and property and typically occurs at very small scales (e.g., adjacent to roads, in campgrounds). These activities neither harm Mexican spotted owls nor adversely affect their critical habitat, particularly when conducted outside of PACs, recovery habitat, and critical habitat.

6. The revised and most recently informed 2012 Recovery Plan (USFS 009534 SUP1) and the original 1995 Recovery Plan (R000001) rely on the assumption that PACs (i.e., nest and roost habitat) are important for survival and recovery because without nest/roost habitat, the owls' ability to reproduce, their overall abundance, and distribution may be limited (USFS 009804 SUP1, R000112). Data indicate that PACs (known areas of nesting/roosting owls) provide required habitat features for owls, and owls reside in these areas for long periods. Consequently, the original 1995 Recovery Plan largely recommended minimizing forest management in PACs (for example, the Recovery Team recommended thinning from below and prescribed burning), stating that since we did not understand how best to manage these areas for owls, we should leave them alone. This is largely the strategy that land management agencies followed for about two decades (1995-2012). However, we also know that the risk of high-

intensity, landscape level fire is increasing over time. As a result, we have permanently lost large areas of owl habitat to stand-replacing wildfire, beginning at large scales with the Rodeo-Chediski Fire (2002) in Arizona and continuing with other fires such as the Wallow and Las Conchas Fires (2011), the Whitewater-Baldy Complex (2012), and the Frye Fire (2017). Mexican spotted owls' nest and roost in areas featuring high canopy cover and relatively decadent stands of multi-aged and sized trees. These areas contain relatively continuous canopies and high surface fuel loads, large numbers of snags, and multi-storied stands. These are all features that can predispose these areas to experience stand replacing fire under certain weather conditions, especially extended dry periods accompanied by high winds. Forest managers use mechanical thinning and prescribed burning to reduce fire risk in southwestern forest habitats that Mexican spotted owls need for their survival and recovery. This includes implementing forest management actions in a way that benefits the persistence and resilience of Mexican spotted owl habitat on the landscape. When these forest management activities do not occur adjacent to and/or within habitats we want to maintain on the landscape, such as PACs and designated critical habitat, time and experience has shown that high-severity wildfire will remove these habitats, in some cases permanently, from the landscape. The complete loss of forested owl nest/roost habitat to wildfire will reduce the amount and distribution of this rare resource for owls and continue to affect our ability to recover the owl throughout its range. Continuing to enjoin these activities will lead to less conservation for Mexican spotted owls and their critical habitat.

7. The FWS and MSO Recovery Team developed delisting criteria for the MSO in the Revised Recovery Plan for the Mexican spotted owl (USFS 009540 SUP1). Those criteria are:

a. Owl occupancy rates must show a stable or increasing trend after 10 years of monitoring. The study design to verify this criterion must have a power of 90% (Type II error rate $\beta$ = 0.10) to detect a 25% decline in occupancy rate over the 10-year period with a Type I error rate ($\alpha$) of 0.10.

b. Indicators of habitat conditions (key habitat variables) are stable or improving for 10 years in roosting and nesting habitat. Trends in all key habitat variables must be shown stable or increasing with a power of 90% (Type II error rate $\beta$ = 0.10) to detect a 25% decline over the 10-year period with a Type I error rate ($\alpha$) of 0.10.

Once the FWS can show that these two delisting criteria have been met across the entire range of the owl, the FWS 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 (USFS 009624 SUP1).

8. Besides refining the delisting criteria in the 2012 Revised Recovery Plan, the Recovery Team also proposed using occupancy monitoring to evaluate population trends in the Mexican spotted owl population (USFS 009878 SUP1, Appendix E). Occupancy monitoring is based on mark-recapture theory (USFS 009878 SUP1, Appendix E) and allows for estimating detection probabilities and correcting directly observed estimates of occupancy rates (presence and absence). However, regardless of the methodology used to measure the population trend (i.e., demography or occupancy monitoring), it is essential that we do not conclude the owl population is stable or increasing when it is really declining (this is called a Type II error in statistical hypothesis testing). If we made this error, then the persistence of the owl population could be in jeopardy because we would not take measures to correct the decline because we

assumed it was stable or increasing. Therefore, it is critical that we set a low Type II error rate so we do not infer an erroneous population trend (R000099). Statistical power is the likelihood that a study (such as the owl population monitoring) will detect an effect when there is an effect to be detected. If statistical power is high, the probability of making a Type II error goes down. Statistical power is affected chiefly by the size of the effect and the size of the sample used to detect it. Bigger effects are easier to detect than smaller effects, while large samples offer greater test sensitivity than small samples. This is why the Recovery Team was not certain that 10-15 years (10 years plus 5 years of delisting monitoring) would provide enough data to correctly assess the population trend in 1995 (R000100) and why the Recovery Team set a minimum of 10 years of range-wide population monitoring to meet the revised 2012 delisting criteria (USFS 009624 SUP1).

9. The Recovery Team and FWS estimated that we would need to implement the occupancy monitoring for a minimum of 10 years in order to have the data necessary to assess the Mexican spotted owl population with a reasonably high level of confidence. However, the time needed to determine the population trend (stable, increasing or decreasing) could take longer if we do not meet assumptions built into the monitoring methodology (*i.e.*, if detection probabilities change over time, etc.).

10. The FWS is currently working with the Southwestern Region of the Forest Service, Bird Conservancy of the Rockies (BCR), and the Recovery Team to conduct the population monitoring methodology recommended in the Recovery Plan (USFS 009878 SUP1, Appendix E) on National Forest System (NFS) lands in Arizona and New Mexico. At this time, this Forest Service region-wide population survey work has occurred during the 2014-2019 breeding

seasons (six years). The Southwestern Region of the Forest Service funded BCR to design and implement the monitoring effort at significant expense to the Forest Service. As described above, based upon the monitoring design, we need a minimum of 10 years of data before we can make inferences regarding whether the owl population on NFS lands is stable, increasing, or declining. The Forest Service's funding and implementation of this monitoring on NFS lands is significant to our understanding of the status of Mexican spotted owls on NFS lands in Arizona and New Mexico.

11. Pursuant to 28 U.S.C. §1746, I certify under penalty of perjury that the foregoing is true and correct.

Executed this 10th day of October 2019.

Shaula J. Hedwall

Shaula J. Hedwall
Senior Fish and Wildlife Biologist
Arizona Ecological Services Office
U.S. Fish and Wildlife Service
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Flagstaff, AZ 86001
Phone: 928-556-2118

Defendants' Exhibit B

IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF ARIZONA

| | | |
|---|---|---|
| WildEarth Guardians,<br>Plaintiff,<br><br>v.<br><br>United Fish and Wildlife Service, et. al.,<br>Defendants. | ) | No. CV-13-00151-RCC |

DECLARATION OF KARL MALCOLM

1. I am currently employed by the United States Department of Agriculture, Forest Service, as Regional Wildlife Ecologist for the Southwestern Region ("Region"). I have held this position for five years. In this capacity I act as technical expert for the Region on wildlife monitoring and the impacts of land management actions on wildlife species and their habitats. This includes responsibility for overseeing the Region's ongoing occupancy survey program for Mexican spotted owls ("MSO") and collaborating with the United States Fish and Wildlife Service ("FWS") and broader scientific community to ensure that our land management decisions are guided by sound and current wildlife science. I have reviewed the Court's September 12, 2019 order which denied in part and granted in part plaintiff's and defendant's motions for summary judgment and imposed an injunction on timber management actions in

Region 3 national forests pending completion of formal Endangered Species Act (ESA) §7(a)(2) consultation with the FWS.

2. Based on my knowledge of the ecology of the MSO and its forested habitats in the Southwestern United States, I believe the Court's injunction now halting a variety of timber management activities is being interpreted and implemented in an overly broad manner which is limiting activities in areas not relevant to MSO conservation, and which elsewhere has the potential to be detrimental to the MSO by delaying valuable conservation actions (e.g., prescribed burning) intended specifically to enhance and protect forested habitats important for MSO conservation and recovery. I also seek to transmit information pertaining to our Region's ongoing, Region-wide MSO occupancy survey program, implemented to address population trend monitoring needs established in our Forest Plans, and which will also contribute to the information the FWS needs in order to consider delisting the species as outlined in the 2012 MSO Recovery Plan, First Revision. Finally, I wish to notify the Court of several letters the Region has received from adversely impacted stakeholders who have important perspectives of their own to share on this matter. These letters speak to the foreseeable ramifications of the injunction, which stand to compromise our ability to collaborate in delivering the management actions needed to safeguard the Region's forests, including MSO habitat.

## I. Timber Management Activities Occurring Outside of Critical Habitat and Protected Activity Centers (PACs) Do Not Have Potential to Affect MSO.

3. As currently being implemented, the Court's injunction applies broadly to include timber management activities in forest types that are not relevant to the conservation or recovery of MSO. Critical habitat for the MSO on Federal lands in the Region was designated by FWS in 2004, based on the presence of primary constituent elements related to forest structure. These

elements are, "a range of tree species, including mixed-conifer, pine-oak, and riparian forest types…" (U.S. Fish and Wildlife Service, 2012). Forests devoid of mixed-conifer, pine-oak, or riparian elements are therefore, by definition, not essential for the protection or recovery of the MSO. Actions taken in forested habitats without these elements are not considered by FWS to have potential to adversely affect the MSO.

4. Implementation of timber management in Region 3 is science-based and purposefully directed for the restoration of composition and structure of frequent-fire forests of the Southwest. The intents of timber management activities are to reduce wildfire impacts, provide vibrant habitat for native wildlife species, protect water sources, and safeguard communities. Essentially, timber management actions in the Region equate to vegetation treatments using mechanical methods. Thinning operations reduce forest stocking to improve tree vigor and restore stand resiliency which in turn proactively addresses uncharacteristic disturbance from insects, disease, invasive species, wildfire, and changing climate. Mechanical treatments mimic fire activity by creating openings and spacing within the forest canopy. Mechanical treatments are applied tactically around communities and watersheds in lieu of or in preparation for prescribed fire to manage risk exposure. Mechanical timber management actions are an important tool for landscape restoration efforts in Region 3. In many rural communities in the Southwest, associated forest products industries provide needed jobs and opportunity for the people we serve.

5. The Region currently has 22 timber management projects spanning 12,553 acres entirely outside of MSO critical habitat, recovery habitat, and delineated Protected Activity Centers (PACs). Attachment 1.

6. The Region has an additional 5 timber management projects which are partially outside of MSO critical habitat, recovery habitat, and PACs. Attachment 2. These projects span 3,252 acres in total, of which 2,240 acres are outside of MSO habitat.

7. While most PACs are located within critical habitat, some are not. Any timber management activities occurring in PACs (including actions in those PACs outside of critical habitat) were addressed via separate ESA §7(a)(2) consultation at the project level.

8. Allowing timber management activities to proceed in portions of project areas outside of recovery and critical habitat, outside of PACs, and in PACs where project level consultation has occurred will not pose a threat to MSO.

## II. A Variety of Activities on National Forest System Lands that Require Cutting of Trees are Sufficiently Limited in Scope, Scale, and Timing as to be Insignificant in their Effects on the MSO and its Habitat.

9. The harvest and removal of personal use forest products, the cutting of hazard trees, routine vegetation maintenance for infrastructure (e.g., power lines, recreation sites, trails, etc.), the cutting of the U.S. Capitol Christmas tree, personal Christmas tree cutting, and special product collections by tribes for ceremonial purposes are examples of activities now categorized as timber management activities and thereby subjected to the injunction, but that are so limited in their scope, scale, and timing as to have virtually no significant effect on MSO or its habitat.

10. These activities occur outside of the spring / summer MSO breeding season, with impacts broadly dispersed throughout the National Forest System, often outside of MSO habitat. In contrast to larger scale commercial timber harvesting projects, these activities impact small numbers of trees in limited spatial extents. The products harvested are generally small diameter, and do not constitute key habitat elements for MSO (i.e., large and old trees).

## III. To Delay or Otherwise Limit the Use of Prescribed Burning in the Region is Counterproductive to the Conservation and Recovery of MSO.

11. The 2012 MSO Recovery Plan, First Revision, highlights MSO habitat conversion and loss from large and severe wildfire as a primary threat to MSO conservation and recovery (U.S. Fish and Wildlife Service, 2012).

12. The use of managed low to moderate severity fire, including prescribed burning, is a primary tool available to the Region to safeguard MSO habitat against the negative effects of uncharacteristically large and severe (i.e., stand-replacing) wildfires (Jones et al., 2016; Jones et al., 2019).

13. There are currently 33 prescribed fire projects partially or completely within MSO habitat halted in the region, and another 30 located entirely outside of MSO critical habitat. Attachment 3. Delaying these projects increases the threat of future large and severe fires which undermines our efforts to conserve the MSO and its critical habitat. Allowing these projects to be implemented as quickly as possible is beneficial to the MSO and its critical habitat.

## IV. The Injunction Should Not Apply to Projects with Project-Specific Forest Plan Amendments and Subsequent, Superseding Consultations with FWS.

14. There are projects that have or will have project-specific Forest Plan amendments and consultation with FWS that contain updated MSO standards and guidelines that align with the 2012 MSO Recovery Plan.

15. Currently there are two signed project decisions - the Rio Tusas-Lower San Antonio Landscape Restoration Project (Carson National Forest) and Southwest Jemez Mountains Landscape Restoration Project (Santa Fe National Forest). These projects contain project-specific forest plan amendments for the protection and management of the MSO. The project-

specific Forest Plan amendments update MSO standards and guidelines from their respective Forest Plans for these restoration projects.

16. The FWS reviewed the Rio Tusas-Lower San Antonio Landscape Restoration Project and provided a letter of concurrence.

17. The USFWS reviewed the Southwest Jemez Mountains Landscape Restoration Project and provided a Biological Opinion. Both the Rio Tusas-Lower San Antonio concurrence letter and the Southwest Jemez Mountain Biological Opinion are project specific ESA §7(a)(2) consultations that are not tiered to the 2012 Biological Opinions rendered for the 1996 Forest Plans.

18. The NEPA analyses for both projects updated standards and guidelines to align with the 2012 MSO Recovery Plan. The determinations are based on the biological assessment, the Forest Plan amendments, and are informed by the 2012 MSO Recovery Plan.

19. For the Rio Tusas-Lower San Antonio Landscape Restoration Project, the FWS concurred with the determination of "may affect, not likely to adversely affect" for the MSO. The FWS based their conclusion on the absence of detections for breeding owls on the Tres Piedras Ranger District. Inventories and surveys have occurred within the project area since 1989 and pre-project surveys have not detected MSO. The project area does contain areas of recovery habitat for the MSO. Proposed treatments in recovery habitats are consistent with the management recommendations in the 2012 MSO Recovery Plan, and likely will provide suitable MSO habitat in the future.

20. For the Southwest Jemez Mountains Landscape Restoration Project the FWS provided a Biological Opinion based on the current status of the MSO and its critical habitat, the

environmental baseline for the action area, the effects of the proposed action and the cumulative effects. It was their biological opinion that implementation of the Southwest Jemez Mountains Restoration Project may result in incidental take but will not jeopardize the continued existence of the MSO and will not destroy or adversely modify its designated critical habitat. The Biological Opinion provided reasonable and prudent measures to minimize the effects of take of MSO and terms and conditions to be followed.

21. Excerpts from the project-specific forest plan amendments and associated U.S. Fish and Wildlife Service ESA § 7(a)(2) concurrence letter /Biological Opinion are provided as Attachment 4. Based on the fact that these projects have ESA §7(a)(2) consultations that are not tiered to the 2012 LRMP Biological Opinions in the injunction, these and others that follow this model should be considered for exception from the Court's injunction.

## V. Commercial Firewood Cutting and Gathering is Similar in its Scope and Scale to Personal Use and Should be Given Similar Consideration.

22. Much of the Region's commercial firewood cutting occurs in pinyon/juniper woodland types, outside of mixed-conifer, pine-oak, and riparian forest types (primary constituent elements for MSO). Attachment 5. Although termed "commercial," this designation is used to distinguish the type of permit issued. These operators tend to be small scale, single truck cutters that service local communities and cater to those unable to gather firewood on their own accord (e.g., the elderly, handicapped).

23. The ability to allow commercial firewood cutting and gathering is vitally important to communities as they prepare for the upcoming winter heating season. This activity is limited in scope and scale and is mostly conducted by individual operators that provide this service to

local communities for individuals and families who do not have the means to gather their primary source of wood for heating and cooking. These activities are not substantially different from personal fuelwood gathering from the perspective of MSO conservation and should be considered for exception from the current injunction.

## VI. Region-wide Population Trend Monitoring Program Outlined in the 2012 MSO Recovery Plan is Ongoing and now entering its Seventh Year.

24. 2019 marks the sixth consecutive year of Bird Conservancy of the Rockies (BCR) completing region-wide breeding season occupancy surveys for MSO on behalf of the Region. This work is supported by a recently renewed challenge cost share agreement, through which the Region invests approximately $270,000 annually in addition to my professional time and that of our forest- and district-level biologists who help coordinate monitoring. The Region recently dedicated an additional $270,000 to support the 2020 field season, bringing the total R3 FS cash investment in the program to date to ~$1.9 million.

25. The robust survey methodology being implemented is the product of close collaboration among the Region, BCR, Rocky Mountain Research Station (RMRS), FWS, and the MSO Recovery Team, compliant with the requirement of our Forest Plans and based directly on the recommendations of the 2012 MSO Recovery Plan, First Revision. One square kilometer survey sites randomly distributed throughout suitable MSO habitat (n=289) were surveyed during the initial 2014 field season (149 surveyed twice, 140 surveyed once). In each of the subsequent years approximately 200 sites were surveyed once to twice each year during the MSO breeding season.

26. The multi-year program was designed to provide a reliable metric of the long-term trend in MSO abundance on National Forest System lands in Arizona and New Mexico, and to help inform future the FWS' decisions about possible delisting of the MSO as a threatened species under the Endangered Species Act. The 2012 MSO Recovery Plan, First Revision, identifies the following recovery criteria for consideration in delisting:

- Owl occupancy rates must show a stable or increasing trend after 10 years of monitoring.
- Indicators of habitat conditions (key habitat variables) are stable or improving for 10 years in roosting and nesting habitat.

27. It is premature to draw conclusions about trends in abundance prior to the completion of the 10-year survey program, but probabilities of sites being occupied by MSO increased from 2014 to 2016 and decreased from 2016 to 2018. Year-to-year variation may be linked to differences in precipitation (with wetter years possibly driving up MSO prey availability, thereby fostering greater reproductive output by MSO). Attachment 6.

28. The Region, FWS, and RMRS are exploring the potential to collaborate with the Forest Inventory and Analysis (FIA) Program to develop a strategy for making determinations on the second criterion.

29. The region plans to continue conducting annual surveys through at least 2023 (estimated additional cost ~$810k), which will produce the ten years of trend data consistent with the requirement in our Forest Plans and which will contribute to the information the FWS needs to consider delisting the species in the future.

## VII. As Currently Being Implemented the Injunction Halting Timber Management Activities is Having Dire Consequences on Our Key Partners in MSO Conservation, on Economically Strained Communities, and on Traditional Forest Users.

30. I am aware of seven letters submitted to the Region by concerned entities since the injunction took effect. Those submitting letters represent diverse groups ranging from the New Mexico Forest Industry Association (NMFIA) speaking on behalf of their membership of several hundred small-scale forest restoration practitioners, to a crucial private industry partner that provides much needed employment opportunities in Grants, NM by implementing uneven age silvicultural treatments our forests need (G. Matthew Allen of Mt. Taylor Manufacturing), to non-governmental conservation organizations committed to MSO and forest conservation (Eytan Krasilovsky of Forest Stewards Guild), to forest-dependent traditional communities (Ralph Vigil of the New Mexico Acequia Commission and Juan Sánchez of the New Mexico Land Grant Council), to our Arizona and New Mexico State Foresters (David Tenney and Laura McCarthy). Attachment 7. Key points from the Declaration of Harm letter submitted by NMFIA were reiterated in a recent (October 7, 2019) article published by the Albuquerque Journal titled, "Ban on work in national forests affecting jobs." The article highlights that at least 400 forest-dependent jobs are being affected by the ban, and that NMFIA estimates there will be $9.8 million in lost revenue over six months – mostly in rural areas. Attachment 8.

