

**United States Department of the Interior**

**U.S. Fish and Wildlife Service**

**Arizona Ecological Services Office**

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In Reply Refer To:

AESO/SE

22410-2011-FE-0524

August 12, 2013

Mr. Neil J. Bosworth, Forest Supervisor  
Tonto National Forest  
2324 East McDowell Road  
Phoenix, Arizona 85006

Dear Mr. Bosworth:

Thank you for your request for formal emergency consultation with the U.S. Fish and Wildlife Service (FWS) pursuant to section 7 of the Endangered Species Act of 1973 (16 U.S.C. 1531-1544), as amended (Act). Based on our records, your request for emergency consultation was initiated on September 26, 2011. The form for emergency fire documentation, which fulfills the requirements necessary for emergency consultation typically provided in a biological assessment and evaluation, was received in this office on March 6, 2013. At issue are impacts that were associated with fire suppression and emergency stabilization activities for the Tanner Fire, located on the Pleasant Valley Ranger District of the Tonto National Forest (TNF), in Gila County, Arizona. You determined that the suppression and emergency stabilization actions taken for the Tanner Fire were "likely to adversely affect" the Mexican spotted owl (*Strix occidentalis lucida*; MSO), and its critical habitat.

This biological opinion is based on information provided in the emergency fire documentation form dated March 4, 2013, telephone conversations, emails between my staff and your staff, and information provided in associated maps. Literature cited in this biological opinion is not a complete bibliography of all literature available on the species of concern, or on other subjects considered in this opinion. A complete administrative record of this consultation is on file at our office.

Consultation History

- August 20, 2011: A lightning strike occurred in the TNF, igniting the Tanner Fire. Suppression and emergency stabilization began on the same date.
- September 26, 2011: We received notice that suppression and emergency stabilization actions were occurring to control the Tanner Fire, and initiated emergency consultation.

Mr. Neil J. Bosworth

- March 6, 2013: We received a final emergency fire documentation form and a March 4, 2013, letter from the Forest requesting initiation of formal section 7 consultation.
- March 14, 2013: We sent a 30-day letter in response to the request for formal consultation.
- July 22, 2013: We sent a draft Biological Opinion to the TNF.
- August 8, 2013: TNF responded to the draft Biological Opinion stating that they had no comments.

## **BIOLOGICAL OPINION**

### **BACKGROUND**

The Tanner Wildfire was started on August 20, 2011, from a lightning strike in the TNF, Pleasant Valley Ranger District, near Roosevelt Lake, Arizona. The fire was contained on October 12, 2011, with suppression activities ending on October 19, 2011, and was officially declared out on November 7, 2011. The wildfire burned a total of 5,469 acres, of which 736 acres burned at high intensity, 1,222 acres were moderately burned, and 1,874 acres burned at a low intensity. The remaining 1,637 acres were classified as unburned. Moderate-intensity burn is defined as a scorch that consumes some, but not all of the needles, leaves, and cover; and high-intensity burn is defined as consuming at least 50 percent of the forest canopy, including leaves, needles, and forest floor cover. High-intensity burns include crown fires.

### **DESCRIPTION OF THE EMERGENCY ACTION**

For additional information and more specific details concerning suppression actions for the Tanner Wildfire, please refer to the emergency fire documentation form and maps provided by the Forest Service for this consultation. The action area, as described by the TNF, includes the Tanner Fire perimeter, as well as a two-mile buffer from the fire perimeter to account for any indirect impacts from noise and smoke drift associated with suppression actions, as described in the Environmental Baseline section.

Suppression and stabilization actions began on August 20, 2011, and ended on October 19, 2011. Suppression is defined as all the work of extinguishing or confining a fire beginning with its discovery (National Wildfire Coordination Group [NWCG] 1996). Stabilization is defined as planned actions that occur to prevent unacceptable degradation to natural and cultural resources including the repair, replacement, and construction of physical improvements to prevent this degradation, and to minimize threats to life or property as a result of the fire (USFS 1999).