31. Based on my review of these letters I am deeply troubled by the potential near-term impacts of the injunction on our long-term capacity to partner in implementing MSO conservation actions (i.e., uneven-aged stand management and subsequent managed fire) on the national forests currently enjoined. Simply stated, we cannot be successful in restoring the ecological integrity of our fire-adapted forests at an impactful scale without partners at the state forestry agencies, NGO conservation partners like the Forest Stewards Guild, traditional forest users, and in private industry. I am equally troubled by the plight of members of rural traditional

communities who are physically unable to collect their own fuelwood to stock up for heating and cooking as we enter the fall and winter heating season. It is commonplace for such community members to secure their heating and cooking wood through small scale commercial channels, which can be accomplished without posing a threat to MSO conservation.

32. The concerns, stories, perspectives, and anecdotes conveyed in these seven letters are corroborated and underscored by a mill impact assessment the FS recently completed to better understand the foreseeable consequences of the injunction on a forest restoration industry which operates and persists on already thin margins in our Region. Attachment 9. This assessment indicates that dozens of rural jobs capable of benefiting the ecological integrity of our forests stand to be lost in communities already struggling with unemployment during the months ahead. I believe that building and sustaining this form of capacity for implementing forest restoration treatments is crucial to our success in conserving the MSO.

33. Pursuant to 28 U.S.C. §1746, I certify under penalty of perjury that the foregoing is true and correct.

Executed this 9th day of October 2019.

Karl D. Malcolm, Ph.D.
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# ATTACHMENT 1

Projects Entirely Outside of MSO Critical Habitat, Recovery Habitat and PACs

# ATTACHMENT 1
## Projects Entirely Outside of MSO Critical Habitat, Recovery Habitat, and PACs

| Forest | District | NEPA Project Name | Unit Project Name | Project Type | MSO Habitat (Yes/No) | Total Acres in Project | Total Project Acres Outside Habitat |
|---|---|---|---|---|---|---|---|
| Carson | Tres Piedras | Tio Gordito | Rincon | Timber Sale | No | 362 | 362 |
| Carson | Tres Piedras | Tio Gordito | Tio North | Timber Sale | No | 534 | 534 |
| Santa Fe | Jemez | Southwest Jemez Mountain LRP | East Fork Task Order | Timber Sale | No | 360 | 360 |
| Santa Fe | Jemez | Southwest Jemez Mountain LRP | Falls Task Order | Timber Sale | No | 178 | 178 |
| Santa Fe | Jemez | Southwest Jemez Mountain LRP | Pino West Task Order | Timber Sale | No | 1,219 | 1,219 |
| Lincoln | Smokey Bear | Carrizo Valley Wildlife Habitat and Timber | Carrizo Valley Commercial Fuelwood | Commercial Fuelwood | No | 7 | 7 |
| Santa Fe | Pecos/Las Vegas | Rowe Mesa | Green Commercial Fuelwood | Commercial Fuelwood | No | 200 | 200 |
| Tonto | Payson | Shoofly CE | Houston Commercial Fuelwood sales | Commercial Fuelwood | No | 39 | 39 |
| Carson | Questa | Kiowa San-Cristobal | Taos Vally Watershed Coalition Joint Chiefs | Service Contract | No | 261 | 261 |
| Cibola | Mountainair | Isleta Collaborative Landscape Project | Isleta Participating Agreement | Service Agreement | No | 507 | 507 |
| Santa Fe | Espanola | Pacheco Canyon Forest Resilience Project | Pacheco Canyon Habitat Restoration Project | Service Contract | No | 198 | 198 |
| Santa Fe | Jemez | Southwest Jemez Mountains LRP | San Diego Hand Thin and Pile | Service Contract | No | 90 | 90 |
| Carson | Questa | Kiowa San-Cristobal | Cerro Negro Forest Council CFRP | CFRP | No | 302 | 302 |
| Carson | Questa | Questa-Lama WUI | El Medio CFRP | CFRP | No | 315 | 315 |
| Cibola | Magdalena | Durfee-Bolander Wildlife Habitat Improve | Alamo Navajo CFRP | CFRP | No | 10 | 10 |
| Gila | Wilderness | Upper Mimbres | Gattons CFRP | CFRP | No | 800 | 800 |
| Carson | Tres Piedras | Rio Tusas Lower San Antonio | NMDGF American Creek | State Agreement | No | 412 | 412 |
| Carson | Camino Real | Rio Trampas | RGWF | RGWF Funded | No | 30 | 30 |
| Cibola | Mt Taylor | Horace Mesa | Pueblo of Acoma RTRL | BIA Funded (RTRL) | No | 5,086 | 5,086 |
| Cibola | Sandia | Cedro Landscape Restoration project | New Mexico State Funded (fuels) | State Agreement | No | 650 | 650 |
| Gila | Wilderness | Upper Mimbres | Canyon Tank Pinon Juniper Restoration | State Agreement | No | 350 | 350 |
| Santa Fe | Coyote | Mesa Camino | Mesa Camino | State Agreement | No | 643 | 643 |
| **Total:** | | | | | | **12,553** | **12,553** |

# ATTACHMENT 2

Projects Partially Outside of MSO Critical Habitat, Recovery Habitat and PACs

# ATTACHMENT 2
## Projects Partially Out of MSO Critical Habitat, Recovery Habitat, and PACs

| Forest | District | NEPA Project Name | Unit Project Name | Project Type | MSO Habitat (Yes/No) | Total Acres in Project | Total Project Acres Outside Habitat |
|---|---|---|---|---|---|---|---|
| Santa Fe | Espanola | Hyde Park WUI Thinning and Rx Fire | Hyde Park Hand Thin/Pile | Service Contract | Yes | 536 | 321 |
| Tonto | Payson | Verde EA/Payson EA/Myrtle EA | Myrtle Payson Verde | Service Contract | Yes | 1,404 | 1,254 |
| Carson | El Rito | Aqua Caballos | Chacon CFRP | CFRP | Yes | 423 | 155 |
| Santa Fe | Coyote | Cordovas Forest Resiliency Project | Padilla CFRP | CFRP | Yes | 352 | 192 |
| Carson | Tres Piedras | Rio Tusas Lower San Antonio | RGWF/Cunningham Gulch | RGWF Funded | Yes | 537 | 318 |
| **Total:** | | | | | | **3,252** | **2,240** |

# ATTACHMENT 3

Prescribed Fire Projects

# ATTACHMENT 3 – Prescribed Fire Projects

| Forest | District | NEPA Project Name | Unit Project Name | Project Type | MSO Habitat (Yes/No) | Total Acres in Project | Total Project Acres Outside Habitat |
|---|---|---|---|---|---|---|---|
| Carson | Camino Real | Borrego Mesa Fules Reduction | Borrgeo | RX (Broadcast) | No | 750 | 750 |
| Carson | Canjilon | Canjilon WUI | Mesita | RX (Broadcast) | No | 1,000 | 1,000 |
| Carson | Questa | Kiowa-San Cristobal WUI | Jonit Chifes Piles | RX (Piles) | No | 200 | 200 |
| Carson | Questa | Valle Vidal NE c.e. | Ring unit of the V.V. | RX (Broadcast) | No | 4,700 | 4,700 |
| Cibola | Kiowa | Kiowa Vacant Units | K87, K45E, K43, K21N | RX (Broadcast) | No | 2,400 | 2,400 |
| Cibola | Mt Taylor | Black Mesa | Black Mesa (HSP) | RX (Broadcast) | No | 500 | 500 |
| Cibola | Sandia | David Canyon | David Canyon | RX (Broadcast) | No | 975 | 975 |
| Gila | Black Range | Indian Peaks | Indian Peaks | RX (Broadcast) | No | 10,000 | 10,000 |
| Gila | Black Range | Indian Peaks | Indian Peaks | RX Prep | No | 10,000 | 10,000 |
| Gila | Black Range | Poverty Creek | Poverty Creek WUI | RX (Broadcast) | No | 500 | 500 |
| Gila | Glenwood | District Pile Burn | District Pile Burn | RX (Piles) | No | 33 | 33 |
| Gila | Glenwood | Outlet of Saliz (NEPA in Process) | Outlet of Saliz RX | RX Prep | No | 700 | 700 |
| Gila | Glenwood | Radar Brushy | Radar Brushy | RX (Piles & Broadcast), Me | No | 1,800 | 1,800 |
| Gila | Reserve | Reserve WUI | Air Strip Reserve WUI | RX (Broadcast) | No | 345 | 345 |
| Gila | Reserve | Reserve WUI | Stark Weather | RX (Piles) | No | 60 | 60 |
| Gila | Reserve | Sheep Basin Restoration | Sheep Basin | RX (Broadcast) | No | 1,974 | 1,974 |
| Gila | Reserve | Upper Moraga Landscape | Collins Park | RX (Broadcast) | No | 2,666 | 2,666 |
| Gila | Silver City | Bar 6 | Bar 6 RX | RX (Broadcast) | No | 2,600 | 2,600 |
| Gila | wilderness | Upper Mimbres | 3-Circles WUI | RX (Piles) | No | 50 | 50 |
| Gila | Wilderness | Upper Mimbres | L-T East Rx | RX (Broadcast) | No | 2,700 | 2,700 |
| Gila | Wilderness | Upper Mimbres | Mimbres River West Rx Prep | RX (Broadcast) | No | 5,000 | 5,000 |
| Gila | Wilderness | Upper Mimbres | T-Bird | RX (Broadcast) | No | 129 | 129 |
| Lincoln | Guadalupe | PJ Woodlands | Road 70 | RX (Prep) | No | 75 | 75 |
| Santa Fe | Cuba | La Jara | La Jara Rx | RX (Broadcast) | No | 330 | 330 |
| Santa Fe | Pecos/LV | Rowe Mesa | Rowe Mesa Rx | RX (Broadcast) | No | 4,200 | 4,200 |
| Tonto | Cave Creek RD | Vista Verde Fuels Reduction | Vista Verde RX | RX (Piles), Mechanical | No | 250 | 250 |
| Tonto | Payson RD | Administrative Site | Force Account Thinning | Force Account | No | 26 | 26 |
| Tonto | Payson RD | Payson EA | Payson RX, Track Piles | RX (Piles) | No | 37 | 37 |
| Tonto | Payson RD | Verde EA | Verde RX,Errosion Tank/Caving Unit Piles | RX (Piles) | No | 240 | 240 |
| Tonto | Pleasant Valley RD | Spring CE | Spring RX(Gruwell Canyon Block | RX (Broadcast) | No | 543 | 543 |
| Carson | Camino Real | La Jara HFRA | La Jara | RX (Broadcast) | Yes | 1,200 | 0 |
| Carson | El Rito | Jarita Mesa/ Alamosa | Ensenada | RX (Broadcast) | Yes | 1,250 | 600 |
| Cibola | Magdalena | Baney | Baney Rx | RX (Broadcast) | Yes | 3,000 | 0 |
| Cibola | Magdalena | Corn Canyon | Corn Canyon | RX (Broadcast) | Yes | 4,300 | 3,700 |
| Cibola | Magdalena | Durfee-Bolander | Durfee-Bolander | RX (Broadcast) | Yes | 2,500 | 1,800 |
| Cibola | Magdalena | Fisher | Fisher | RX (Broadcast) | Yes | 8,001 | 0 |
| Cibola | Mountainair RD | Espinoso | Espinoso | RX (Broadcast) | Yes | 600 | 520 |
| Cibola | Mountainair RD | Thunderbird RX | Thunderbird RX | RX (Broadcast) | Yes | 350 | 280 |
| Cibola | Mt Taylor | Bluewater | Copperton Rx | RX (Broadcast) | Yes | 3,600 | 0 |
| Gila | Reserve | BlackDeer/SixShooter | Shooter/Doe Piles | RX (Piles) | Yes | 70 | 0 |
| Gila | Reserve | Buzzard Salvage | Buzzard Piles | RX (Piles) | Yes | 232 | 0 |
| Gila | Silver City | Jaybird | Jaybird RX | RX (Broadcast) | Yes | 2,600 | 260 |
| Gila | Silver City | Signal Peak HFRA | Little Cherry Creek WUI | Force Account | Yes | 60 | 10 |
| Gila | Wilderness | Admin / Upper Mimbres | Hazard Trees | Force Account | Yes | 5 | 4 |
| Gila | Wilderness | Upper Mimbres | District Wide Piles | RX (Piles) | Yes | 100 | 85 |
| Gila | Wilderness | Upper Mimbres | Gattons Park Grassland Restoration | Force Account | Yes | 40 | 0 |
| Lincoln | Sacramento | 16 Springs | 16 Springs | RX (Broadcast) | Yes | 4,000 | 0 |
| Lincoln | Sacramento | Jim Lewis | Lewis | RX Prep | Yes | 500 | 0 |
| Lincoln | Smokey Bear | Gavilan | Gavilan | RX (Piles) | Yes | 600 | 0 |
| Lincoln | Smokey Bear | Perk Grindstone | Perk Grindstone | Rx (Piles) | Yes | 3,600 | 1,500 |
| Lincoln | Smokey Bear | Ski Apache | Ski Apache | RX (Piles) | Yes | 373 | 0 |
| Santa Fe | Coyote | Cordovas | Cordovas Rx | RX (Piles) | Yes | 150 | 75 |
| Santa Fe | Coyote | Rio Chama | La Presa Rx | RX (Broadcast) | Yes | 1,200 | 100 |
| Santa Fe | Cuba | Chaparral | Diego Rx | RX (Broadcast) | Yes | 375 | 0 |
| Santa Fe | Espanola | Borrego | Borrego Mesa Rx | RX (Broadcast) | Yes | 200 | 100 |
| Santa Fe | Espanola | Pacheco | Pacheco Pile Rx | RX (Piles) | Yes | 100 | 50 |
| Santa Fe | Espanola | Santa Fe Watershed | Aztec Springs Rx | RX (Broadcast) | Yes | 350 | 150 |
| Santa Fe | Jemez | Chaparral | Joaquin North Rx | RX (Broadcast) | Yes | 1,600 | 0 |
| Santa Fe | Jemez | Chaparral | Joaquin Piles | RX (Piles) | Yes | 600 | 0 |
| Santa Fe | Jemez | Southwest Jemez | Stable Canyon Rx | RX (Broadcast) | Yes | 1,600 | 0 |
| Santa Fe | Pecos/LV | Gallinas Piles | Gallinas Rx | RX (Piles) | Yes | 500 | 0 |
| Tonto | Tonto Basin RD | Maverick | Maverick RX | RX (Broadcast) | Yes | 4,500 | 2,546 |
| Tonto | Pleaseant Valley RD | Chamberlain EA | Chamberlain RX Frying Pan Unit | RX (Piles) | Yes | 310 | 0 |
| **Total:** | | | | | | **103,249** | **66,563** |

# ATTACHMENT 4

Excerpts From Project-Specific Forest Plan Amendments and Associated Consultation Documents

ATTACHMENT 4

Documentation to support the Determination to continue to harvest timber in project areas on the six enjoined National Forest where NEPA decisions and associated Biological Concurrence/Opinions include revised Forest Plan amendments that incorporate the 2012 MSO recovery plan, and update standards and guidelines for MSO.

Both the Rio Tusas-Lower San Antonio Landscape Restoration Project – Carson National Forest and Southwest Jemez Mountains Landscape Restoration Project – Santa Fe National Forest contain Project Specific Forest Plan Amendments for the protection and management of the Mexican Spotted Owl. These amendments update standards and guidelines from their respective Forest Plans for these restoration projects. The USFWS reviewed the Rio Tusas-Lower San Antonio Landscape Restoration Project and provided a letter of Concurrence. The USFWS reviewed the Southwest Jemez Mountains Landscape Restoration Project and provided a Biological Opinion. These are stand-alone determinations that are post-2012 Biological Opinions that were rendered for the 1996 Forest Plans.

The NEPA analyses for both projects updated standards and guidelines to align with the 2012 MSO Recovery Plan. The determinations are based on the biological assessment, the Forest Plan amendments, and are informed by the 2012 MSO Recovery Plan.

For the Rio Tusas-Lower San Antonio Landscape Restoration Project, the USFWS concured with the determination of "may affect, not likely to adversely affect" for the Mexican spotted owl. The Service based the conclusion on the absence of detections for breeding owls on the Tres Piedras Ranger District. Inventories and surveys have occurred within the project area since 1989 and pre-project surveys have not detected spotted owls. The project area does contain areas of recovery habitat for the Mexican spotted owl. Proposed treatments in recovery habitats are consistent with the management recommendations in the 2012 Mexican Spotted Owl Recovery Plan, First Revision, and likely will provide suitable habitat in the future.

For the Southwest Jemez Mountains Landscape Restoration Project the USFWS provided a Biological Opinion based on the current status of the Mexican spotted owl and its critical habitat, the environmental baseline for the action area, the effects of the proposed action and the cumulative effects, it was their biological opinion that implementation of the Southwest Jemez Mountains Restoration Project may result in incidental take but will not jeopardize the continued existence of the Mexican spotted owl, and will not destroy or adversely modify its designated critical habitat. The Biological Opinion provided reasonable and prudent measures to minimize the effects of take of Mexican spotted owls and terms and conditions to be followed.

**Excerpts - Project Specific Forest Plan Amendments and associated Biological Concurrence/Opinions which include Mexican Spotted Owl determinations post-2012 Forest Plan amendments**

**Rio Tusas-Lower San Antonio Landscape Restoration Project – Carson National Forest**

Environmental Assessment

Purpose and Need section (page 3)

In 2012 the Mexican Spotted Owl Recovery Plan, First Revision was published (USFWS 2012). There is a need for the project activities to be in alignment with the management direction provided in the revised recovery plan. A project-specific plan amendment is needed because the 1986 Carson National Forest Plan, as amended, includes direction from the former (1995) recovery plan. In order to be consistent with the current recovery plan, the proposed plan amendment would:

- Update definitions and direction for protected (protected activity centers (PACs)), recovery habitat, and other forest and woodland types.
- Update language and direction related to prescribed cutting and fire treatments in PACs.
- Add forest structure guidelines for recovery habitat.
- Add direction for riparian forest habitats.
- Update survey information.
- Remove the direction for treating habitat in incremental percentages.