Management actions associated with the fire included burnout ignitions, dozer line construction, helicopter water and retardant drops by heli-tankers and air-attack at 8,500 feet (ft.) above ground level (agl), snagging, chainsaw and chipper use, and hand line construction. Snagging is

Mr. Neil J. Bosworth

the removal of dead trees that are over 20 feet high. Hand lines are defined as firelines that are constructed using hand tools, while dozer lines are firelines created by the front blade of a dozer. A burnout is the setting of fire inside a control line to consume fuel between the edge of the fire and the control line. Lastly, retardant and water drops are defined as the cascading of fire retardant or water from an air tanker or heli-tanker (NWCG 2012). Both Class A Silvex and Phos-Check LC95A retardants were dropped.

#### *Ground suppression/ignition/stabilization*

Ground suppression activities included hand line, dozer line, burnout, and hazard tree removal. A one-mile hand line was constructed east and south west of ‘Sling spot 1’ (Appendix A, Figure 2). A dozer line approximately 3.5 miles long, and 20 ft wide (approximately 8.4 acres) was completed along the unused existing Forest Road (FR) 671 on the west to north central boundary of the fire. Burnout was completed on August 23, 2011, on the northern and eastern borders of the fire zone and impacted approximately 490 acres (Appendix A, Figure 2). These burnouts were done to protect against crown fires and occurred as the fire backed down slopes to holding features. Suppression areas burned at moderate to higher intensities. Chainsaws were used to remove hazard trees, and a chipper was used to dispose of them. The removal of snags occurred along State Highway 288 for safety reasons. Noise from the chainsaws was estimated to affect 26 acres within the eastern edge of the Armer Mountain Protected Activity Centers (PAC).

#### *Aerial suppression*

Aerial suppression activities included the use of helicopters for retardant and water drops. A fixed wing helicopter was used to provide continuous coverage of air-attack at 8,500 ft. agl for five days and then two hours a day for an additional thirty days. This fixed wing aircraft kept an approximate height of 200 ft above MSO habitat. Retardant drops occurred along the southeastern edge of the fire, and in a northeastern section of the fire’s edge (Appendix A, Figure 3). Two suppression chemicals were used. Approximately 500 gallons of Class A Silvex were applied on the ground, and 39,480 gallons of Phos-Check LC95A retardant were applied aurally. The helicopter provided 100 water drops. No drafting occurred from natural creeks or stock tanks by suppression personnel as water was purchased and provided by water tenders, and made available at a heli-well. The majority of water drops were on the southwestern edge of the fire (Appendix A, Figure 3), with no water drops occurring in any PACs.

## **STATUS OF THE SPECIES**

### Mexican Spotted Owl

The MSO was listed as a threatened species in 1993 (USFWS 1993), and critical habitat was designated in 2004 (USFWS 2004). The primary threats to the species were cited as even-aged timber harvest and stand-replacing wildfire, although grazing, recreation, and other land uses were also mentioned as possible factors influencing the MSO population. A detailed account of the taxonomy, biology, and reproductive characteristics of the MSO is found in the revised Recovery Plan (USFWS 2012). The information provided in those documents is included herein by reference.

Mr. Neil J. Bosworth

Although the MSO's entire range covers a broad area of the southwestern United States (U.S.) and Mexico, the MSO does not occur uniformly throughout its range. Instead, it occurs in disjunct localities that correspond to isolated forested mountain systems, canyons, and in some cases steep, rocky canyon lands. Surveys have revealed that the species has an affinity for older, uneven-aged forest, and the species is known to inhabit a physically diverse landscape. Because of their distribution, the U.S. range of the MSO has been divided into six Ecological Management Units (EMU), as discussed in the Recovery Plan. The primary administrator of lands supporting MSO in the U.S. is the Forest Service.

Historical and current anthropogenic uses of MSO habitat include both domestic and wild ungulate grazing, recreation, fuels reduction treatments, resource extraction (e.g., timber, oil, gas), and development. These activities have the potential to reduce the quality of MSO nesting, roosting, and foraging habitat, and may cause disturbance during the breeding season. Livestock and wild ungulate grazing is thought to have a negative effect on the availability of grass cover for prey species. Recreational impacts are increasing on all forests, especially in meadow and riparian areas. There is anecdotal information and research that indicates that owls in heavily used recreational areas are much more erratic in their movement patterns and behavior. Fuels reduction treatments, though critical to reducing the risk of severe wildfire, can have short-term adverse effects to MSO through habitat modification and disturbance. As the human population grows, especially in Arizona, small communities within and adjacent to the National Forest Service (NFS) lands are being developed. This trend may have detrimental effects to MSO by further fragmenting habitat and increasing disturbance during the breeding season. West Nile Virus also has the potential to adversely impact the MSO. The virus has been documented in Arizona, New Mexico, and Colorado, and preliminary information suggests that owls may be highly vulnerable to this disease (Courtney et al. 2004). Unfortunately, due to the secretive nature of owls and the lack of intensive monitoring of banded birds, we will most likely not know when owls contract the disease or the extent of its impact to MSO range-wide.