Table 7 A comparison of existing Carson Forest Plan guidelines and proposed project-specific plan amendments (page 19)

| Existing Guideline Language Carson Land and Resource Management Plan (1996 Update) | New Project-specific Guideline Language |
|---|---|
| Mexican spotted owl Standards | Mexican spotted owl Standards |
| Provide three levels of habitat management- protected, restricted, and other forest and woodland types to achieve a diversity of habitat conditions across the landscape (Carson NF Forest Plan, page 87). | Standard: Three levels of habitat management will be provided- protected (protected activity centers (PACs)), recovery habitat and other forest and woodland types. |
| Protected areas include delineated protected activity centers; mixed conifer and pine-oak forests with slopes greater than 40 percent where timber harvest has not occurred in the last 20 years; and reserved lands which include wilderness, research natural areas, wild and scenic rivers, and congressionally recognized wilderness study areas (Carson NF Forest Plan, page 87). | Delete |
| Restricted areas include all mixed-conifer, pine-oak, and riparian forest outside of protected areas (Carson NF Forest Plan, page 87). | Glossary and Background: Recovery habitat is primarily mixed conifer and riparian forest and rocky canyons that are either currently, or have the potential for becoming nest/roost habitat, or provide or could provide foraging, dispersal, or wintering habitats. Nesting/roosting habitat typically occurs either in well-structured forests with high canopy cover, large trees, |

| | |
|---|---|
| | and other late seral characteristics, or steep and narrow rocky canyons formed by parallel cliffs with numerous caves and/or ledges within specific geological formations.<br>Guideline: 25 percent in mixed-conifer of forested recovery habitat should be managed as recovery nest/roost habitat varying by forest type and Ecological Management Unit (EMU) (formerly called Recovery Units).<br>This habitat should be managed to replace nest/roost habitat lost due to disturbance (e.g., fire) or senescence and to provide additional nest/roost habitat to facilitate recovery of the owl. The remainder of forested recovery habitat should be managed for other needs (such as foraging, dispersing, or wintering) provided that key habitat elements are retained across the landscape. |
| Other forest and woodland types include all ponderosa pine, spruce-fir, woodland, and aspen forest outside protected and restricted areas (Carson NF Forest Plan, page 87). | Glossary and Background: Other forest and woodland types include ponderosa pine forest, and pinyon-juniper woodland that are neither restricted or within PACs.<br>Guideline: No specific management is suggested for these habitat types. However, the needs of the owl should be designed to be compatible with the project's desired conditions of moving towards a sustainable and resilient forest at the landscape scale. |
| Survey all potential spotted owl areas including protected, restricted, and other forest and woodland types within an analysis area plus the area ½ mile beyond the perimeter of the treatment area (Carson NF Forest Plan, page 87). | Standard: The survey area shall include all areas where owls or their habitat might be affected by management actions. If an area is relatively large, it can be subdivided into manageable subunits to achieve the best survey results. In general, the survey area shall include the survey area and a 0.5-mile area from its exterior boundaries.<br>Standard: Within the project area, all areas that contain forested recovery habitat, riparian forest, and canyon habitat, or might support owls will be surveyed as defined in the current recovery plan. |
| Establish a protected activity center at all Mexican spotted owl sites located during surveys and all management territories established since 1989 (Carson NF Forest Plan, page 87). | Standard: A 600-acre activity center will be established using boundaries of known habitat polygons and/or topographic boundaries, such as ridgelines, as appropriate. The boundary should enclose the best possible Mexican spotted owl habitat, configured into as compact a unit as possible, with the nest or activity center located near the center. This should include as much roost/nest habitat as is reasonable, supplemented by foraging habitat where appropriate. |
| Allow no timber harvest except for firewood and fire risk abatement in established protected activity centers. For protected activity centers destroyed by fire, windstorm, or other natural disaster, salvage timber harvest or declassification may be allowed after | Standard: The project will be designed to meet or move towards the percent basal area by size class and the minimum density of large trees thresholds displayed in table C.3 of the revised Recovery Plan. |

| | |
|---|---|
| evaluation on a case-by-case basis in consultation with US Fish and Wildlife Service (Carson NF Forest Plan, page 87). | Guideline: Management should sustain or enhance desired conditions for the owl, including fire-risk reduction, as well as monitoring owl presence.<br>Guideline: Protection of PACs may require active management in forested habitat to reduce fuel loads and fuel continuity in areas adjacent to and within these areas to reduce potential for high severity and stand-replacement fires. Treatments should be located strategically and informed by fire behavior modeling across the landscape.<br>Guideline: Selective cutting treatments in some PACs may be needed to achieve objectives. To determine which PACs may benefit from prescribed cutting treatments a landscape-scale analysis should be used to determine where the needs of fire risk reduction and habitat enhancement are greatest. Within the remaining PAC acreage (500+ ac), combinations of prescribed cutting and fire treatments may be used to reduce fire hazard while striving to maintain or improve habitat conditions for the owl and its prey. |
| Allow no timber harvest except for fire risk abatement in mixed-conifer and pine-oak forests on slopes greater than 40 percent where timber harvest has not occurred in the last 20 years (Carson NF Forest Plan, page 87). | Delete |
| Limit human activity in protected activity centers during the breeding season (Carson NF Forest Plan, page 87). | Guideline: Limit human activity in protected activity centers during the breeding season. Management activities should be deferred from the nest/roost core during the breeding season (1 Mar. – 31 Aug.), except where non-breeding is confirmed or inferred that year per the accepted survey protocol in the current recovery plan. |
| In protected and restricted areas, when activities conducted in conformance with these standards and guidelines may adversely affect other threatened, endangered, or sensitive species or may conflict with other established recovery plans or conservation agreements; consult with U.S. Fish and Wildlife Service to resolve the conflict (Carson NF Forest Plan, page 87). | Standard: In protected and recovery habitat areas, when activities conducted in conformance with these standards and guidelines may adversely affect other threatened, endangered, or sensitive species or may conflict with other established recovery plans or conservation agreements; consult with U.S. Fish and Wildlife Service to resolve the conflict. |

## Monitoring (Appendix A)

1. Mexican Spotted Owl (MSO) – Restricted/Recovery Habitat

   a. All potential MSO habitat would be surveyed in treatment areas in accordance with the most recent survey protocol prior to the commencement of implementation. If MSO are detected, we would re-initiate consultation with the USFWS.

   b. Live trees with the potential to provide nesting habitat cavities will be favored for retention.

c. Implement project-specific forest plan amendment guidelines for treatments in MSO protected and recovery habitats.

2. Mexican Spotted Owl – Protected Activity Centers (PACs) Habitat (There are currently no known Mexican spotted owl PACs within the project area. If PACs are discovered, the USFWS would be consulted and measures would be incorporated in compliance with the current Recovery Plan. *Measures a through c are examples of current PAC guidance*)

a. Mexican spotted owl timing restrictions will be applied to management activities within one-quarter mile of PACs. Within these areas, no treatment related activities will occur during the breeding season, from March 1 through August 31.

b. Activities associated with mechanical thinning and broadcast burning would be implemented to minimize effects to MSO within PACs by only treating outside the breeding season and by only allowing prescribed fire with low intensity/low severity in 100-acre nest core areas.

c. Burning proximate to PAC(s) during the breeding season (March 1–August 31) would be conducted in such a manner that only limited smoke would occur within a PAC and smoke would not settle in PACs for long durations having a negligible indirect effect to MSO.

Wildlife Effects analysis for the Modified Proposed Action (page 70) for MSO

Mexican Spotted Owl

…Formal surveys following regional protocol methodologies for the presence of Mexican spotted owl have occurred on large portions of the forest since 1989, including various areas within the project area. No Mexican spotted owls have been documented on the Tres Piedras Ranger District.

…Potential Mexican spotted owl habitat would be surveyed in treatment areas in accordance with the most recent survey protocol prior to the commencement of implementation. If Mexican spotted owls are detected, we would re-initiate consultation with the USFWS. Mexican Spotted Owl.

Additionally, project planning has relied on guidelines for Mexican spotted owl habitat management provided in the current Recovery Plan (USFWS 2012). ... Additionally, the species has not been detected within the project area. Nevertheless, surveys would be conducted in suitable habitat prior to implementation. Mitigation measures would be implemented to minimize potential impacts to Mexican spotted owls, including protections that would be implemented if owls are detected within the project area.

Therefore, the modified proposed action, including the project-specific forest plan amendment, may affect but is not likely to adversely affect the Mexican spotted owl.

There is no designated or proposed critical habitat for the Mexican spotted owl within the project area, therefore, critical habitat for this species would not be impacted by the project. …

U.S. Fish and Wildlife Service. 2012. Mexican Spotted Owl Recovery Plan, First Revision (*Strix occidentalis lucida*). Southwest Region, USFWS, Albuquerque, New Mexico. September 2012.

On July 20, 2017, USFWS conducted informal consultation for the Rio Tusas-Lower San Antonio Landscape Restoration Project. The conclusion for MSO reads:

The Service also concurs with your determination of "may affect, not likely to adversely affect" for the Mexican spotted owl. The Service bases this conclusion on the absence of detections for breeding owls on the Tres Piedras Ranger District. Inventories and surveys have occurred within the project area since 1989 and pre-project surveys have not detected spotted owls. The project area does contain areas of recovery habitat for the Mexican spotted owl. Proposed treatments in recovery habitats are consistent with the management recommendations in the 2012 Mexican Spotted Owl Recovery Plan, First Revision, and likely will provide suitable habitat in the future. Development of habitat for breeding owls will be beneficial to the species. Foraging or dispersing owls may use areas within the action area. However, impacts associated with implementation of the proposed action will likely be insignificant and perhaps discountable. Development of suitable habitat for foraging and dispersing owls will also be beneficial. For the reasons stated, the Service believes the proposed action will result in effects that are beneficial, insignificant, and discountable for the Mexican spotted owl. Designated critical habitat for the Mexican spotted owl is not present in the action area.

**Southwest Jemez Mountains Landscape Restoration – Santa Fe National Forest**

**EIS**

Forest Plan Amendments (p.41)
Forest plan amendments are needed to achieve the purpose and need and to assure consistency with the forest plan. These are site-specific amendments and would apply to this project only. The forest plan would be amended using the 1982 rule procedures as allowed by the transition language of the 2012 planning rule ((36 CFR 219.17(b)(3)).

| **Existing** | **Forest Plan Language** | **Purpose of the Amendment (Reason for Change)** |
|---|---|---|
| In Mexican Spotted Owl Protected Activity Centers: Designate a 100-acre “no treatment” area around the known nest site of each selected protected activity center. (Appendix D – Standards and Guidelines for Management of Mexican Spotted Owl, Northern Goshawk, and Livestock Grazing). | The 2012 Mexican Spotted Owl Recovery Plan allows prescribed fire in the 100-acre no treatment area. | Designate a 100-acre limited treatment area around the identified core area of a protected activity center (PAC). Limited treatment means that only prescribed fire is allowed. |
| In Mexican Spotted Owl Protected Activity Centers: Select for treatment 10% of the protected activity centers where nest sites are known in each recovery unit having high fire risk conditions. (Appendix D – Standards and Guidelines for Management of Mexican Spotted Owl, Northern Goshawk, and Livestock Grazing). | This guidance is in line with the 2012 Mexican Spotted Owl Recovery Plan and allows us to treat all six PACs within the project area and better achieve desired conditions. | Conduct restoration treatments in up to 20% of PACs within each ecosystem management unit (EMU) that exhibits high fire risk conditions. |

| | | |
|---|---|---|
| In Mexican Spotted Owl Protected Activity Centers: Also select another 10% of the protected activity centers where nest sites are known as a paired sample to serve as control areas. (Appendix D – Standards and Guidelines for Management of Mexican Spotted Owl, Northern Goshawk, and Livestock Grazing). | The proposed monitoring was developed in conjunction with USFWS and allows for us to monitor changes but still treat the PACs. | Paired monitoring of PACs will take place within the project area using the existing PACs and separating treatments within PACs by at least two years. This will aid in distinguishing between effects from treatment versus environmental or other influences on Mexican spotted owl. |
| In Mexican Spotted Owl Protected Activity Centers: Use combinations of thinning trees less than 9 inches in diameter, mechanical fuel treatment and prescribed fire to abate fire risk in the remainder of the selected protected activity center outside the 100-acre "no treatment" area. (Appendix D – Standards and Guidelines for Management of Mexican Spotted Owl, Northern Goshawk, and Livestock Grazing) | To meet the desired conditions, we want to be able to cut trees up to 18-inches diameter in PACs, outside of the core area. | Within Mexican spotted owl PACs, use combination of cutting trees less than 18-inches diameter, mechanical fuel removal, and prescribed fire to treat fuel accumulations to abate fire risk. |
| In Mexican Spotted Owl Restricted Areas: The following table displays the minimum percentage of restricted area which should be managed to have nest/roost characteristics. The minimum mixed conifer restricted area includes 10% at 170 basal area and an additional amount of area at 150 basal area. The additional area of 150 basal area is +10% in BR-E and +15% in all other recovery units. The variables are for stand averages and are minimum threshold values and must be met simultaneously. In project design, no stands simultaneously meeting or exceeding the minimum threshold values should be reduced below the threshold values unless a district-wide or larger landscape analysis of restricted areas shows that there is a surplus of restricted area acres simultaneously meeting the threshold values. Management should be designed to create minimum threshold conditions on project areas where there is a deficit of stands simultaneously meeting minimum threshold conditions unless the districtwide or larger landscape analysis shows there is a surplus. (see table 1a below) | Adjusts requirements for nest/roost characteristics in recovery habitat to guidance from the 2012 Mexican Spotted Owl Recovery Plan. | Table C.3 from the revised recovery plan (p. 278) displays the minimum desired conditions for mixed-conifer forest areas managed for recovery nesting/roosting habitat. Manage stands so that a specified portion (25%) of the landscape does not fall below the lower stand condition thresholds in table C.3. Identify and protect stands that meet or exceed nest/roost conditions and then assess whether or not these stands satisfy this area requirement. Stands that do not meet nest/roost conditions and are not designated for development of such can be managed to meet other resource objectives. The environmental analysis for this project is striving for these desired conditions in the recommended amounts at this large spatial scale. see table 1b below) |
| In Mexican Spotted Owl Restricted Areas: Encourage prescribed and prescribed natural fire to reduce hazardous fuel accumulation. Thinning from below may be desirable or necessary before using prescribed fire to reduce ladder fuels and the risk of crown fire. (Appendix D – Standards and Guidelines for Management of Mexican Spotted Owl, Northern Goshawk, and Livestock Grazing) | Remove language specifying the use of thinning from below. This can indicate that only the lowest size classes of trees are removed. Uneven-aged management requires the removal of intermediate size classes as well. | Encourage prescribed and prescribed natural fire to reduce hazardous fuel accumulation. Thinning may be desirable or necessary before using prescribed fire to reduce ladder fuels and the risk of crown fire. |

| | | |
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**Effects Analysis**

Forest Plan Amendments (p. 188)
The other proposed amendments would have beneficial effects on forest stands:
• Allowing prescribed fire in Mexican spotted owl core areas would reduce fire hazard in these areas and allows the positive effects of fire to occur on more acres.

• Allowing more comprehensive vegetation treatments in protected activity centers would reduce fire hazard and allow some restoration activities that would preserve these areas, on more acres.

• Using the direction regarding diameter size and basal area in the revised MSO recovery plan would help us meet the objectives of growing bigger trees faster and reducing fire hazard.

• Removing trees of all sizes instead of thinning from below would allow us to create more balanced, uneven-aged stands by removing small and medium-size trees. …

**Southwest Jemez Mountains Restoration Project Biological Opinion**

Mexican spotted owl and critical habitat
After reviewing the current status of the Mexican spotted owl and its 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 implementation of the Southwest Jemez Mountains Restoration Project 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 conclusion on the following:
1. The project will strive to implement the Recovery Plan (USDI FWS 2012) and manage for Mexican spotted owl recovery on the Santa Fe National Forest.
2. Desired conditions and guidelines in the project recognize the need to reduce the potential for landscape level, stand-replacing fire in mixed conifer forests that the Mexican spotted owl occupies. These efforts to improve forest condition and sustainability should reduce the risk of high severity fire and subsequently, reduce the loss of owl habitat.
3. Based on the discussion provided in the Effects to Mexican Spotted Owl Critical Habitat section above, the CHU affected by the project will continue to serve the function and conservation role of critical habitat for the Mexican spotted owl.

**Amount of Take**
**Mexican Spotted Owl**
For the purpose of evaluating incidental take of Mexican spotted owls from the action under consultation, incidental take can be anticipated as either the direct fatality of individual birds or the alteration of habitat that affects behavior (e.g., breeding or foraging) of birds only temporarily, or to such a degree that the birds are considered lost as viable members of the population and thus "taken." Birds experiencing only temporary or short-term effects may fail to breed, fail to successfully rear young, or raise less fit young; longer-term disturbance may result in owls deserting the area because of chronic disturbance or because habitat no longer meets the owl's needs.

We anticipate that the proposed action is reasonably certain to result in incidental take of Mexican spotted owls. However, it is difficult to quantify the number of individual owls potentially taken because: (1) dead or impaired individuals are difficult to find and losses may be masked by seasonal fluctuations in environmental conditions; (2) the status of the species could change over time through immigration, emigration, and loss or creation of habitat; and (3) the species is secretive and we rarely have information regarding the number of owls occupying a PAC and/or their reproductive status. For these reasons, we will attribute incidental take at the PAC level. This fits well with our current section 7 consultation policy which provides for incidental take if an activity compromises the integrity of an occupied PAC to an extent that we are reasonably certain that incidental take occurred (USFWS 1996). Actions outside PACs will generally not result in incidental take because we are not reasonably certain that Mexican spotted owls are nesting and roosting in areas outside of PACs. We may modify this determination in cases when areas that may support spotted owls have not been adequately surveyed and we are reasonably certain spotted owls are present.

Based upon analyses of the effects of Forest Service projects within previous forest restoration BOs, we anticipate the majority of incidental take for actions implemented under the SW Jemez Restoration Project proposed action will be in the form of short-term harassment. Owls experiencing short-term harassment may fail to successfully rear young in one or more breeding seasons, but will not likely desert the area because of a short-term disturbance (Delaney et al. 1999); harassment is measured as owls taken associated with a specific number of PACs. Incidental take in the form of harm is also anticipated, albeit at a lesser amount than take from harassment and is measured as the number of owls taken. For this project harm would be the direct fatality of individual birds.

There are at least six PACs that could be affected by the project. All PACs will be mechanically thinned and prescribe burned. In addition, other actions associated with riparian, aspen, and meadow restoration will occur in PACs. This work will occur outside the breeding season but based upon the lack of information in the proposed action, it is unclear how habitat may be modified as a result of these other activities.

Using available information as summarized within this document, we have identified conditions of incidental take for the Mexican spotted owl associated with implementation of the Southwest Jemez Mountains Restoration Project. Based upon the potential for incidental take to occur as part of implementation of the project, we anticipate the following incidental take for the proposed action, which is in addition to previously authorized incidental take resulting from ongoing projects or projects that have yet to be implemented:

- We anticipate the take of one pair of Mexican spotted owls and/or associated eggs/juveniles in the form of harassment in up to two PACs due to a single (one breeding season) or short-term (one to three breeding seasons) disturbance (non-habitat altering action that disrupts or is likely to disrupt owl behavior within the PACs) or habitat alteration (e.g., short-term loss of key habitat components) associated with implementation of the proposed action. The disturbance and short-term habitat modification generated by activities associated with the project is likely to interrupt, impede, or disrupt normal behavior patterns to the point that breeding and feeding activities are impacted over the course of one to three breeding seasons. Incidental take is exceeded if owls associated within an individual PAC are harassed over the course of more than three breeding seasons or if owls associated with more than two PACs are harassed in one year as a result of this project. This incidental take tiers to (is included

within) the amount of take anticipated under the 2012 BO for the Santa Fe Land and Resource Management Plan.

- In addition, we anticipate the incidental take of one Mexican spotted owls in the form of harm and/or direct fatality due to vehicular collision over the life of the project. Following the discovery of a fatality, we will re-assess the project with the Forest Service and determine how to reduce future fatality. This incidental take is within the number of owls anticipated to be incidentally taken (harmed) under the 2012 BO for the Santa Fe National Forest Land and Resource Management Plan.

**EFFECT OF THE TAKE**

In this BO, the USFWS determines that this level of anticipated take is not likely to result in jeopardy to the Mexican spotted owl. We have based this determination on the number of PACs with anticipated take from mechanical thinning and burning projects to be implemented under the project that could have short-term adverse effects, but long-term benefits to the Mexican spotted owl, and direct fatality that could occur from vehicular collisions.

**Mexican Spotted Owl and Jemez Mountains Salamander**

The USFWS believes the following reasonable and prudent measures are necessary and appropriate to minimize the effects of take of Mexican spotted owls and Jemez Mountains salamanders.

1. Minimize adverse effects to Mexican spotted owls and Jemez Mountains salamanders affected by the Southwest Jemez Mountains Restoration Project.

2. Minimize adverse effects to Mexican spotted owl and Jemez Mountains salamanders habitat affected by the Southwest Jemez Mountains Restoration Project.

3. Monitor the impacts of mechanical thinning, prescribed burning, and associated actions to the Mexican spotted owl and Jemez Mountains salamander affected by the Southwest Jemez Mountains Restoration Project.

**TERMS AND CONDITIONS**

Mexican spotted owl

The following terms and conditions will implement reasonable and prudent measure 1:

1.1 The Forest Service shall avoid activities within 0.25 mile of PACs during the breeding season (March 1 to August 31) that could result in disturbance to nesting owls. If the Forest Service determines through protocol surveys that spotted owls are not nesting the year of the proposed project or locates a nest and is able to buffer the breeding owls from noise throughout the breeding season, then this restriction would not apply. Other options include documenting topographic buffers in specific PACs or using noise tampering technology to reduce noise impacts.