Currently, high-intensity, stand-replacing fires are influencing ponderosa pine and mixed conifer forest types in Arizona and New Mexico. Uncharacteristic, severe, stand-replacing wildfire is probably the greatest threat to MSO. As throughout the West, fire intensity and size have been increasing within this geographic area.

Researchers studied MSO population dynamics on one study site in Arizona (n = 63 territories) and one study site in New Mexico (n = 47 territories) from 1991 through 2002. The Final Report, titled "Temporal and Spatial Variation in the Demographic Rates of Two Mexican Spotted Owl Populations" (Gutierrez et al. 2003), found that reproduction varied greatly over time, while survival varied little. The estimates of the population rate of change ( $\Lambda$ =Lambda) indicated that the Arizona population was stable (mean  $\Lambda$  from 1993 to 2000 = 0.995; 95 percent Confidence Interval = 0.836, 1.155) while the New Mexico population declined at an annual rate of about 6 percent (mean  $\Lambda$  from 1993 to 2000 = 0.937; 95 percent Confidence Interval = 0.895, 0.979). The study concludes that spotted owl populations could experience great (>20 percent) fluctuations in numbers from year to year due to the high annual variation in recruitment. Due to this high annual variation in recruitment, the MSO is then likely to be very vulnerable to actions that impact adult survival (e.g., habitat alteration, drought, etc.) during years of low recruitment.

Mr. Neil J. Bosworth

Critical habitat units were designated because of their habitat suitability: large contiguous blocks of habitat, occupied habitat, rangewide distribution, the need for special management or protection, and adequacy of existing regulatory mechanisms when identifying critical habitat units. The Tanner Fire occurred on the BR-W-5 critical habitat unit which is 118,940 acres (USFWS 2004). For an area to meet the definition of critical habitat there needs to be at least one PCE present. Areas within critical habitat unit boundaries do not always meet this definition, but owls have been observed moving across open terrain that is between islands of suitable nesting and roosting habitat (Arsenault et al. 1997, Ganey 1998, and Willey 1998).

### Mexican Spotted Owl Critical Habitat

Critical habitat for the MSO was designated in 2004. The critical habitat rule designated approximately 8.6 million acres of critical habitat in Arizona, Colorado, New Mexico, and Utah, mostly on Federal lands (USFWS 2004). Within this larger area, critical habitat is limited to areas that meet the definitions of protected and restricted habitat, as described in the Recovery Plan. Protected habitat includes all known owl sites and all areas within mixed conifer or pine-oak habitat with slopes greater than 40 percent where timber harvest has not occurred in the past 20 years. Restricted habitat includes mixed conifer forest, pine-oak forest, and riparian areas outside of protected habitat.

The primary constituent elements (PCEs) for MSO critical habitat were determined from studies of their habitat requirements and information provided in the Recovery Plan (USFWS 1994). Since owl habitat can include both canyon and forested areas, PCEs were identified in both areas. The PCEs which occur for the MSO within mixed-conifer, pine-oak, and riparian forest types that provide for one or more of the MSO's habitat needs for nesting, roosting, foraging, and dispersing are in areas defined by the following features for forest structure and prey species habitat:

#### *Forest Structure:*

- A range of tree species, including mixed conifer, pine-oak, and riparian forest types, composed of different tree sizes reflecting different ages of trees, 30 percent to 45 percent of which are large trees with diameter-at-breast height (dbh) of 12 inches or more;
- A shade canopy created by the tree branches covering 40 percent or more of the ground; and
- Large, dead trees (snags) with a dbh of at least 12 inches.

#### *Adequate Prey Species:*

- High volumes of fallen trees and other woody debris;
- A wide range of trees and plants species, including hardwoods; and

Mr. Neil J. Bosworth

- Adequate levels of residual plant cover to maintain fruits and seeds and allow plant regeneration.