1.2 Forest Service management activities within PACs and restricted habitat shall be coordinated and implemented to reduce potential disturbance to Mexican spotted owls. For example, where possible, thinning and/or burning activities associated with habitat adjacent to PACs will be coordinated with overall PAC thinning and/or burning activities in order to minimize the frequency and duration of operations within and immediately adjacent to these areas.

1.3 The Forest Service, in coordination with the USFWS, shall develop contingency plans in the event of new PACs being established or PAC boundary modifications due to owl movement or habitat changes. Flexibility shall be built into the project (including task orders) so that as owls

move or new sites are located, project activities can be modified to accommodate these situations.

1.4 The Forest Service shall ensure that all contractors associated with thinning and burning activities, transportation of equipment and forest products, research, or restoration activities are briefed on the Mexican spotted owl, know to report sightings and to whom, avoid harassment of the owl, and are informed as to who to contact and what to do if a Mexican spotted owl is incidentally injured, killed, or found injured or dead on the Santa Fe National Forest. If an owl fatality is discovered, the USFWS Mexican spotted owl lead will be contacted as soon as possible.

1.5 Haul trucks will not exceed 25 miles per hour on Forest Service System Roads in the project area.

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1.5 Haul trucks will not exceed 25 miles per hour on Forest Service System Roads in the project area.

The following terms and conditions will implement reasonable and prudent measure 2:

2.1 The Forest Service shall coordinate management activities within PACs and restricted habitat in order to reduce effects to habitat from multiple entries that can disturb owls and result in adverse effects to habitat.

2.2 The Forest Service shall meet annually with the USFWS to discuss the upcoming year's thinning and burning plans in Mexican spotted owl habitat and review the past year's thinning and burning activities in owl habitats.

The following terms and conditions will implement reasonable and prudent measure 3:

3.1 The Forest Service shall monitor the effects of mechanical thinning and prescribed burning on owl occupancy and reproduction, and key habitat components (as defined in the Revised Mexican spotted owl Recovery Plan, table C.2) in all six PACs. Owl occupancy and reproductive data shall be collected for at least two years prior to treatment and two years post-treatment. Vegetation data should be collected pre-treatment and at defined intervals post-treatment. The specific plan development, selection of PACs, and monitoring framework, shall be developed in coordination with the USFWS (including the Mexican spotted owl lead) and Forest Service District Staff to ensure coordination with other projects and monitoring efforts. This monitoring plan shall be designed and implemented to evaluate the effects of thinning and prescribed fire on owl occupancy and reproduction, and retention of or movement toward desired habitat conditions within PACs.

3.2 The Forest Service shall monitor the impacts of incidental take resulting from implementation of the proposed action and report these findings to the USFWS. Incidental take

monitoring shall include information such as when the project was implemented, whether the project was implemented as proposed and analyzed in this BO (including conservation measures and best management practices), breeding season(s) over which the project occurred, relevant owl survey information, and any other pertinent information about the project's effects on the species.

3.3 Annual reports will describe actions taken under this proposed action and impacts to the owl and its critical habitat. The annual report shall be sent to the New Mexico USFWS Ecological Services field office and the USFWS Mexican spotted owl species lead by March 1st of each year.

Review requirement: The reasonable and prudent measures, with their implementing terms and conditions, are designed to minimize incidental take that might otherwise result from the proposed action. If, during the course of the action, the level of incidental take is exceeded, such incidental take would represent new information requiring review of the reasonable and prudent measures provided. The Forest Service must immediately provide an explanation of the causes of the taking and review with the Arizona Ecological Services Office the need for possible modification of the reasonable and prudent measures.

ATTACHMENT 5

Commercial Firewood Cutting

# ATTACHMENT 5 – Commercial Firewood

| Forest | District | NEPA Project Name | Unit Project Name | Project Type | MSO Habitat (Yes/No) | Total Acres in Project | Total Project Acres Outside Habitat |
|---|---|---|---|---|---|---|---|
| Lincoln | Smokey Bear | Carrizo Valley Wildlife Habitat and Timber | Carrizo Valley Commercial Fuelwood | Commercial Fuelwood | No | 7 | 7 |
| Santa Fe | Pecos/Las Vegas | Rowe Mesa | Green Commercial Fuelwood | Commercial Fuelwood | No | 200 | 200 |
| Tonto | Payson | Shoofly CE | Houston Commercial Fuelwood sales | Commercial Fuelwood | No | 39 | 39 |
| Gila | Glenwood | Radar Brushy | Radar Brushy Commercial Fuelwood | Commercial Fuelwood | Yes | 100 | 0 |
| Gila | Reserve | Burro | Burro Turkey Park Commercial Fuelwood | Commercial Fuelwood | Yes | 172 | 0 |
| **Total:** | | | | | | **518** | **246** |

ATTACHMENT 6

Site Occupancy by Mexican Spotted Owls (*Strix occidentalis lucida*)
in the US Forest Service Southwestern Region, 2018

Attachment 6

# Site Occupancy by Mexican Spotted Owls (*Strix occidentalis lucida*) in the US Forest Service Southwestern Region, 2018

**October 2018**

Bird Conservancy of the Rockies
*Connecting People, Birds and Land*

**Bird Conservancy of the Rockies**
14500 Lark Bunting Lane
Brighton, CO 80603
303.659.4348
www.birdconservancy.org
Technical Report SC-MSO-USFS-05

# The Bird Conservancy of the Rockies

*Connecting people, birds and land*

**Mission**: Conserving birds and their habitats through science, education and land stewardship

**Vision**: Native bird populations are sustained in healthy ecosystems

*Bird Conservancy of the Rockies conserves birds and their habitats through an integrated approach of science, education and land stewardship. Our work radiates from the Rockies to the Great Plains, Mexico and beyond. Our mission is advanced through sound science, achieved through empowering people, realized through stewardship and sustained through partnerships. Together, we are improving native bird populations, the land and the lives of people.*

**Core Values:**

1. **Science** provides the foundation for effective bird conservation.
2. **Education** is critical to the success of bird conservation.
3. **Stewardship** of birds and their habitats is a shared responsibility.

**Goals:**

1. Guide conservation action where it is needed most by conducting scientifically rigorous monitoring and research on birds and their habitats within the context of their full annual cycle.
2. Inspire conservation action in people by developing relationships through community outreach and science-based, experiential education programs.
3. Contribute to bird population viability and help sustain working lands by partnering with landowners and managers to enhance wildlife habitat.
4. Promote conservation and inform land management decisions by disseminating scientific knowledge and developing tools and recommendations.

**Suggested Citation:**

Lanier, W. E., and J. A. Blakesley. 2018. Site Occupancy by Mexican Spotted Owls (*Strix occidentalis lucida*) in the US Forest Service Southwestern Region, 2018. Bird Conservancy of the Rockies. Brighton, Colorado, USA.

**Cover Photo:**

Mexican Spotted Owl by Wendy Lanier.

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**Executive Summary**

The Mexican Spotted Owl (MSO) was listed as threatened under the Endangered Species Act in 1993. A revised recovery plan for MSO was completed in 2012, recommending that the population be monitored via estimating the rate of site occupancy. In August 2013, the US Forest Service Southwestern Region contracted with the Bird Conservancy of the Rockies (formerly the Rocky Mountain Bird Observatory) to refine the site occupancy monitoring protocol recommended in the revised recovery plan, to pilot test the protocol in 2014, and continue monitoring in subsequent years on Forest Service lands in Arizona and New Mexico.

As part of this continued monitoring, we surveyed 198 sites in 2018. These sites were a random subset of sites initially surveyed in 2014 and the same sites surveyed in 2015-2017, except for two sites which were inaccessible due to fire. Of the 198 sites, 163 were surveyed twice. Forest fires and fire-related National Forest closures prohibited us from completing second surveys in 35 sites. However, our data were still sufficient to estimate occupancy and detection probabilities.

We analyzed the data under a multistate occupancy modeling framework. Using this model we were able to estimate the site occupancy probabilities for MSO in 2014-2018 as well as the probability that an occupied site contained a pair of MSOs. The probability of site occupancy increased from 2014 to 2016 and decreased from 2016 to 2018. The conditional probability that an occupied site contained a pair of MSOs remained constant across years.

These models also account for imperfect detection. Detection probability was influenced by ordinal date and wind levels. Unsurprisingly, wind had a negative impact on detection probability. Detection improved as the season progressed in sites with pairs of owls. This is likely due to different behavioral responses of the owls during different stages of the breeding season. We also found that detection probability was higher for pairs than for single owls.

In summary, the sampling frame and survey methods used in 2014 provided the framework needed to continue to monitor site occupancy by Mexican Spotted Owls in the Southwestern Region of the US Forest Service in 2015-2018. This framework may be expanded or adapted for monitoring Mexican Spotted Owls in additional areas of their range. Additional years of data collection will allow us to expand the analysis to answer pertinent questions about what factors drive the occupancy dynamics which will inform management of this sensitive species.

**Acknowledgements**

The implementation of the 2018 field season and the subsequent analysis of the data would not have been possible without the support and assistance of numerous people.

Karl Malcolm of the US Forest Service Southwestern Region was instrumental in securing the funding as well as making sure we had the support we needed throughout the field season. In addition, Karl and the USFS Southwestern Region supported our survey efforts from 2014-2018.

Numerous Forest Service Forest and District Biologists provided logistical support and invaluable local knowledge as well as making sure our crew remained safe during the field season. In addition, many Forest Service personnel ensured that were had the necessary permits and knowledge to continue to survey in areas that were closed due to fire risks.

The 2014-2018 Bird Conservancy Spotted Owl crews successfully collected a tremendous amount of data, often in rugged and remote terrain. Their tireless dedication is what makes this work possible.

In addition, this project would not exist without the vision of the MSO Recovery Team. Current Recovery Team members Bill Block and Joe Ganey of the US Forest Service Rocky Mountain Research Station, and Shaula Hedwall of the US Fish and Wildlife Service provided critical guidance in designing and executing this project, as did Karl Malcolm.

This project was funded by the US Forest Service Southwestern Region under Challenge Cost Share Agreement 12-CS-11132422-188 with Supplemental Project Agreement 17-CS-11031600-041.

## Table of Contents

## Introduction

The Mexican Spotted Owl (hereafter "MSO" or "owl") is one of three subspecies of Spotted Owl. It was listed as threatened under the Endangered Species Act in 1993. In 1995, the MSO recovery team recommended that the population be monitored via multiple demographic studies randomly located throughout the range of the subspecies (USDI FWS 1995). However, this undertaking proved to be logistically impractical and too expensive. A revised recovery plan was completed in 2012 (USDI FWS 2012), which recommended that the population be monitored by estimating the rate of site occupancy across its range within the United States.

The revised MSO recovery plan outlines two criteria for delisting the subspecies: one pertaining to the owl population trend and the other pertaining to the owl's habitat (USDI FWS 2012). This study addresses the first criterion:

> *"Owl occupancy rates must show a stable or increasing trend after 10 years of monitoring*. The study design to verify this criterion must have a power of 90% (Type II error rate $\beta = 0.10$) to detect a 25% decline in occupancy rate over the 10-year period with a Type I error rate ($\alpha$) of 0.10."

Occupancy monitoring tracks the proportion of sites occupied by a target species across a region of interest. It is especially useful because it does not involve capturing/banding of individuals and is much easier to implement. In addition it accounts for imperfect detection. Very rarely are organisms detected perfectly; they are often not observed by researchers even when present in the sampling area. Accounting for imperfect detection improves the accuracy and precision of site occupancy estimates (MacKenzie et al. 2002).

The vast majority of the owls in the United States inhabit land administered by the Southwestern Region of the US Forest Service. In 2013, the Forest Service contracted Bird Conservancy of the Rockies (formerly Rocky Mountain Bird Observatory) to refine and implement the site occupancy monitoring protocol recommended by the recovery plan. A pilot study was conducted in 2014. Based on our experiences and results from that pilot study, we adjusted our sample size and field logistics for subsequent years. We currently have five years of data and are able to estimate occupancy and detection probabilities under a multistate occupancy modeling framework.

### Objectives

The primary objectives were to:

1. Conduct MSO surveys at 200 randomly located sites throughout the US Forest Service Southwestern Region
2. Analyze the 2014 – 2018 data in a multistate framework to
    a. Estimate site occupancy for each year
    b. Estimate the occupancy rates for pairs of MSO's
    c. Estimate trends in occupancy rates

   d. Estimate detection probabilities and understand the factors that influence our ability to detect owls when they are present
3. Provide recommendations for long-term monitoring of the MSO in the Southwestern Region

## Methods

Sampling Area and Design

The geographic area that we sampled in 2018 remained the same as previous years. For details about how we selected our 1 $km^2$ survey sites, see the 2014 report (Blakesley 2015). Based on results from 2014, we concluded that surveying 200 sites annually would meet the Recovery Plan's monitoring objectives. Those 200 sites were a random subsample of the sites that were surveyed in 2014 and were each surveyed in 2015-2017 (Figure 1). We intended to survey each site twice.

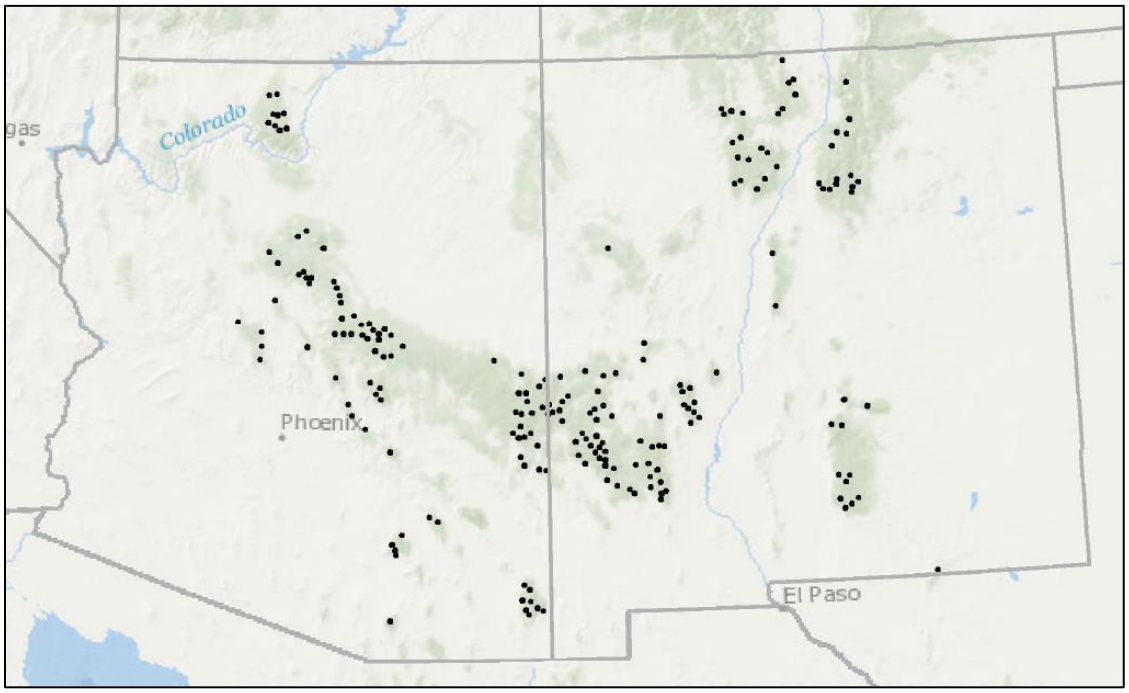


Figure 1. The distribution of sampling units (black dots; *n = 200*) surveyed for Mexican Spotted Owl site occupancy in 2018 in the US Forest Southwestern Region.

Each site contained five predetermined survey points. These points were distributed within the site such that there was one point in the center of the site and one point in each of the four quadrants (Figure 2). This ensured full coverage of the site, assuming that conditions allowed the technician to hear owls 250-300 m away. We encouraged technicians to use their discretion to move the survey points to locations that would improve the reach of their calls (e.g. calling from a ridge top rather than the side of a ridge) or to improve their ability to hear any owls (e.g. moving away from a loud stream). However, our technicians were not to move points more than 100 m from their original location in order to maintain full coverage of the site.

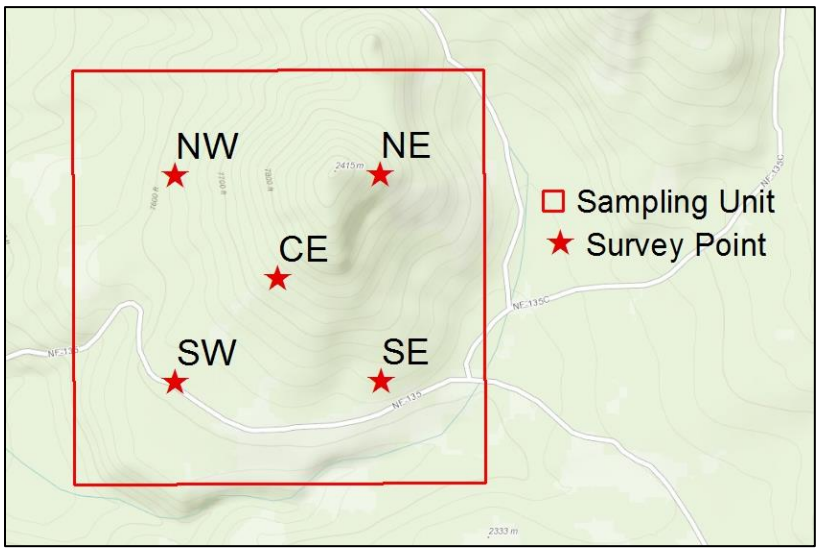


Figure 2. 1-km² sampling unit containing five survey points, used to survey for Mexican Spotted Owl site occupancy in 2014-2018 in the US Forest Southwestern Region.

Survey Protocol

Survey techniques for Spotted Owls are well-established (Forsman 1983). Spotted Owls are territorial and readily respond to vocalizations of other Spotted Owls, whether they are actual owls calling, recordings of owl calls, or human imitations of owl calls.

Technicians navigated to the survey points using a Garmin eTrex 20 Global Positioning System (GPS) and the geographical coordinates of the survey points. Surveys were conducted no earlier than 30 minutes after sunset. At each survey point within a site, technicians broadcasted prerecorded Spotted Owl calls using a FoxPro NX4. Each prerecorded call file contained 10 minutes of calls with a frequency of about 20 seconds of calling and 20 seconds of silence. Following the 10 minutes of calls, technicians listened in silence for five minutes. We used three different call files: one with a mixture of male and female calls, one with female calls only, and one with male calls only. We began surveying a site with the mixed male and female calls. If a MSO was detected, the technician switched to the recordings of the opposite sex owl for the remainder of that point survey and all subsequent point surveys within that site. Technicians continued to call all points within a site until they detected both a male and female MSO within the site. Occasionally one or two points within a site were not called due to safety concerns, high noise levels, or private property. We required a minimum of three points surveyed to consider a site effectively surveyed.

Once a technician detected an owl, that technician recorded the sex, age class, species, and time of detection of the owl. Adult MSO's have a wide variety of calls whereas juveniles only make a unique begging call, thereby allowing us to differentiate between adults and juveniles. Adult female MSO's have a higher pitched call and this difference in pitch can be used to determine the sex of the calling owl. For other owl species, age and sex were not so easily determined and were recorded as "unknown." The technician then took a compass

bearing towards the owl and estimated the distance to the owl. The technician plotted the bearing and distance on a map and used that to estimate the location in Universal Transverse Mercator (UTM) coordinates of the owl. Occasionally, the technicians were able to walk to where the owl was and then use their GPS units to record more precise coordinates of the owl.

Technicians also collect data on wind (using the Beaufort scale) and noise levels at each call point. For more details regarding our survey protocol and data collection, see Appendix A and Appendix B.

Analysis

Per the MSO recovery plan (USDI FWS 2012), we collected and analyzed our data in an occupancy framework (MacKenzie et al. 2006). In this occupancy framework, the main focus is determining presence or absence of owls in the sample sites. We analyzed the 2014-2018 data using multistate occupancy models (Nichols et al. 2007). The multistate model affords a straightforward way to estimate the rate of occupancy across multiple years as well as analyze a trend in those estimates. This directly supports the goals of the MSO recovery plan. In addition, it allows us to estimate the probability that an occupied site is characterized by additional state variable (e.g. reproductive or social status). In our analysis, we defined this additional state variable as the probability that an occupied site contains a pair of owls, which has strong implications for potential population growth. These probabilities are described by the parameters $\psi_{it}^{1}$ and $\psi_{it}^{2}$ (Table 1).

Like most recently developed occupancy models, this model also accounts for imperfect detection. The probability of detection is described by two parameters, $p_{ij}^{1}$ and $p_{ij}^{2}$, differentiated by the occupancy state of the site (Table 1). In addition, the model allows for misclassification of the state variable of interest (in our case, pair occupancy). This probability that an observer would correctly classify the occupancy state (i.e. detect both owls in a site occupied by a pair) is defined by the parameter $\delta_{ij}$ (Table 1).

Table 1. Parameters estimated by the multistate model of site occupancy by Mexican Spotted Owls in the US Forest Southwestern Region, 2014-2018.

| Parameter[1] | Definition |
|---|---|
| $\psi_{it}^{1}$ | Probability that site *i* is occupied in year *t* regardless of whether or not there is a pair of owls present |
| $\psi_{it}^{2}$ | Conditional probability that site *i* contains a pair of owls, given that is occupied in year *t* |
| $p_{ij}^{1}$ | Probability that occupancy is detected for site *i* during survey *j*, given that the site does not contain a pair of owls |
| $p_{ij}^{2}$ | Probability that occupancy is detected for site *i* during survey *j*, given that the site contains a pair of owls |
| $\delta_{ij}$ | Probability that the pair of owls is detected in site *i* during survey *j* |

[1] In some previous reports we used the parameter notation of MacKenzie et al. (2009); in this report we are using the notation of Nichols et al. (2007).

We can also use the parameters estimated by the model to derive other occupancy parameters of interest such as site occupancy probability for pairs not contingent on occupancy status as well as the site occupancy probability for single owls. The unconditional probability that a site is occupied by a pair of owls for a given year is calculated as:

$$\psi_{it}^{pair} = \psi_{it}^{1} * \psi_{it}^{2}.$$

The probability that a site is occupied by only a single owl is:

$$\psi_{it}^{single} = \psi_{it}^{1} - (\psi_{it}^{1} * \psi_{it}^{2}).$$

Even though this model is structured for data from a single season, we can get year-specific estimates by treating year as a group in the analysis. Thus, we can analyze the overall trend in occupancy as mandated by the recovery plan. Therefore the data contained one season but five groups for each of the years from 2014-2018. Because a third survey was conducted in several sites in 2015, the data contained three survey periods within a season. For sites in which a third survey was not conducted in a given year, which was often the case, a "." denoted the lack of the survey for that period. The model is capable of handling such missing data.

Model Formation and Selection

We considered models that varied in their structures for the occupancy and detection probability parameters. We considered structures where the two occupancy probability parameters, $\psi_{it}^{1}$ and $\psi_{it}^{2}$, varied by year, were fit to linear trend, or fit to a quadratic trend (Table 2). We included the trend structures because estimating trends in this population is the ultimate goal of this work as outlined in the MSO 2012 Recovery Plan. We did not

model trends in occupancy prior to 2018 because < 5 years of data were insufficient to make meaningful inferences about trends.

Table 2. Candidate structures for each occupancy parameter and candidate covariates for each detection parameter in the analysis of multistate site occupancy by Mexican Spotted Owls in the US Forest Southwestern Region, 2014-2018. Date refers to the ordinal date of the survey. Wind and noise refer to the conditions during the survey. We fit all possible combinations of the detection covariates to the three detection parameters including a null model with no covariates.

| **Site Occupancy** $\psi_{it}^{1}$ | **Pair Occupancy** $\psi_{it}^{2}$ | **Detection Probability** $p_{ij}^{1}$, $p_{ij}^{2}$ and $\delta_{ij}$ |
|---|---|---|
| year | year | year |
| linear trend | linear trend | date |
| quadratic trend | quadratic trend | year*date |
| null | null | noise |
| | | wind |
| | | null |

We investigated multiple covariates that may have impacted detection probability by modeling effects of year, ordinal date, noise, wind and an interaction between year and date (Table 2). In addition, we considered a null structure in which detection probability was the same across all surveys. Variation in detection probability by year could reflect annual differences in owl behavior due to population-wide variation in nesting rates. Alternatively, there may have been heterogeneity in detection probability due to possible differences in ability of each year's crew. Ordinal date may impact detection probability as a result of within-season shifts in the owls' vocal or territorial behavior as the breeding season progresses from courtship to nesting to fledgling stages. Detection probability may have also improved with technician ability as experience was gained during each field season. The timing of behavioral shifts may have varied among years due to the different weather conditions or overall nesting rates each year. Therefore, we included an interaction between year and ordinal date to account for this potential difference. Wind and noise were both modeled as an average of the conditions at each call point within a site during a given survey, and could have impacted our ability to hear calling owls. We modeled all additive combinations of these four covariates as well as the interaction of year and date for each of the detection probability parameters.

We took a step-wise approach to model formation (Doherty et al. 2009). First, we determined the most supported structure for each detection parameter. During this step, we fit all possible structures to one detection parameter at a time while holding the other detection parameters and occupancy parameters at their most parameterized structure (i.e. allowing the occupancy probabilities to vary by year and allowing the other detection probabilities to vary by wind, noise, and the interaction of year and date). We used Akaike's Information Criterion adjusted for sample size ($AIC_c$) to rank the models and determine the most supported structure for each detection parameter (Burnham and Anderson 2002). Using the most supported structure for each detection parameter, we then fit models with all possible structures for the occupancy probability parameters and ranked them using $AIC_c$. This step-wise approach required fitting a total of 76 models as opposed to the

128,000 models that would have resulted from an "all possible models" approach. We fit these models to the MSO data from 2014 - 2018 using Program MARK (White and Burnham 1999).

## Results

### 2018 Summary

We conducted 361 surveys in 198 sites. All 198 sites received at least one survey. We were unable to access two of our sites due to a wildfire that started early in the field season. In addition, fire, fire-related closures, and the thunderstorms of the monsoon season prohibited us from conducting a second survey in 35 sites. We detected owls during 138 surveys in 91 sites.

### Multistate Occupancy Model

*Detection Probabilities*

The model selection results from the first step of our analysis showed that wind and ordinal date were important covariates for the detection probabilities. Wind was in the top structure for $p_{ij}^1$ and $p_{ij}^2$ and ordinal date was in the top structure for $p_{ij}^2$ and $\delta_{ij}$ (Table 3).

Table 3. Most supported structures for the three detection probability parameters for Mexican Spotted Owls as determined by initial step of the 2014-2018 occupancy analysis. We fit models using a logit link function and estimates for the $\beta$ coefficients, including the intercept, $\beta_0$, are presented along with their standard errors in parentheses. Estimate are from the most parsimonious model from the second step of the analysis.

| Parameter | Top Structure | $\beta_0$ (SE) | $\beta_{wind}$ (SE) | $\beta_{date}$ (SE) |
|---|---|---|---|---|
| $p_{ij}^1$ | wind | 0.501 (0.399) | -0.649 (0.246) | -- |
| $p_{ij}^2$ | wind + date | 0.419 (0.606) | -0.472 (0.118) | 0.013 (0.004) |
| $\delta_{ij}$ | date | -0.354 (0.596) | -- | 0.014 (0.004) |

Detection probabilities increased with increasing date and decreased with increasing wind (Table 4; Figures 3 and 4). Detection in sites occupied by a pair, $p^2$, was considerably higher than in sites occupied by single owls, $p^1$. However there was little difference between $p^2$ and $\delta$ (Table 4).

Table 4. Parameter estimates for the different detection probabilities estimated by the most parsimonious single season multistate model of site occupancy by Mexican Spotted Owls in the US Forest Southwestern Region, 2014-2018. Estimates are presented for the average values of the covariates of date and wind. Standard errors appear in parentheses. Parameter definitions appear in Table 1.

| | Survey 1 | Survey 2 | Survey 3 |
|---|---|---|---|
| $p^1$ | 0.415 (0.069) | 0.431 (0.069) | 0.528 (0.078) |
| $p^2$ | 0.803 (0.021) | 0.881 (0.019) | 0.929 (0.017) |
| $\delta$ | 0.803 (0.023) | 0.881(0.021) | 0.911 (0.022) |

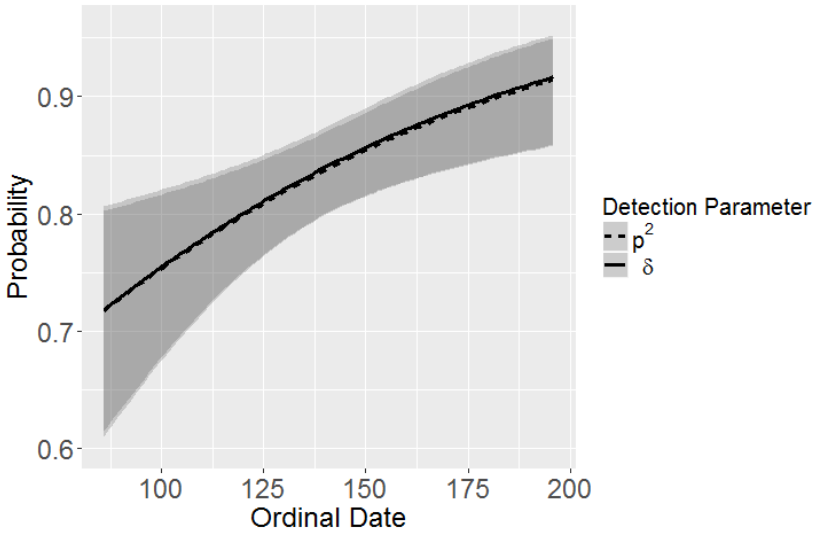


Figure 3. The relationship between date and $p^2$ and $\delta$ as estimated by the most parsimonious model of site occupancy by Mexican Spotted Owls in the US Forest Southwestern Region, 2014-2018. The shaded regions represent 95% confidence intervals around the estimate. The ordinal date of April 1 is 100. Delta ($\delta$) is the probability that a pair of owls is detected given that the site contains a pair and $p^2$ is the probability that occupancy (i.e. at least one owl) is detected given that the site contains a pair of owls. There was little support for an effect of date on $p^1$ so it is not presented here.

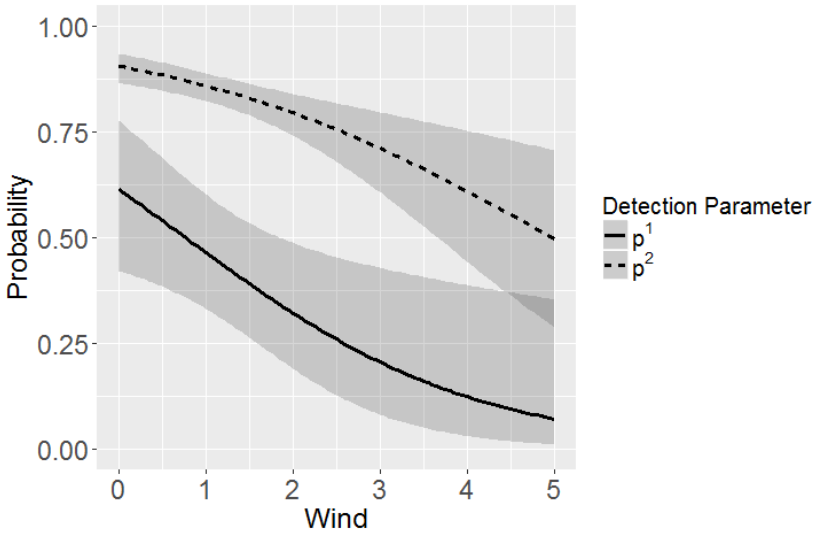


Figure 4. The relationship between wind conditions during a survey and $p^1$ and $p^2$ as estimated by the most parsimonious model of site occupancy by Mexican Spotted Owls in the US Forest Southwestern Region, 2014-2018. The shaded regions represent 95% confidence intervals around the estimate. $p^1$ is the probability that occupancy is detected given that the site does not contain a pair of owls and $p^2$ is the probability that occupancy is detected given that the site contains a pair of owls. There was little support for an effect of wind on $\delta$ so it is not presented here.

*Occupancy Probabilities*

From the second step of modeling, of the 16 models we fit that contained all possible combinations of structures for the two occupancy probabilities, two had a $\Delta AIC_c$ less than two and were considered the top models (Table 5). The most parsimonious model ($AIC_c$ weight = 0.379) contained a quadratic trend on site occupancy, $\psi_{it}^1$, and showed no annual change in the conditional probability that an occupied site contained a pair of MSOs, $\psi_{it}^2$. Because the most parsimonious model was a subset of the second-most parsimonious model, we present estimates from the top model (Burnham and Anderson, 2002).

Table 5. Multistate models of site occupancy by Mexican Spotted Owls in the US Forest Southwestern Region, 2014-2018. Log ($L$) is the log-likelihood, $K$ is the number of parameters, $\Delta AIC_c$ is the difference in Akaike's information criterion from the top model, and $w_i$ is the model weight. "Quad" indicates a quadratic trend in occupancy, "linear" indicates a linear trend in occupancy, "year" indicates that occupancy was estimated separately for each year, and "." indicates that occupancy was estimated to be the same across all years.

| Model | log ($L$) | $K$ | $\Delta AIC_c$ | $w_i$ |
|---|---|---|---|---|
| $\psi^1$ (quad), $\psi^2$ (.), $p^1$(wind), $p^2$(date + wind), $\delta$(date) | -1561.020 | 11 | 0.000 | 0.379 |
| $\psi^1$ (quad), $\psi^2$ (quad), $p^1$(wind), $p^2$(date + wind), $\delta$(date) | -1563.390 | 13 | 1.293 | 0.198 |
| $\psi^1$ (year), $\psi^2$ (.), $p^1$(wind), $p^2$(date + wind), $\delta$(date) | -1563.795 | 13 | 2.103 | 0.132 |
| $\psi^1$ (quad), $\psi^2$ (linear), $p^1$(wind), $p^2$(date + wind), $\delta$(date) | -1562.993 | 12 | 2.210 | 0.126 |
| $\psi^1$ (year), $\psi^2$ (quad), $p^1$(wind), $p^2$(date + wind), $\delta$(date) | -1566.155 | 15 | 3.473 | 0.067 |
| $\psi^1$ (year), $\psi^2$ (linear), $p^1$(wind), $p^2$(date + wind), $\delta$(date) | -1565.769 | 14 | 4.363 | 0.043 |
| $\psi^1$ (quad), $\psi^2$ (year), $p^1$(wind), $p^2$(date + wind), $\delta$(date) | -1567.078 | 15 | 5.319 | 0.027 |
| $\psi^1$ (.), $\psi^2$ (quad), $p^1$(wind), $p^2$(date + wind), $\delta$(date) | -1564.679 | 17 | 7.317 | 0.010 |
| $\psi^1$ (linear), $\psi^2$ (quad), $p^1$(wind), $p^2$(date + wind), $\delta$(date) | -1565.694 | 11 | 7.612 | 0.008 |
| $\psi^1$ (year), $\psi^2$ (year), $p^1$(wind), $p^2$(date + wind), $\delta$(date) | -1570.085 | 12 | 8.087 | 0.007 |
| $\psi^1$ (.), $\psi^2$ (year), $p^1$(wind), $p^2$(date + wind), $\delta$(date) | -1568.073 | 13 | 10.658 | 0.002 |
| $\psi^1$ (linear), $\psi^2$ (year), $p^1$(wind), $p^2$(date + wind), $\delta$(date) | -1569.157 | 14 | 11.140 | 0.001 |
| $\psi^1$ (linear), $\psi^2$ (.), $p^1$(wind), $p^2$(date + wind), $\delta$(date) | -1567.015 | 10 | 13.749 | 0.000 |
| $\psi^1$ (linear), $\psi^2$ (linear), $p^1$(wind), $p^2$(date + wind), $\delta$(date) | -1568.999 | 11 | 15.958 | 0.000 |
| $\psi^1$ (.), $\psi^2$ (.), $p^1$(wind), $p^2$(date + wind), $\delta$(date) | -1567.310 | 9 | 16.122 | 0.000 |
| $\psi^1$ (.), $\psi^2$ (linear), $p^1$(wind), $p^2$(date + wind), $\delta$(date) | -1569.040 | 10 | 17.799 | 0.000 |

Overall site occupancy ($\psi^1$) increased from 2014 to 2016 ($\psi^1_{2014}$= 0.423, SE=0.037; $\psi^1_{2015}$= 0.574, SE=0.029; $\psi^1_{2016}$= 0.638, SE=0.032) then declined between 2016 and 2018 ($\psi^1_{2017}$= 0.620 SE=0.029; $\psi^1_{2018}$= 0.518 SE=0.041; Figure 5).

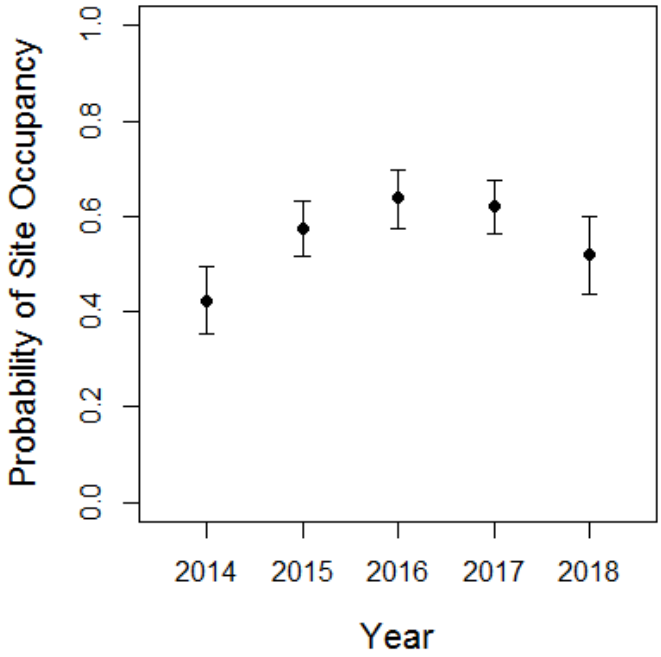


Figure 5. Estimated probability of site occupancy by Mexican Spotted Owls in the US Forest Southwestern Region, 2014-2018. Error bars represent 95% confidence intervals.

The probability that an occupied site contained a pair of owls was constant in the most-parsimonious model and estimated at 0.756 (SE=0.034). However, the unconditional probabilities that a site was occupied by a single owl or a pair of owls followed the same quadratic pattern as the overall site occupancy (Table 6).

Table 6. Derived unconditional probabilities of site occupancy, $\psi_{it}$, by social status (single or pair) by Mexican Spotted Owls in the US Forest Southwestern Region, 2014-2018. Estimates were derived from parameter estimates from the most-parsimonious model. Standard errors appear in parentheses. Parameter definitions appear in Table 1.

| | t=2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|
| $\psi_{it}^{single}$ | 0.103 (0.019) | 0.140 (0.024) | 0.156 (0.026) | 0.151 (0.025) | 0.126 (0.023) |
| $\psi_{it}^{pair}$ | 0.319 (0.027) | 0.434 (0.022) | 0.482 (0.025) | 0.469 (0.023) | 0.392 (0.031) |

## Post-hoc Analysis and Results

Analysis

The first year of the project, 2014, was the pilot year when the necessary sample size was unknown. In that year we surveyed 276 sites, the final 200 sites would become a subset of these sites. The estimated occupancy probability in 2014 was considerably lower than subsequent years so we wanted to determine if the occupancy estimates we observed from 2014 were valid or an unintended artifact of the additional sites in the pilot season.