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

## **ENVIRONMENTAL BASELINE**

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

### Description of the Action Area

The action area includes the location of fire activity, suppression activities, and an area that extended approximately two miles from any suppression activity, in or outside the fire boundary to account for noise and concentrated smoke drift. This action area includes portions of eight 6<sup>th</sup> code Hydrologic Unit Code (HUC) watersheds: Middle Salome Creek, Reynolds Creek, Cooper Forks-Cherry Creek, Bladder Canyon Cherry-Creek, Coon Creek, Workman Creek, Cottonwood Wash, and Armer Gulch. The action area is approximately 10 miles north of Roosevelt Lake, in between the boundaries of Salome Wilderness and Sierra Ancha Wilderness, in Gila County. State Route (SR) 288 essentially divides the fire area in half. The terrain in the action area is low to steep terrain, and vegetation includes chaparral, mixed conifer, pinyon juniper, ponderosa pine, and riparian types. Elevation is between 5,700 and 7,000 ft (1,737-2,134 m). The fire burned a total of 5,469 acres, of which all are located within a designated critical habitat unit for the MSO.

The action area includes six MSO PACs, including Armer Mountain PAC, Workman Creek PAC, Reynolds Creek PAC, Cienega Spring PAC, Coon Creek PAC and Pueblo Canyon PAC (Appendix A, Figure 1). According to the Forest Service, suppression activities only occurred in Armer Mountain and Workman Creek PACs.

Mr. Neil J. Bosworth

### Factors affecting the species and critical within the action area

The occurrence of high intensity, stand-replacing wildfires has significantly contributed to the status of the subspecies, and remains the greatest threat to the subspecies (USFWS 2012). Past fires have affected MSO habitat in the Sierra Anchas Mountains, which border the action area. Three fires totaling 722 acres have burned within the Tanner Fire zone. In addition to the threat of wildfire, affects to MSO in the action area include recreation, grazing, fuel-wood harvest, road development, and mining.

The action area includes five campgrounds, two of which occur within PACs, and was under consultation for the salvage of burned trees. The Rose Creek campground is in the Armer Mountain PAC, and the Falls campground is in the Workman Creek PAC. Given the close proximity to these PACs, some recreation will occur. The level of disturbance the species experiences from OHV use, impacts from recreationalists, or other disturbance activities, is not known. Disturbance activities like those listed above, especially during nesting season, add stress to the individuals and can lower reproductive success rates. Recreational disturbances were all present prior to the fire, will persist as the ecosystem recovers, and will continue post-recovery. A previous consultation (02EAAZ00-2012-I-0276-R001) reviewed the potential effects of tree salvage, and removal of green trees in the fire area. The salvage used equipment that could have disturbed owls in the area, but it was determined that this project was not likely to adversely affect the critical habitat or owls.

Two of the six MSO PACs within the action area, the Armer Mountain PAC and Workman Creek PAC, were directly impacted by suppression activities. Presence of owls was noted in the Armer Mountain PAC in 2006 and 2007, no information was gathered between 2008 and 2010, and there was no response by owls in 2011 or 2012. A single male owl was detected in 2011 and 2012 in the Workman Creek PAC. Occupancy is inferred for the years where confirmation of presence was not available, and it is inferred that the other four PACs within the action area are occupied. The Tanner Fire burned the entire Armer Mountain PAC, with approximately 60 percent of the PAC burned at moderate intensities, 15 percent burned at high intensity, and the remainder burned at low intensity. The majority of the moderate to high intensity burns occurred in the area identified as the core location in 2007. Owls that were present in this core are inferred to have left naturally to go to the surrounding critical habitat that was unburned and underburned which would be able to support them.

The fire area contained the vegetation types described above, of which the mixed conifer, pine, and riparian vegetation types would qualify as MSO habitat. The current condition of the habitat in the action area is disturbed due to the removal of ground and plant cover, removal of woody debris, and reduction in the number of tree and plant species by the fire. Where suppression fires burned at high intensities, recovery of nest/roost habitat will take many years.

Mr. Neil J. Bosworth

## **EFFECTS OF THE ACTION**

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

Research has shown owls will persist in an area post-wildfire, at least for the short-term (Bond et al. 2002, Jenness 2000). However, while the owls may persist in the area, they were likely adversely affected by suppression activities, including burnout, dozer use, helicopter use, and chainsaw use, which led to noise disturbances, and a reduction in foraging capabilities where suppression actions burned at higher intensities.