To do so, we removed the data from the sites that were surveyed in 2014 but not the subsequent years from the dataset. In theory, the larger sample size in 2014 should not impact the results due to the random sample in all years. However, we deemed it worth exploration. We applied the same model formation and selection methods as previously described to the data from just the final 200 sites and compared the occupancy estimates.

Results

Reducing the data to just the final 200 sites did not greatly impact model selection results or the occupancy estimates (Table 7). The top models with $\Delta AIC_c < 2$ remained the same between the two analyses, as did the most parsimonious model. Both occupancy probabilities increased slightly with this reduced dataset. However the estimates from the different analyses are within one standard error of one another and overall site occupancy ($\psi^1$) in 2014 is still relatively low compared with the subsequent years.

Table 7. Parameter estimates of the 2014 occupancy probability from the most-parsimonious model for each analyses. "Original analysis" refers to the analysis of the data presented in the result section. "Final 200 sites analysis" refers to the same analysis but using only the data from the 200 sites surveyed in all five year. Standard errors are presented in parentheses.

| Occupancy parameter | Original analysis | Final 200 sites analysis |
|---|---|---|
| $\psi^1$ | 0.423 (0.037) | 0.454 (0.042) |
| $\psi^2$ | 0.756 (0.034) | 0.759 (0.034) |

After exploring this possible reason for the low occupancy we observed in 2014, we conclude that the estimates for occupancy in 2014 from our original analysis are reflective of the true occupancy in that year rather than an unintended effect of the pilot season.

## Discussion

The data indicate that site occupancy by Mexican Spotted Owls increased from 2014 to 2016 and decreased from 2016 to 2018. Additional analyses using annual owl reproductive data collected by US Forest Service and other biologists may elucidate whether the observed changes reflect variation in recruitment of young owls into the territorial population. Furthermore, favorable weather has been shown to influence adult survival as well as reproductive output of Mexican Spotted Owls (Seamans et al. 2002). In the future we will be able to add weather covariates to our analyses. The multistate occupancy modeling framework will allow us to continue to monitor the site occupancy rates as well as parameters of biological interest such as the probability of pair occupancy.

The estimates for the different detection probabilities highlight the different behaviors of single owls verses paired owls. The detection probability for sites with single owls, $p^1$, was lower than for sites with a pair, $p^2$. This follows a similar pattern we found in the prior analyses (Lanier and Blakesley 2015, 2016, 2017) and is likely caused by one or more of the following factors. First, a single owl detected in one survey may have been a transient that was unavailable for detection in the other survey. In this case, the owl's presence could

be considered "use" rather than "occupancy" because occupancy assumes that the owl was available for detection in both surveys. Secondly, nonbreeding owls might have larger home ranges (Willey and van Riper 2007) and therefore an owl might not be spatially available for detection during both surveys even if its home range encompassed the survey site. Also, without a breeding territory to defend, a single owl may be less likely to respond to our calls. Lastly, sites occupied by a single owl, by definition, have fewer owls available to respond and be detected than sites with a pair. Therefore, the opportunities for technicians to hear an owl are greater in sites occupied by a pair.

The multistate analysis showed that the probability of detecting both members of a pair in sites occupied by a pair, $\delta$, was very high. Therefore, we were highly likely to detect both members of that pair. There was a low probability of nondetection in sites occupied by a pair ($1\text{-}p^2$) and a similarly low probability of missing one member of a pair ($1\text{-}\delta$).

The decrease in detection probability with increasing wind is intuitive. High wind can make it difficult for observers to hear the owls or for the owls to hear calls broadcasted by the observers. In addition, there could also be a behavioral reason for the low detection during higher winds. Owls might be less likely to respond and exert energy if the wind is coupled with cold temperatures.

The increase in detection probability with increasing date could be due to differential owl response rates during different stages of the breeding season. Owls might be more or less territorial or willing to reveal their location during different stages of the breeding season (e.g. pre-nesting, nesting, dependent fledglings, etc.). This hypothesis is supported by the fact that our model selection did not select date as an important factor for detecting single birds, which are not actively breeding.

It is also encouraging that the effect of year was not an important factor for detection probability. Therefore, the different makeup of each year's crew does not create heterogeneity in detection probability from year to year. This is likely due to our thorough training, relative simplicity of our survey methods, and cooperative nature of Spotted Owls to broadcast surveys.

Some of our previous reports on this project included a multistate robust design occupancy analysis, which estimated local extinction and colonization probabilities (Lanier and Blakesley 2015 and 2016, MacKenzie et al. 2009). We chose to not include that analysis in this report. On their own, the dynamic parameters of extinction and colonization probability do not offer much more insight into the population than the occupancy estimates that we provide in this report. However, these dynamic parameters could be used in conjunction with habitat and climate covariates in future analyses to determine what drives colonization and local extinction. We are currently developing this analysis and look forward to sharing its results.

With each subsequent year, we amass more valuable data on MSO occupancy. This rich dataset is capable of much more than trend analysis as prescribed by the Recovery Plan. Some potential directions we believe would be of interest to the MSO Recovery Team and land managers within the MSO range include:

1. Using habitat and climate covariates along with a multistate robust design occupancy model to determine what factors contribute to
    a. occupancy of sites, and
    b. local extinction and colonization of sites.
2. Using MSO reproductive data collected by USFS biologists and others in Region 3 as a covariate in analyses to determine
    a. how much variation in site occupancy can be attributed to reproductive output in previous years, and
    b. whether annual reproductive rates influence detection probability.
3. Separating the "single" state into "single male" and "single female" to better understand the behavior and ecology of single owls.
4. Using the data we collect on other owl species during surveys to examine interspecific influences on occupancy and detection of MSO's, especially the influence of Great Horned Owl presence on MSO's.
5. Continue to explore the efficacy of deploying autonomous recording units at existing survey sites to determine whether acoustic monitoring will be useful in supplementing or replacing broadcast surveys.

This fifth year of monitoring continued to demonstrate the ability of the current sampling design and methods to achieve the monitoring goals set out in the 2012 MSO Recovery Plan. We recommend that the Forest Service continue monitoring under the current framework so that we can continue to gain more knowledge about the annual variation in site occupancy by Mexican Spotted Owls. This framework can be expanded to include other areas of the Mexican Spotted Owl's range.

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## Appendix A. Mexican Spotted Owl Broadcast Survey Protocol

Bird Conservancy of the Rockies is conducting broadcast surveys for the purpose of estimating occupancy rates and monitoring trends in occupancy rates of the Mexican Spotted Owl on all National Forests in Arizona and New Mexico (USFS Region 3). This project is required under the Mexican Spotted Owl Recovery Plan, First Revision (2012).

The sampling locations were selected using a spatially-balanced sampling algorithm (Generalized Random-Tessellation Stratification), and were essentially a random sample of locations within a sampling frame of potentially suitable Mexican Spotted Owl habitat. It is essential to the validity of the monitoring program that all selected sites are surveyed unless they are unsafe to survey.

Sampling locations (sites) consist of 1-km$^2$ areas. Each site contains 5 survey points, with one point in the center of the site and one point in the center of each quarter of the site, named according to their location (Figure 1).

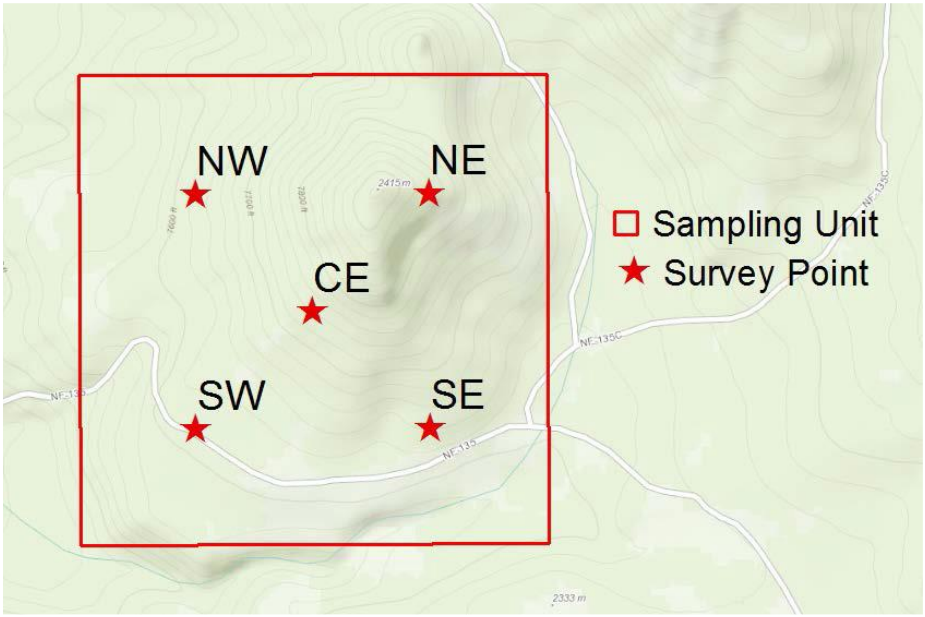



Figure 1. 1-km$^2$ square sample site containing 5 survey points.

Field technicians will have topographic maps and UTM coordinates of each survey point in their GPS units. Field technicians may use their discretion to move survey points to avoid trespassing on private property, to take advantage of local topography and/or to avoid unsafe terrain; for example, to call from a ridge rather than the side of a slope. In general, call points should not be move more than 100 meters. Field technicians must record the UTMs of the actual location from which they surveyed. A survey point within a site may be skipped if the point lies on private property more than 100 m from Forest Service land or if the technician has concerns about their personal safety (i.e. if the terrain is too dangerous). Safety is of the highest concern; the second highest is conducting thorough and complete surveys.

Surveys are to be conducted no earlier than 30 minutes past sunset (note: the GPS units can be used to determine the exact time of sunset). Each field technician will have a FoxPro NX4 broadcast device to use during surveys. The units contain various recordings of male and female spotted owl calls, with approximately 20 seconds of calls followed by 20 seconds of silence, for 10 minutes. Technicians are to listen for spotted owl responses throughout the survey period. Following the 10 minutes of intermittent calls, the technician will listen for owl responses for 5 additional minutes; the entire time spent at each survey point is 15 minutes (unless a spotted owl responds; see below).

Objectives are to **survey every point until both a male and female spotted owl are detected within the 1-km$^2$ site, or until all 5 points are surveyed**. If a spotted owl is detected outside of the site, the survey will continue at the remaining survey points. If only one sex of owl is detected within the site from a survey point, the technician will switch from the recording of both sexes of owls (channel zero) to a recording of the opposite sex of owl for the remainder of the 15 minute survey. At this point, it will be up to the technician to turn off the broadcaster at the 10 minute mark and also to keep track of the time during the 5 minutes of silence. For example, if a male owl is detected in survey minute 7, switch to the recording of female calls (channel one) and play this for 3 minutes then listen for 5 minutes; if a female owl is detected in minute 4, switch to the recording of male calls (channel two) for 6 minutes then listen for 5 minutes. All subsequent surveys in the site should use the recordings of the opposite sex. The purpose of this procedure is to avoid excess disturbance to spotted owls detected.

Record the compass bearing from the survey point to the initial location of all owls detected. Plot the bearing on the paper map of the survey site. Use local topography and common sense to estimate the location of the owl (plot on the map) and record the estimate the distance from the call point to the owl.

**If you detect an owl while walking between survey points**, stop. In the black **Survey Information** section, record your location as Point "99", enter the UTMs of your location and all other information as you would from an established survey point. Then fill out the red **Detection Information** section for the owl you detected. Enter the "Min. to Detect" as "0".

**When two technicians are surveying separate points at the same site:** Do **NOT** conduct broadcast surveys at more than one point at a time, including the 5 minute listening period. Use walkie-talkies or InReach units to communicate with your field partner to ensure that you do not survey within the same 15-minute period. The purpose of broadcasting spotted owl calls is to entice any spotted owls present to respond because they perceive you as an intruder in their territory. If an owl perceives that there are two intruders in their territory, they may remain silent.

**Survey conditions:** Do not survey during rainfall more than a light drizzle. Do not survey if wind conditions would prevent you from detecting a calling spotted owl within 250 meters of your survey point (generally greater than 18 mph; see Beaufort wind scale on survey form). Although ridges can be good points to survey from when winds are not strong, during windy conditions it may be better to survey downslope from ridge tops.

**Safety:** Except in very gentle terrain, technicians should arrive at their survey sites during daylight hours to view the landscape and plan how they are going to navigate between survey sites. Technicians will check in with their crew leaders at least once a day, either in

person, by cell phone, or via their DeLorme inReach satellite communication device. The crew leader may request twice-per-day check-in. The crew leader will designate one crew member with whom they will check in daily.

**Survey Form details:**

**SUMMARY INFORMATION (BLUE PORTION OF THE SURVEY FORM)**

**Site:** Each site name contains 3 letters and 4 digits. The letters indicate the National Forest of the site; the numbers indicate the order of the site in the GRTS random sample; for example, "SFE0005".

**Date:** Follow the example format: 2 digit day, 3 letter month; for example, "01 APR".

**Visit number:** Each site will be visited 2 times within the season.

**Observers 1 and 2**: Use 3 initials (or 2 initials if you don't have a middle name).

**If two people are surveying separate points within a unit**, each person should fill out a form in the field, but after the survey is over, the data from one technician should be copied onto the other technician's form so that only one survey form is turned in for the survey. Destroy the duplicate form that you are not turning in to avoid confusion.

**# Pairs, # Single males, # Single females, # Juveniles:** This section should be filled out at the end of the survey, after all points are surveyed for the night. **Enter zeros rather than leaving fields blank.**

**Survey Complete?** See the codes on the survey form. If a survey is incomplete, an additional visit to the site will be required.

**Why survey incomplete?** Enter a very short explanation, following the examples given on the form. If survey is complete, put a dash in this field.

**SURVEY INFORMATION (BLACK PORTION OF THE SURVEY FORM)**

**Point:** See Figure 1. Use 2 letter codes for surveys from the points or "99" if you detect an owl between survey points.

**Wind:** See codes.

**Noise:** Use this field for non-wind noise, such as a creek or traffic. Enter the type of noise in the "Notes" box of the survey form.

**Start time:** The time you start broadcasting, or the time you heard an owl if you are walking between points or hear the owl before you start broadcasting from a point. Record as 24-hour time; For example, 8:15 PM = 2015. Exact midnight = 2400. 15 minutes after midnight = 0015, NOT 2415.

**End time:** The time you stop listening for owls.

**Survey time:** Fill this out after you enter Start Time and End Time. If you do not detect any owls, this will usually be 15 minutes. If you detect a male and female owl, it may be less than 15 minutes. If you need extra time to confirm a detection (or location of a detection), it is ok to spend more than 15 minutes at a point.

**UTME and UTMN:** Use your GPS unit.

**DETECTION INFORMATION (RED PORTION OF THE SURVEY FORM)**

Only fill out this section if owls are detected. Most of these fields are obvious and/or have codes on the form.

**Min. to Detect:** This is the number of minutes that lapse between when you started surveying a point and when you detect the owl. If you detect an owl before you begin broadcasting, enter "0" for Min to Detect. If you detect an owl within a minute of broadcasting, enter "1" even though an entire minute had not lapsed.

**Owl Location UTM's**: Estimated from where you plotted it on the printed topo maps. Alternatively, if you can see the owl, then walk to where it is and use your GPS to get more accurate UTM's (note: a bearing and distance are still needed in this case).

**Bearing and Distance:** Unless the owl is perched on top of your head, record a bearing and distance for all owls observed, even the ones that are very close and you can see. Use your compass to take a bearing to the detected owl. Use your common sense to estimate a distance to it.

**Unique Bird ID:** This field is used to keep track of the same owl detected from multiple points. Use the same code to indicate the same individual spotted owl detected from more than one point. Start with M1, F1, U1. For example, if you hear the same male owl from NE and NW points, record its location and data for each detection on separate lines, and enter "M1" as the ID on both lines. If you then hear a second male owl from the NW point, record its location on a new line and enter "M2". If only one owl of each sex is detected, there is no need to use the Unique Bird ID field. Example:

| Point | Species (see codes) | Sex (M,F,U) | Age (A,J,U) | How (see codes) | Time Detected | | | | Min. to Detect | Bearing (degrees) | Distance (meters) | Unique Bird ID | Inside/ Outside* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NE | SPOW | M | A | HO | 2 | 1 | 3 | 5 | 5 | 225 | 300 | M1 | I |
| NW | SPOW | M | A | HO | 2 | 2 | 0 | 7 | 2 | 135 | 250 | M1 | I |
| NW | SPOW | M | A | HS | 2 | 2 | 1 | 2 | 7 | 352 | 75 | M2 | I |

**Inside/Outside:** Enter I or O to indicate whether the owl is inside or outside of the 1-km$^2$ survey site.

## Appendix B. Spotted Owl Broadcast Survey Form

SPOTTED OWL BROADCAST SURVEY FORM

Page ____ of ____

Site: _____ (e.g., SFE0005)

Date: ____/_____/ 2018 (e.g., 01 / APR / 2018)

Visit #: _____

Observer 1: _____ INITIALS

Observer 2: _____ INITIALS

Survey Complete? _____
Y Yes; 5 pts surveyed OR SPOW pair in sampling unit
P Partial; 3-4 pts surveyed AND no SPOW pair
N No; < 3 points surveyed AND no SPOW detected

***MSO Summary:***

# Pairs ____ # Single Males ____ # Single Females ____ # Unk. Sex ____ # Juveniles _____

Why Survey Incomplete? _____
Bear, Fire, Mt Lion, People, Priv Prop, Rain, Snow, Space Aliens, Tech Error, Terrain, Wind

***Survey Information:***

| Point | Wind (see codes) | Noise (see codes) | Start Time | End Time | Survey Minutes | Observer Location UTME | Observer Location UTMN |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

Beaufort Wind Scale

| Code: | mph | Description |
|---|---|---|
| 0 | 0 | smoke rises vertically |
| 1 | 1-3 | smoke drifts |
| 2 | 4-7 | wind felt on face |
| 3 | 8-12 | leaves in constant motion |
| 4 | 13-18 | raises dust; branches sway |
| 5 | 18-24 | small trees sway |

Noise codes
0 – no noise
1 – some noise, but can hear very well
2 – moderate noise; can still hear to 200 m
3 – loud noise; affecting ability to detect owls
4 – very loud stream or other noise (move!)

***Detection Information:***

| Point | Species (see codes) | Sex (M,F,U) | Age (A,J,U) | How (see codes) | Time Detected | Min. to Detect | Owl Location UTME | Owl Location UTMN | Bearing (degrees) | Distance (meters) | Unique Bird ID | Inside/ Outside* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

Notes:

Species codes

| | |
|---|---|
| BDOW | Barred Owl |
| BNOW | Barn Owl |
| ELOW | Elf Owl |
| FEPO | Ferruginous Pygmy-Owl |
| FLOW | Flammulated Owl |
| GHOW | Great Horned Owl |
| LEOW | Long-eared Owl |
| NOPO | Northern Pygmy-Owl |
| NSWO | Northern Saw-whet Owl |
| SPOW | Spotted Owl |
| WESO | Western Screech-Owl |
| WHSO | Whiskered Screech-Owl |

How detected codes
HO Heard Only
HS Heard, then Seen
SO Seen Only
SH Seen, then Heard

*Inside (I) or Outside (O) sampling unit

3/20/2017

IF FOUND, PLEASE RETURN TO: Bird Conservancy of the Rockies; 230 Cherry Street; Fort Collins, CO 80521

ATTACHMENT 7

Letters from Concerned Entities:

Mt. Taylor Manufacturing
Forest Stewards Guild
New Mexico Acequia Commission
New Mexico Land Grant Council
New Mexico Forest Industry Association
New Mexico State Forester
Arizona State Forester

09/30/2019

To Whom It May Concern:

Mt. Taylor Machine, LLC, dba Mt. Taylor Manufacturing, performs **uneven-age** silviculture in the Zuni Mountains, Cibola County, Mt. Taylor Ranger District, New Mexico, with the goal of preventing catastrophic wildfires and, more importantly, preventing the loss of our critical watersheds due to said fires. Uneven-age silviculture results in remaining stands of ponderosa pine containing trees in all stages of life; small trees, medium trees, large trees. It is done to, more or less, replicate human populations – from young to very old. This is exactly what WildEarth Guardians want for the Mexican Spotted Owl. What they do NOT want is **even-age** silviculture. WildEarth Guardians state in the Case 4:13-cv-00151-RCC that the two greatest threats to the Mexican Spotted Owl are (with the greatest threat listed first) "even-age silviculture" and "wildfire".

As stated, MTM does not perform even-age silviculture and never has. Now that MTM's work has been halted by this injunction, there will be less uneven-age silviculture (thus less desirable habitat) leaving the Mexican Spotted Owl at increased risk of catastrophic wildfires. Moreover, within the case documents, it clearly states that US Fish and Wildlife predict the "future incidence [of catastrophic wildfires] can be expected to remain fairly constant", although that is actually hard to believe with global warming. MTM management believes we can count on catastrophic wildfire becoming more prevalent as time progresses.

What does this mean for Mt. Taylor Manufacturing and its 48 employees?

First, many of our employees will be permanently laid off. This is a horribly difficult thing to do as our crew is mostly Navajo. The unemployment rate on the Navajo Reservation is, as of this week, 42%. These people NEED their jobs!

Second, MTM will lose contracts which were hard-won. MTM supplies wood chips to many customers across New Mexico and has signed contracts for wood chips with the City of Albuquerque and Albuquerque Public Schools. If requested, our chip customers will attest that MTM has been able to provide better quality, a better price and better service than our competitors. Once MTM is unable to provide chips due to the injunction, New Mexico chip customers will return to buying a lower quality product from Colorado.

Third, our main lumber customer will return to filling their lumber needs out of Mexico. Currently our largest lumber customer is based in Mexico. Thus, MTM is an exporter. I believe it is common knowledge that the USA imports vastly more products than it exports. MTM does its small part in helping to lower the trade imbalance. We provide great quality/service to our customer. If requested, they can, and will, attest to this.

Fourth, MTM uses residue from our sawmill to manufacture wood pellets for home heat. Our largest customer is Costco Wholesale. MTM supplies the three Costco stores in the Rio Grande Valley. We have other loyal customers who rely upon our pellets for winter warmth. If requested, these customers will also attest to our quality, service and price. They need us. We need them.

While we do make other products, the above are those which will be most affected by the injunction. But worse than that is the effect on our employees. 48 people. MTM's subcontracted harvester, WW Logging, has 15 employees. Adolfo Torrez with Custom Crates and Pallets has 70 employees. Jimmy Kellar with K&B

Timberworks has 15. Terry Connelly, Walatowa Timber has 25. I believe that, should this situation not be resolved quickly, New Mexico will see approximately six to seven hundred jobs disappear and worse, increased risk of catastrophic wildfire. For Cibola and McKinley Counties, home to Grants, New Mexico and Gallup, New Mexico, catastrophic wildfire in the Zuni Mountains could do more than simply harm our forests. It has been proven that severe wildfires can fill drainages with ash and ultimately ruin our watersheds…the very same watersheds that fill the aquifers supplying water for these communities.

In 1965 our company began operating as a wood moulding plant. At its peak, it provided 96 people with jobs, on two shifts, shipping quality wood mouldings to 32 states and Canada. However, certain laws (NAFTA was a big one) caused havoc in the industry. Profit margins evaporated. Eventually we dropped back to one shift. By the time the housing bubble burst, MTM was competing against companies in China, Chile, Mexico, Paraguay, Chile, Brazil and more. Profit margins were almost non-existent. When the housing bubble burst, MTM dropped to about 12 employees. Financially damaged, management began to rebuild into a small log sawmill. After many years and a great deal of personal investment, MTM had created what is perhaps the best sawmill in New Mexico. However, the transition from manufacturing wood mouldings to rough green lumber was not an easy one. A truckload of mouldings was worth about 80,000.00. A truckload of rough green lumber is worth about 4,200.00. Why bother? Why would management bother? Because both of the Allen brothers spent time in the Zuni Mountains with their Dad when they were young. Because some of our Navajo employees were counting on us for employment. Because saving our forests was the right thing to do.

At this point, we don't pay our selves very well. We work tremendous hours. We are under horrible stress. And now this.

A lawsuit was filed stating the US Fish and Wildlife and US Forest Service have done an inadequate job of tabulating/monitoring the Mexican Spotted Owl. The battle is basically between USFS and WildEarth Guardians, the organization that filed suit. And like any ugly divorce, it's the children who suffer the most… We can claim it is not children who are suffering through this battle. It is industry. But that is wrong. Industry provides jobs held by parents. Parents with children. Most are Navajo. I wonder who is more endangered…those kids or the owls.

This injunction needs to be lifted. There has to be middle ground whereby WildEarth Guardians can push for a better job of owl monitoring and population tabulation while not shutting down the forest restoration industry, the one thing destined to really help the Mexican Spotted Owl. If this is not corrected, within two months, I will have no choice other than to end MTM's 54 year history in New Mexico, sell assets to settle debt, and move on. Forest restoration will suffer. The Mexican Spotted Owl habitat will suffer. My employees will suffer.

Sincerely,

G. Matthew Allen
CEO
Mt. Taylor Manufacturing

Jordan Allen
Witnessed Name

Witness Signature

People: 505.287.9469 | Fax: 505.287.9468 | P.O. Box 2307, Milan, New Mexico 87021|
www.mttaylormanufacturing.com

# NEW MEXICO NOTARY ACKNOWLEDGMENT

THE STATE OF NEW MEXICO

COUNTY OF BERNALILLO

This instrument was acknowledged before me on 1 OCT 19 (date) by JORDAN F ALLEN (name(s) of person(s)).

Notary Public Signature

OFFICIAL SEAL
DAVID SEVILLE
Notary Public
State of New Mexico
My Commission Expires 10/26/19

Print DAVID SEVILLE

Title or Office: _____

My commission expires: 26 OCT 2019

(Seal)

Forest Stewards Guild
putting the forest first

October 2, 2019

Cal Joyner, Regional Forester
Region 3 of the USDA Forest Service
333 Broadway Blvd., SE
Albuquerque, NM 87102

RE: Negative effects of Mexican spotted owl injunction, need quickly to resume certain activities

Dear Cal,

The Forest Stewards Guild (the Guild) has a long history of working with Region 3 of the USDA Forest Service (Forest Service) on collaboratively designed and implemented projects. The projects often involved many diverse groups in different capacities, including the WildEarth Guardians. Over the last 25 years, we have worked through disagreement and conflict. Most notably was during the development of the New Mexican Forest Restoration Principles.

The September 11, 2019 Arizona Federal District Court Judge ruling to halt all "timber management actions" on six national forests in New Mexico and Arizona is having serious consequences for the ecological restoration of dry forests, wildfire risk reduction, youth training programs, and the forest restoration business sector.

The Guild stands in support of the Endangered Species Act and science-based forest management in the Southwest and across the country. We also stand in support of adaptive management approaches based on field data. We encourage the Forest Service to conduct the monitoring needed to inform Mexican spotted owl habitat management. The Guild also recognizes that uncharacteristic wildfire is a threat to owls and owl habitat and that our work to restore dry forests protects owls and their habitat.

The Guild is respectfully inquiring to learn if the scope of the injunction can be narrowed to focus on critical habitat and areas that have recent positive Mexican spotted owl surveys. Narrowing the geographic scope of the injunction, similar to the recent personal fuelwood allowance, will have far reaching benefits for ecological restoration hand and mechanical thinning projects, prescribed fire projects, youth conservation corps initiatives, and improve conditions for the forest restoration businesses that the citizens of New Mexico need to protect our forests and watersheds.

Specifically, the Guild is passionate about finding areas to continue to operate for these important, long-standing, and timely conservation projects:

- The Zuni Mountains Collaborative Forest Landscape Restoration Project,
- The Southwest Jemez Collaborative Forest Landscape Restoration Project,

2019 Galisteo St., Suite N7
Santa Fe, NM 87505

*phone* 505-983-8992
*fax* 505-986-0798

www.ForestStewardsGuild.org

- The Forest Stewards Youth Corps (FSYC) and other related youth and veteran corps projects,
- The Expansion of Prescribed Fire in the Zuni Mountains Collaborative Forest Restoration Program (CFRP) project and other collaboratively developed CFRP projects, and
- The All Hands All Lands Burn Team for the Rio Grande Water Fund.

These projects are being heavily impacted by the injunction and are affecting the Guild's ability to implement our ecological and social mission in New Mexico. Furthermore, we believe these projects will either benefit Mexican spotted owl habitat or protect habitat and owls from uncharacteristic high-intensity wildfire. For example, the FSYC youth crew program are unable to accomplish needed conservation projects and are missing out on valuable experience and training. Additionally, the Guild was unable to hire a whole seasonal crew in a rural town due to this injunction and the cessation of prescribed burns.

Please keep me informed as you work through the court ruling and its implications.

Sincerely,

Hytan Krasilovsky
Deputy Director

**MICHELLE LUJAN GRISHAM**
GOVERNOR

**OLIVIA PADILLA-JACKSON**
CABINET SECRETARY

**RALPH VIGIL**
CHAIRMAN

**Mary Mascarenas**
VICE CHAIR

**NEW MEXICO ACEQUIA COMMISSION**
DEPARTMENT OF FINANCE AND ADMINISTRATION
LOCAL GOVERNMENT DIVISION
Bataan Memorial Building, Suite 201 ♦ Santa Fe, New Mexico 87501
(505) 827-4950 ♦ FAX No. (505) 827-4948

October 2, 2019

Cal Joyner, Regional Forester
US Forest Service
Southwestern Region
333 Broadway SE
Albuquerque, NM 87102

Dear Mr. Joyner,

Thank you for taking the time to jump on a call with members of the New Mexico Acequia Commission (NMAC) and the NM Land Grant Council to discuss the recent decision handed down by the US District Court in the case of the Wild Earth Guardians v. US Fish and Wildlife (No. CV-13-00151-TUC-RCC).

As you are aware, the NM Acequia Commission is charged with the duties of serving as a facilitator for communication between local acequia organizations and the state and federal governments, and for reviewing plans or legislation that affect acequias.

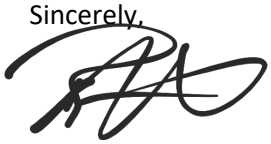
As we discussed, the NMAC was concerned with the ruling handed down by the Courts, because it would have devastating unintended consequences to our traditional communities. Many of our traditional communities continue to rely on wood from the US Forest Service lands for heating their homes, for use in traditional and cultural ceremonies as well as being a major source of income for many in our rural areas. In addition to gathering of fire wood, our communities rely on the National Forest for food, hunting and fishing, gathering of local herbs for traditional medicines, while relying on healthy watersheds to provide clean water to our local communities, the State of New Mexico as well as regional water initiatives. The ruling handed down by the courts has the potential to devastate many of our people, communities and economies throughout New Mexico.

Although the injunction was amended to allow for fuelwood collection for personal use, it is still negatively impacting small scale commercial collection, which are an integral part of our traditional communities. Most rural communities in New Mexico continue to rely on wood to heat their homes as the use of propane alone can be cost prohibitive to many of our families on fixed incomes.

The New Mexico Acequia Commission respectfully request that the parties involved in the law suit, take steps necessary to ask the Courts to limit the scope of the injunction on USFS timber management action, to only those lands which have been identified as critical habitat for the Mexican Spotted Owl (MSO). NMAC is sensitive to the issues raised for the MSO, however, the current amended ruling is still too broad in scope and will continue to have negative impacts to the Acequias of New Mexico and to our traditional communities.

If you would like to discuss or have further dialogue regarding the impacted areas and communities, we would be happy to meet to help identify potential solutions. Please feel free to contact myself or Robert Apodaca at 505-412-1057 if you have any questions. Again, thank you for taking the time to talk to us and we look forward to further dialogue with you and your staff on this important issue.

Sincerely,



Ralph Vigil, Chairman
New Mexico Acequia Commission
505-603-2879

# New Mexico Land Grant Council

**1829 Sigma Chi Rd NE ♦ Albuquerque, New Mexico 87106**

**Email: nmlandgrantcouncil@unm.edu ♦ Website: www.lgc.unm.edu**

**JUAN SÁNCHEZ**
CHAIR
**REBECCA CORERRA-SKARTWED**
VICE-CHAIR

**MICHELLE LUJÁN GRISHAM**
GOVERNOR


October 2, 2019

Cal Joyner,
Regional Forester
U.S. Forest Service
Southwestern Region
333 Broadway SE

Dear Mr. Joyner:

In light of the recent decision handed down by the United States District Court in the case of WildEarth Guardians v. United States Fish and Wildlife, et al., No. CV-13-00151-TUC-RCC, the New Mexico Land Grant Council, a state agency tasked with providing support to Spanish and Mexican land grants-mercedes throughout New Mexico (pursuant to §49-1-1 NMSA 1978), is writing this letter requesting that the U.S. Forest Service Region 3 take all action necessary to request that the Court limit the scope of the injunction on USFS timber management actions to only those lands which have been identified as critical habitat for the Mexican Spotted Owl (MSO). As currently written, the injunction has put a halt to all timber management activities including watershed and forest health restoration projects in Non-MSO habitat. These projects are critical in protecting forest system lands from uncharacteristic catastrophic wildfires and improving water quality and quantity for downstream users. In addition, these projects outside of MSO critical habitat areas further protect those habitats thereby increasing the opportunity for the MSO population to recover.

Spanish and Mexican Land Grant-Merced communities are centuries-old settlements throughout New Mexico that predate the establishment of the U.S. Forest Service and United States sovereignty in the Southwest. These land-based communities were originally established by the Spanish Crown, and later the Republic of Mexico, through grants of land that included millions of acres of common land which were utilized by the local communities to harvest natural resources for their survival. Although these grants of land are subject to the protections guaranteed by the Treaty of Guadalupe Hidalgo, a faulted land adjudication process by the federal government resulted in millions of acres of land-grant merced common land ending up under federal control. Much of this land is now managed by the U.S. Forest Service. Many of these land grant-merced communities still exist today and nearly all of them are adjacent to lands now managed as national forest system land. As traditional land-based communities, residents of land grants-mercedes are still reliant on the natural resources surrounding them. This includes: harvesting fuelwood to cook and heat their homes; gathering other natural resources, such as wild herbs and piñón nuts; grazing and watering their livestock; hunting and fishing; and utilizing centuries old water rights originating in forested uplands to irrigate crops. As currently written the injunction on lands not designated as MSO critical habitat has the potential to threaten all of these traditional uses, particularly fuelwood collection.

Although the injunction has been amended to allow for fuelwood collection for personal use, it is still negatively impacting small-scale commercial collection which is an integral part of village economies throughout New

Mexico. Many of our elderly villagers can no longer haul wood themselves and must therefore rely on these small local commercial harvesters (leñeros) for their winter wood supply needs. Most rural communities rely on wood to heat their homes as the use of propane alone is cost prohibitive particularly for individuals on fixed incomes living below the poverty line.

The Council appreciates any efforts you can make toward narrowing the scope of the injunction to lessen these negative impacts on our communities. Please contact Arturo Archuleta, Program Manager for the Council, at (505) 328-4104 or at carchuleta02@unm.edu, if we can be of any service in this or any other matter.

Thank you.

Con todo respeto,

Juan Sánchez
Chairman

New Mexico Forest Industry Association

October 3, 2019
PO Box 320
Mountainair, NM 87036

Mr. Cal Joyner, Regional Forester
333 Broadway SE
Albuquerque, NM 87102

RE: Court-ordered injunction in the case WildEarth Guardians vs. U.S. Fish and Wildlife Service, et al concerning the Mexican spotted owl. Extended broad injunction declaration of harm.

Dear Mr. Joyner,

On behalf of our members, the New Mexico Forest Industry Association (NMFIA) is submitting this declaration of harm regarding the September 12, 2019 injunction that suspends all timber management activities on the five national forests in New Mexico.

Established in 2007, NMFIA is a statewide non-profit organization. NMFIA membership consist of businesses and professionals that make a living working with forests and wood - firewood cutters; forest/watershed restoration practitioners, forester/natural resource professionals; thinning contractors; and people who transport, make, and sell products from the material that result from the wood that comes from the finite resource of our woodlands and forests.

NMFIA members are mostly located in economically distressed, rural, forested areas across New Mexico: Rio Arriba, Taos, Colfax, Mora, San Miguel, Santa Fe, Sandoval, Bernalillo, Cibola, McKinley, Catron, Socorro, Valencia, Torrance, Lincoln, Otero and Grant Counties. Our membership also reflects New Mexico's cultural diversity.

Over the last 30 years, New Mexico's forest industry adapted the size and scale of their businesses to meet the challenges caused by regulations and agency requirements, for the sake of survival. Most of the businesses in the 1970/1980s did not survive and those that did, have retooled to utilize the residuals of forest/watershed restoration. The businesses that exist today implement forest restoration, understand silvicultural prescriptions, understand New Mexico ecosystems and effectively assist the Forest Service in meeting planned ecological, economic and social goals in all the National Forests in New Mexico.

This injunction puts those businesses and the investments made in people and infrastructure at risk. A preliminary analysis reflects:

- the known investment retooling is valued at $25,600,000;
- 264 primary jobs directly are impacted;
- at least 154 secondary jobs threatened;

- over 450 people are now scrambling to move to other jurisdictions to sustain their livelihood and families;
- several businesses that make wood products from restoring forests/watersheds were out of wood supplies the week the shutdown was affected. Others that rely on the wood from the National Forests will run out within 60 days of the shutdown; and
- Revenue lost if timber management activities are suspended for 6 months - $9,863,000.

If the shutdown due to this injunction continues, the losses will not just be the jobs and investments listed above. It will result in the loss of many of those businesses; the loss of entrepreneurs who are willing to engage to restore forests and watersheds; the devaluation of the capital investments made and the diminished likelihood that future capital will be spent to manage our forests in a responsible manner. Additionally, the loss of a trained workforce which has been difficult to develop as they leave to other jobs and industries plus an increase in unemployment insurance and similar costs for businesses that survive. As these things happen with the direct impacts, it tears the social fabric in New Mexico, harming the wildlife habitat, making communities poorer, putting our water supplies for traditional, agricultural, and domestic use at greater risk from catastrophic wildfire. Without these things, especially the water, New Mexicans cannot exist.

Please feel free to contact me, if necessary.

Sincerely,

Brent Racher
President

Brent Racher

Signed and attested before me this 4 day of October 2019 by Brent Racher, herein.

Notary Public

My Commission Expires: 03-01-2022

OFFICIAL SEAL
Loretta Vega
NOTARY PUBLIC - STATE OF NEW MEXICO
My Commission Expires: 03-01-2022

State of New Mexico
Energy, Minerals and Natural Resources Department

**Michelle Lujan Grisham**
Governor

**Sarah Cottrell Propst**
Cabinet Secretary Designate

**Todd E. Leahy, JD, PhD**
Deputy Cabinet Secretary

**Laura McCarthy**
State Forester
Forestry Division

October 4, 2019

Mr. Calvin Joyner
Southwestern Regional Forester
USDA Forest Service
333 Broadway SE
Albuquerque, NM 87102

RE: WildEarth Guardians vs. U.S. Fish and Wildlife Service regarding the Mexican spotted owl

Dear Mr. Joyner:

The court's quick action to modify the September 12, 2019 injunction to exclude personal use firewood collection was welcome news. Many New Mexicans rely on firewood throughout the winter months and a ban on firewood gathering would have had devastating effects. Endangered Species Act compliance is important and the injunction will move the U.S. Fish and Wildlife Service and USDA Forest Service in the right direction. However, I am still concerned about the ecological, economic and social impacts of the cessation of all remaining timber management activities during the five months or longer while formal consultation is completed. Therefore, I am providing information that I hope the court will consider for the purpose of narrowing the scope of the injunction.