### *Noise Disturbance*

Firelines, hand lines, and dozer lines were constructed in the Armer Mountain PAC beginning August 20, 2011. Chainsaws and chippers were used along State Highway 288 to remove hazard trees. A hand line and heli-spot were also developed on the boundary of the Workman Creek PAC, with the hand line barely entering the PAC. The use of chainsaws and chippers along State Highway 288 affected approximately 26 acres within the eastern edge of the Armer Mountain PAC. The core area for the Armer Mountain PAC was approximately 0.38 mile from the nearest suppression activities, which in this case were the chainsaws and chippers. The distance between the core and the highway was greater than the 0.25 mile buffer that is typically recommended to lessen noise disturbance. Altered behavior probably still occurred for both adult and juveniles in the area due to individual alertness being higher than normal from the fire. Sound disturbances could have altered dispersal and foraging behaviors. Foraging is especially critical for juvenile owls that need sufficient energy reserves to disperse. Other noise disturbance effects may have included flushing owls from roosts, altering roosting activities, hyper-alertness, and agitated behavior. These effects would increase the owl's vulnerability to predators, and increase vulnerability to stress and injury (USFWS 2012). These responses to noise disturbances cannot be considered insignificant. Disruption to normal behaviors regarding sheltering and foraging are likely to occur. However these disruptions did not measurably impact the species' ability to recover.

One study found that disturbance to roosting MSO from aircrafts is greatest the closer these actions occur to the owl's core area. Delaney et al. (1999) determined that helicopter flights flushed MSO 50 percent of the time within 98 feet, 19 percent within 197 feet, 14 percent within 344 feet, with no disturbance recorded beyond 344 feet. Heli-tankers did minimal bucket work within MSO habitat. The heli-tankers crossed over MSO habitat at 150 ft before dropping the water on the fire, and the documented height of aerial suppression equipment over MSO habitat was 200 ft. agl for the fixed wing. Given these heights, and the data from the Delaney et al. study (1999), noise disturbance is likely to have caused adverse effects to the MSO within the Armer Mountain PAC. Noise disturbances are probable for those owls that would have been

Mr. Neil J. Bosworth

displaced from the fire itself, and which would have an already heightened sense of alertness. Furthermore, owls that moved away from the Armer Mountain PAC to avoid the fire probably went southwest, or west of the PAC, based on habitat suitability. Water drops south, southwest, and west of the Armer Mountain PAC occurred in these same areas. Disruption to foraging behavior, dispersal, roosting behavior, and potential to flushing is likely.

The core of the Workman Creek PAC is greater than 0.25 mile from the heli-spot that was designated on the southeastern portion of the Tanner Fire. This distance would minimize noise disturbances from helicopters in the area; therefore any noise for this PAC was insignificant and discountable.

#### *Smoke Disturbance*

Suppression ignitions for the burnout and fireline may have contributed to smoke drift due to three of the suppression ignitions burning at moderate to high intensities. Two of the suppression burns were along the northern edge of the fire, and the third burn was to the north of the Workman Creek PAC. Smoke disturbance can include eye and respiratory irritation. The majority of the smoke from the wildfire and suppression burns plumed, with very little settling. Smoke was dispersed by a south, southeast blowing wind. A majority of the smoke would be produced from the wildfire, however given that the wildfire and suppression ignited fires were burning simultaneously and at relatively the same intensities, it is impossible to differentiate the smoke effects produced by the wildfire to those from burnout operations on the MSO with any degree of certainty. The amount of smoke from the suppression actions cannot be quantified; but with the area burned, and the intensity of the ignitions, it is likely that smoke from suppression activities is insignificant in relation to the amount of smoke produced by the wildfire.