Forests in New Mexico are biologically diverse and provide a wide range of values for wildlife and people. The Carson, Cibola, Gila, Lincoln and Santa Fe National Forests are the ancestral lands of more than 30 Native American Tribes and the former Land Grants of 33 traditional Hispanic communities. More than 600 acequias, or community irrigation ditch organizations, draw their water from forested sources commonly located on National Forests. About 300 mutual domestic water systems are located on the National Forests or immediately downstream. In total the National Forests are water sources for more than half of the state's population. The land, forests, water and people are intertwined in our state and the impacts of the injunction are far reaching.

Climate change is already widely felt in New Mexico and substantial increases in the length and intensity of wildfire behavior are the most notable examples. Higher temperatures and greater variability in weather events, from deep drought to intense rainfall, have stressed forests and increased the likelihood of uncharacteristically severe wildfire, or mega-fire. Wildfires in 2011 and 2012 had enormous blow-ups where fire burned more than 30,000 acres in 12 hours, scorching all vegetation and sterilizing soil. Rainfall on these expansive burned areas resulted in debris flows and flooding that threatened communities and destroyed bridges, roads and water systems.

Extensive fire ecology and dendrochronology research in New Mexico has clearly established historic wildfire behavior and frequency in the state. Forest management in the last 20 years has focused on restoring ecological conditions of forests and increasing resiliency to wildfire. New Mexico State Forestry, together with scientists and partners, developed Principles of Ecological Restoration that serve as the guide for the practice of restoration forestry on National Forests and other lands, and have been updated as new science has emerged.

Prescribed burning has become an essential tool for ecological restoration of ponderosa pine and dry mixed conifer forests. Numerous studies conducted over the past decade have concluded that prescribed fire is the most effective of all management tools at tempering fire behavior to result in ecologically appropriate low- to moderate-intensity burns. Prescribed fire use has been expanding in New Mexico thanks to concerted efforts by state and federal land management agencies, non-governmental organizations and the private sector. The safest conditions for prescribed burning occur in fall and spring. More than 6,000 acres of burning had been planned for fall 2019 on the National Forest, and as much as 10,000 acres would be burned if the right conditions materialized over the course of the fall. Some of these prescribed burns would have been in the Santa Fe Watershed that supplies water to the capitol city of Santa Fe. Dendrochronology has shown the historical fire return interval in this watershed was every 7 to 11 years and missing a season of prescribed burning sets back the effort to protect this essential municipal water source.

The State has been investing in forest restoration projects since 2014. More than $14 million of severance tax bond and other funding has been spent to reduce the risk of mega-fires and protect communities, wildlife and forests from degradation. A recent map of the probability of wildfire transmission to the wildland urban interface, where people live, showed the highest risks coming from the National Forests. The State has committed $3 million of current year funding to forest restoration projects on the National Forest. These projects are on hold pending the lifting or narrowing of the injunction. Tribes also provide funding to National Forests for collaborative timber management activities through the Reserved Treaty Rights Lands program and Tribal Forest Protection Act. The cessation of these projects means the Tribes will not deliver the required outcomes, jeopardizing their eligibility for future funding.

Forest restoration employment has also steadily increased in New Mexico, with an all-time high last year of more than 450 people enrolled in the Forest Worker Safety Certification Program. Rural residents are most likely to enroll in the training and the safety certificate qualifies them to work on forest restoration projects. These workers are the lifeblood of New Mexico's restoration economy and they work on projects that range from small-scale commercial firewood operations, to hazardous fuels reduction to protect homes and communities, to thinning projects that diversify stand structure, improve wildlife habitat and reduce the risk of uncharacteristic high-severity wildfire. I am concerned these recently certified workers will not have employment through the fall, winter and spring, forcing them to seek other work and possibly never return to forest restoration.

New Mexico has no large sawmills operating and hasn't since the mid-1990s. The handful of sawmills currently operating are family-run businesses or are tribally owned and operated. These sawmills generate specialty products on a small scale for local and regional markets. A few operations make wood pellets, and most have diversified product lines from southwest style construction materials to fence posts and wood pallets. None of these wood-using businesses have a stockpile of more than 60 days and some only had a week of supply that is already exhausted. An estimated 250 jobs are at stake in rural communities where unemployment is significantly higher than the state average. These businesses may not make it through a shutdown, and if they stop operations, it is unlikely they will start again when the National Forests reopen.

Commercial firewood plays an important role in New Mexico's rural communities. These are small-scale operations that provide supplemental income in areas with high unemployment and who supply affordable wood to elderly and disabled residents. The price for firewood has already skyrocketed as a result of the injunction. In two communities, where the Cerro Negro and Trampas Forest Councils were formed this year to train local wood cutters and provide them with opportunities to harvest up to 5 cords of firewood, the projects are halted because they were operating under a commercial fuelwood permit.

Finally, a prolonged cessation of all timber management activities will have significant social impacts. Tribes gather wood products for ceremonial uses. Indigenous and traditional Hispanic community members value the National Forests for many reasons including spiritual and religious uses, building materials for adobe homes and rural subsistence livelihoods. Workers for Tribal and Hispanic forestry crews and small businesses, such as the Ramah Navajo Forestry Crew and Rocky Mountain Youth Corps, will need to find other employment in the interim.

The State of New Mexico values the National Forests for many ecological, economic and social reasons. The September 12, 2019 injunction is likely to have serious consequences. New Mexico State Forestry strongly suggests that the injunction be further narrowed to exclude timber management activities in areas that are not habitat for the Mexican spotted owl. As well, the injunction should be narrowed to exempt prescribed burning, commercial fuelwood and hazardous fuels reduction projects whose purposes are to ensure public health and safety in the wildland urban interface or protect community water sources, irrigation infrastructure or recreation areas.

Whatever happens next, New Mexico State Forestry is committed to identifying contingency plans to keep forest workers employed and businesses open through the winter and spring. We will work closely with the Forest Service to make sure that New Mexico's forests are resilient and well managed for present and future generations.

Sincerely,

Laura McCarthy
State Forester

CC: John Bingaman, Chief of Staff
Courtney Kerster, Federal Affairs
Michael Sloane, Department of Game and Fish

**Douglas A. Ducey**
Governor

# Office of the State Forester

## Arizona Department of Forestry and Fire Management

**David Tenney**
State Forester

Regional Forester Cal Joyner
USFS Southwestern Region 3
333 Broadway SE.
Albuquerque, NM 87102

October 2, 2019

Dear Forester Cal Joyner;

I am writing today to express concern over the recent ruling by the United States District Court for the District of Arizona (WildEarth Guardians v. United States Fish and Wildlife Service No. CV-13-00151-TUC-RCC) enjoining all timber management activities on six National Forests in New Mexico and Arizona and the consequences it will have for the citizens of the State of Arizona. I am disturbed over the impact this decision will have on hazardous fuel and forest restoration treatments that protect communities, watersheds and critical habitat

Ongoing and planned, NEPA approved, hazardous fuels treatments, prescribed fires and forest restoration efforts on the Tonto National Forest are critical to protecting communities from catastrophic wildfire like the 2018 Camp fire in California where there were 85 civilian fatalities and over 18,804 structures destroyed. In DFFM's 2018 evaluation of communities at risk from catastrophic fire in Arizona six of the top ten communities at risk border the Tonto National Forest. The federal government established the Tonto National Forest in part to protect watersheds and water quality for Phoenix, and the forest management treatments designed to protect those watersheds are critical in insuring adequate supplies of water to the 11th largest population center in the United States. I am concerned that the ruling meant to support the protection of an endangered species will prevent the work necessary to protect critical Mexican Spotted Owl (MSO) habitat. One only needs to look at the 2011 Wallow fire where 72 MSO protected activity centers were burned in one catastrophic fire.

This ruling also has significant negative consequences to existing and future forest product industries that are critical to maintaining reasonable costs for needed forest restoration efforts throughout the State and represent a substantial economic benefit to rural communities. The fledgling forest products industry in Arizona operates on razor thin margins and the loss of material from the Tonto National Forest threatens the viability of those industries, additionally, we are currently at a critical time with the 4 Forest Restoration Initiative Request for Proposal (RFP) Phase 2 which attempts to attract new forest product industry to Arizona. The current ruling puts in question two of the six subareas identified in the RFP and represents a chilling effect and added risk to prospective industry considering relocating to Arizona.

Finally, this ruling removes the option of fuel wood gathering by private individuals on the Tonto National Forest. The removal of fire wood tends to occur closer to communities and private property and decreases wildfire threat to those communities. This ruling also impacts lower

income citizens and communities that rely on fuel wood to heat their homes. The timing of this decision, occurring when citizens are stocking up fuel wood for winter, leave people with few options.

We appreciate the recent collaboration and shared stewardship with the Forest Service. The recent emphasis of the Forest Service to work closer with stakeholders like the State of Arizona is important to us and represents a positive change in our relationship that we want to strengthen and continue. This court decision severely impacts our ability to work together across landscapes and jurisdictional boundaries to protect Arizona's forest, communities and watersheds. We cannot afford to delay the preventive measures that are already in motion. I urge you and the leadership of the Forest Service to take appropriate action to remedy the situation as soon as possible.

Sincerely,

David Tenney
Director
Department of Forestry and Fire Management

ATTACHMENT 8

Albuquerque Journal Article: Ban on Work in National Forests Affecting Jobs

ATTACHMENT 8

# Ban on work in national forests affecting jobs

**By Mark Oswald / Journal Staff Writer**

**Published: Monday, October 7th, 2019 at 10:39pm**
**Updated: Monday, October 7th, 2019 at 10:56pm**



The Thompson Ridge Fire burns in the Jemez Mountains in 2013. A court order has halted timber management in New Mexico's national forests. (Marla Brose/Albuquerque Journal)

SANTA FE – A court-ordered ban on timber management in New Mexico's national forests is affecting hundreds of jobs, according to the state Forest Industries Association.

The association has filed a formal "declaration of harm" with the Forest Service, said Brent Racher of Corona, president of the group.

He said the association calculates that at least 400 jobs are affected by the ban, in fields ranging from those who do forest and watershed restoration work by removing small trees or underbrush to prevent wildfires under federal contracts to artisans who use forest wood to make furniture and flooring.

He said the association has estimated there will be $9.8 million in lost revenue over six months, mostly in rural areas, if the ban remains in place.

He said his family business is losing work on a forest restoration project as long as the ban stands.

“It’s a significant impact on us, to be honest with you,” Racher said.

“We’re looking for state or private land, trying to find something to do,” he said.

Meanwhile, WildEarth Guardians – whose lawsuit against the U.S. Fish and Wildlife Service over its alleged failure to monitor the threatened Mexican spotted owl population prompted the ban on timber management – is proposing expedited mediation in the case.

The group also “would like to support an exemption (to the ban) for land not adversely affecting the spotted owl,” says WildEarth Guardians Executive Director John Horning. The ban on timber management pending further action in the court case is intended to prevent destruction of owl habitat.

Last week, the Arizona judge in charge of the case modified his order to allow traditional firewood gathering for personal use or small-scale sales after the Forest Service had stopped issuing permits for the activity. WildEarth Guardians supported the change.

Other forest management activities, including commercial timber sales, hazardous fuels reduction, forest thinning and prescribed burns to prevent wildfires, are still suspended under the order.

WildEarth Guardians maintains the Forest Service’s interpretation of the court order against timber management has been overly broad.

Horning said it’s “ridiculous” that some activities, such as clearing brush from trails and collecting trees for Native American ceremonies, are not allowed. He called on the Forest Service to release trail work and Native plant gathering for religious purposes from the ban.

“The purpose of this was to protect the spotted owl,” he said.

He noted that the Forest Service’s directive based on the court order says, “No further cutting of vegetation shall be commenced.”

“That would say you can’t cut grass,” Horning said.

He added that if the Forest Service really cared about following court orders, it would have followed a string of previous orders over 20 years on protection of the spotted owl.

“They have done nothing proactive other than incite fear and controversy,” Horning said.

Shayne Martin, a spokesman for the Forest Service, said Friday that the agency won’t go into a mediation process now, before asking the judge for clarification of his order sometime this week.

“There’s a legal process to go through,” Martin said.

He disputed that the Forest Service has gone beyond the court order in banning forest activities, saying that timber management work is defined in a federal manual.

Racher, of the Forest Industries Association, said a ban on cutting small trees for forest restoration projects is "tremendously frustrating," because "we've worked long and hard to work on a collaborative process toward restoring forests and watersheds," based on "better wildlife habitat and preventing catastrophic fires."

"A lot of people think that the forest or timber industry is just people cutting big logs," Racher said. "That's not been the case since the 1990s."

State Rep. Joseph Sanchez, D-Alcalde, issued a news release saying, "The lumber industry in New Mexico provides a significant number of jobs in rural communities and is vital to the local economy."

"It is ridiculous that one of the poorest states in the country is also the only state in the country that cannot harvest lumber from national forest land," he said. "Prescribed burns are critical to ensure we don't have wildfires, particularly in rural communities, and without it, we are facing a significant human safety issue. … Even three months (of the ban) could cause irreparable damage to many New Mexico businesses."

**Contact the writer.**

Custer takes checkered at Dover for 7th Xfinity win of year

Oct. 05, 2019 05:49 PM EDT

Derby sanctions players after alcohol-related car crash

Oct. 04, 2019 06:39 PM EDT

ATTACHMENT 9

Mill Shutdown Impact Analysis

**ATTACHMENT 9**

**MILL SHUTDOWN IMPACT ANALYSIS**
**-- Examples --**
**September 30, 2019**

**Carson**

1) Olguin's Sawmill in Taos- 15 people (including contractors) total mill/logging/hauling =15 lost jobs, **has enough for up to 1.5 months**. Getting material from Rincon IRTC on the Tres Pierdas RD (Carson) and he has a deck sale on the Coyote RD (Santa Fe).
2) Kuykendall Logging- 10 employees. They have enough wood on the ground that they can skid and haul **for another month before they run out of logs.** Getting material from the Tio Gordito and Maqunita Projects via the Gulch, Tio North and Willow Timber Sales.
3) Blanca Forest Products Inc. (Sawmill)- 70 employees. Kuykendall's provide 15% of their mill run volume. **They have enough supply to operate through October and part of November with little to no impact. After that, they will have to lay off their swing shift before the holidays. That is 20-24 employees.**

**Cibola**

1) Mt Taylor Manufacturing in Milan- 34 people at mill and 12 logging/hauling = 46 total jobs, has **enough supply to operate into December and then will close**. Getting material from the Bluewater Ecosystem and Watershed Restoration project through the National Wild Turkey Federation Stewardship Agreement.

**Gila**

1) Kellar Logging in Reserve, NM (Catron County)- **16 people** which includes the mill and logging operations. In addition to these employees, there are **seven trucks** that make multiple trips to Reserve several times a week to pick up products sold by the mill that include: lumber, logs, chips, sawdust and bark. These seven truckers are not employees by Kellar logging. **Total number of jobs directly affected by shutdown with this company is 23.** Kellar Logging currently have Doe-Gun and Buzzard timber sales under contract and was the high bidder on Baseball 3 timber sale that was not awarded due to the injunction.
2) Timber Tramp Logging in Luna, NM (Catron County)- **23 people**. This includes a sub-contractor operating on the Turkey Park Timber Sale. In addition to these employees, there are **two trucks** that haul products from Luna to deliver material (logs) to other facilities in New Mexico. **Total number of jobs directly affected by shutdown with this company is 25. This company also received a CFRP grant in 2018 to build a mill.** Timber Tramp Logging currently has the Turkey Park Timber Sale under contract.
3) **Tucker Looney Logging** – Located in Cliff, NM (Grant County) this company **employs 5 people** that includes logging and mill operations. This mill is a startup and beginning operations. Tucker Looney Logging is currently one of operator for the Grant County SWCD CFRP at Gatton's Park on the Wilderness RD.
4) **Commercial Fuelwood Cutters and Thinners with active permits by District:**

- **Black Range RD** (D2) – Currently has 3 people with mills purchasing house logs, vigas, latillas, etc. under permit. **Total number of employees for the three operators is 5 people.**
- **Quemado RD** (D3) – Currently has 3 permit holders for commercial firewood permits. **Total number of employees for commercial fuelwood permits 8 people.**
- **Glenwood RD** (D4) – Currently has 1 permit for commercial fuelwood. **Total number of employees for commercial fuelwood permits 3 people.**
- **Wilderness RD** (D5) - Grant County SWCD CFRP at Gatton's Park thinning portion has a **Total number of thinners on project is 6 people.**
- **Reserve RD** (D6) – Currently has 3 active commercial fuelwood permits. **Total number of employees for commercial fuelwood permits is 9 people. Note:** The Reserve RD also has a commercial fuelwood sale that has not been awarded and employees are included the number for the Reserve RD.
- **Silver City RD** (D7) – Does not have active commercial permits.

The total number of **logging/sawmill jobs** directly affected by the court ruling is **53 people.** The total number of **fuelwood cutters and thinners** directly affected by the court ruling **is 31 people for a total of 84 people.** This does not include the other jobs associated with the industry including vendors providing services (fuel, parts, and services) and businesses buying and selling finished forest products.

**Lincoln**

1) Custom Crates and Pallets- 49 employed at Canutillo TX mill, 25 employed at Juarez mill, 2 employed woods workers, 3 managers. Total of 79**. Supply good until February**. Getting material from the Jim Lewis project via the Board LTM Timber Sale
2) Wilkinson Logging - 2 woodsworkers / mill operators. Sale nearing completion **will be out of wood within 2 months**. Getting material from the Jim Lewis project via the Chilcoote North Timber Sale.
3) Ellinger Logging- 8 employed as woodsworkers / mill operators. Ellinger supplies the following mills in Otero County: NM tie and pole, employs 8. Leck Riddle, employs 3. Turkey Creek Forestry, employs 2. A-Firewood, employs 4. Jimmy Bridge, employs 3. **Supply until December**. Getting material from the Jim Lewis project via the Board CTM Stewardship Contract.
4) A-E Firewood - employs 4 **Supply until February**. Getting material from the Jim Lewis project via the Bluewater Non-saw Deck Sale.

**Santa Fe**

1) Santa Fe, Walatowa Timber Industries on the Jemez Pueblo, 18 people at the mill and 7 logging/hauling, has enough supply for 6-7 weeks and then will shut down. Without supply from elsewhere, 4-5 people would be laid off now due to the shutdown. Three truck drivers will be laid off in 3-4 weeks once the material has been hauled off the forest. **Everyone will be laid off in 6-7 weeks.** Getting material from Southwest Jemez Restoration project via a Stewardship Contract.

**Tonto**

1) GEP has 123 employees company-wide, which includes personnel at Williams and Heber Arizona sawmills, woods operations, and trucking. Currently, GEP has 60 operating days of logs in

Williams and 30 in Heber. The following task orders are awarded to GEP on the Tonto National Forest: Woodchuck, Mercer, and Naegelin Crest.

2) Tri-Star Logging delivers biomass material to the Novo Power bio-energy mill and small diameter saw logs to the NovoStar sawmill both in Snowflake, Arizona. Tri-Star logging employs 60 people; Novo Power employs 40 people; and, NovoStar employs 35 people. The following stewardship contracts are awarded to Tri-Star Logging on the Tonto National Forest: Angel Rim, Diamond Nickel, and Michellison.

**UNITED STATES DISTRICT COURT**
**FOR THE DISTRICT OF ARIZONA**

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|---|---|
| WILDEARTH GUARDIANS,<br><br>Plaintiff,<br><br>v.<br><br>UNITED STATES FISH AND WILDLIFE SERVICE; UNITED STATES FOREST SERVCE,<br><br>Defendants. | CASE NO. 4:13-cv-151-RCC<br><br>**[PROPOSED] ORDER GRANTING DEFENDANTS' MOTION TO ALTER THE COURT'S JUDGMENT AND TO CLARIFY OR MODIFY THE COURT'S INJUNCTION** |

Having considered Defendants' motion to alter the Court's judgment and to modify the Court's injunction, the Court hereby grants the motion and finds that the U.S. Fish & Wildlife Service, using the best scientific data available at the time of its decision, appropriately addressed the Mexican spotted owl's prospects for recovery. The current injunction is lifted.

Dated: _____

_____
Hon. Raner C. Collins