#### *Habitat Disturbance*

An estimated 125 acres of protected habitat and 365 acres of restricted habitat were disturbed through ground suppression ignitions in both the Workman and Armer PACs. The one action to take place within the Workman Creek PAC was a handline. A burnout was ignited near the PAC, but did not burn into the PAC. The vegetation burned in the burnout activities was described as burning mostly at low intensity, with some areas burning at moderate to high intensities. In addition, as noted above, 8.4 acres were impacted by the dozer line. This totals approximately 498.4 acres of MSO habitat that was impacted through suppression actions. Vegetation along the constructed dozer and hand lines was displaced and removed. The creation of the dozer line and hand line may have also contributed to soil compaction and erosion, which could inhibit regeneration of plants. Other impacts that may occur from these control lines is the increased risk of non-native species occurrence, particularly with dozer lines, due to the removal of ground cover to expose mineral soil. The Forest Service concluded that this removal of the woody debris, plant cover, changes in tree size distribution, and reduction in the range of tree and plant species due to suppression activities is likely to adversely affect the critical habitat of the MSO. Furthermore the water and fire retardant drops that occurred in the MSO's critical habitat could result in defoliation of trees. The effects on the PCEs, while adverse, will be able to recover over time. Anecdotal evidence from MSO monitoring suggests that PACs burned

Mr. Neil J. Bosworth

with moderate-to-high fire severity continued to be occupied by reproductive owls, and sustain foraging behaviors (USFWS 2012).

It should be noted that, even though suppression activities may have impacted the MSO, we recognize the suppression activities as essential to prevent losses to surrounding areas including MSO habitat, from the Tanner Fire.

## **CUMULATIVE EFFECTS**

Cumulative effects include the effects of future State, tribal, local, or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act. Since the action occurred on Forest Service lands, most actions that would occur in the action area would require additional section 7 consultation.

## **CONCLUSION**

This biological opinion does not rely on the regulatory definition of “destruction or adverse modification” of critical habitat at 50 CFR 402.02. Instead, we have relied upon the statutory provisions of the Act to complete the following analysis with respect to critical habitat.

After reviewing the current status of the MSO and its designated critical habitat, the environmental baseline for the action area, the effects of the proposed action, and cumulative effects, it is the FWS’s biological opinion that the suppression activities taken during the Tanner Wildfire on the TNF did not jeopardize the MSO or destroy or adversely modify its critical habitat.

We present these conclusions for the following reasons:

1. The suppression actions occurred during the last ten days of the MSO breeding season. Therefore, it is not likely that the fire suppression actions associated with the fire precluded MSO reproduction within the action area, nor adversely affect eggs or owlets in the nest.
2. An approximated 26 acres within the eastern edge of the Armer Mountain PAC were affected by noises which probably disrupted foraging activities, and roosting behaviors, leading to adverse effects but which are not expected to extend beyond this PAC.
3. Water and retardant drops occurred in MSO critical habitat potentially disturbing owls in that area, but this is a small area of MSO critical habitat, and is not expected to permanently affect the functionality of the habitat.
4. Although the implementation of the suppression actions are not expected to reduce the conservation value of this area for MSO within the Basin and Range West EMU, suppression actions in critical habitat did result in the loss of some primary constituent

Mr. Neil J. Bosworth

elements. The actions impacted approximately 524.4 acres of critical habitat (490 acres from burnout, 8.4 from the dozer line, and 26 from noise). Impacts from suppression actions resulted in changes in tree size and distribution, loss of woody debris that has affected MSO foraging habitat, reduction in the range of tree species, and a reduction in adequate levels of residual plant cover. These impacts will take several years to recover, but these impacts did not result in the area being adversely modified or destroyed. Furthermore studies have shown that an area burned at moderate-high severities can sustain foraging, roosting, and be occupied by successfully breeding owls.

5. The Recovery Plan concludes that critical habitat unit BR-W-5, in which the Tanner Fire occurred, is necessary for the recovery of the species. The recovery potential of this unit is not precluded by the activities taken for the suppression of the fire given the acreage affected by the suppression actions, and ability for the PCEs in those areas to recover in a few years.

### **INCIDENTAL TAKE STATEMENT**

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

For the purposes of evaluating incidental take of MSO from the action under consultation, incidental take can be anticipated as either the direct harassment of individual birds or the alteration of habitat that affects behavior (i.e. breeding or foraging) of birds to such a degree that essential behaviors are impaired and individual birds are thus "taken."

### **AMOUNT OR EXTENT OF TAKE ANTICIPATED**

Using the best available data as summarized within this document, we identified suppression actions which were reasonably certain to have resulted in incidental take of MSOs in the action area. Based on the information provided in the emergency fire documentation form, the details of suppression actions taken, and our analysis, we estimate the following amount or extent of anticipated take resulting from suppression actions for the Tanner Wildfire:

Mr. Neil J. Bosworth

We conclude take in the form of harassment, associated with behavior disturbances such as stress, agitation, and/or changes to foraging activities from noise occurring during aerial and ground suppression, for one pair of MSOs and/or juveniles. For the Armer Mountain PAC (031205018), this anticipated take is in the form of short-term disturbance, which is a non-habitat altering action that disrupts or is likely to disrupt owl behavior for one to three breeding seasons.

We do not believe that take occurred for the following five PACs based on their location from the Tanner Wildfire perimeter where effects from smoke and noise were likely minimal: Workman Creek (031205014), Reynolds Creek (031205019), Coon Creek, Pueblo Canyon, and Cienega Springs.

### **EFFECT OF TAKE**

In this biological opinion, we determine that this level of anticipated take did not likely result in jeopardy to the MSO or result in destruction or adverse modification of MSO critical habitat.

Incidental take statements in emergency consultations do not include reasonable and prudent measures or terms and conditions to minimize take unless the agency has an ongoing action related to the emergency. The Forest has not advised us of any ongoing actions related to the emergency.

The FWS will not refer the incidental take of any migratory bird or bald eagle for prosecution under the Migratory Bird Treaty Act of 1918, as amended (16 U.S.C. Sections 703-712), or the Bald and Golden Eagle Protection Act of 1940, as amended (16 U.S.C. Sections 668-668d).

### **DISPOSITION OF DEAD, INJURED, OR SICK MSO**

Upon locating a dead, injured, or sick MSO, initial notification must be made to the FWS's Law Enforcement Office, 2545 West Frye Road Suite #8, Chandler, Arizona 85224 (telephone: 480/967-7900) within three working days of its finding. Written notification must be made within five calendar days and should include the date, time, and location of the animal, a photograph, if possible, and any other pertinent information. The notification shall be sent to the Law Enforcement Office with a copy to this office. Care must be taken in handling sick or injured animals to ensure effective treatment and care and in handling specimens to preserve the biological material in the best possible state. If possible, the remains of intact MSO(s) shall be provided to this office. If the remains of the MSO(s) are not intact or are not collected, the information noted above shall be obtained and the carcass left in place. Injured animals should be transported to a qualified veterinarian by an authorized biologist. Should the treated MSO(s) survive, the AESO should be contacted regarding the final disposition of the animal.

### **CONSERVATION RECOMMENDATIONS**

Section 7(a) (1) of the Act directs Federal agencies to utilize their authorities to further the purpose of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to

Mr. Neil J. Bosworth

minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information.

1. We recommend that the Armer Mountain and Workman Creek PACs be formally monitored for ten years post-fire to better understand the effects of the wildfire and related suppression activities on the MSO and that the results of the monitoring are provided to us.
2. We encourage regular monitoring of MSO PACs on the TNF.

In order to keep us informed of actions minimizing or avoiding adverse effects or benefiting listed species or their habitat, we request notification of the implementation of any conservation recommendations.

### **REINITIATION-CLOSING STATEMENT**

This concludes formal consultation on the actions outlined in this biological opinion. As provided in 50 CFR Section 402.16, reinitiating of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if:

- (1) New information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion;
- (2) The agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this opinion; or
- (3) A new species is listed or critical habitat designated that may be affected by the action.

We appreciate your consideration of the MSO. For further information, please contact Nichole Engelmann (x237) or Mary Richardson (x242). Please refer to consultation number 22410-2011-FE-0524 in future correspondence concerning this project.

Sincerely,

/s/ Debra Bills for

Steven L. Spangle  
Field Supervisor

cc.: Wildlife Biologist, Fish and Wildlife Service, Flagstaff, AZ (Attn: Shaula Hedwall)  
Forest Service, Tonto National Forest, Phoenix, AZ (Attn: Brian Peterson)  
District Ranger, Pleasant Valley Ranger District, Tonto National Forest, Young, AZ  
Chief, Habitat Branch, Arizona Game and Fish Department, Phoenix, AZ  
Regional Supervisor, Region VI, Arizona Game and Fish Department, Mesa, AZ

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Mr. Neil J. Bosworth

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# APPENDIX A

Figure 1: MSO PACs and the Tanner Fire boundary

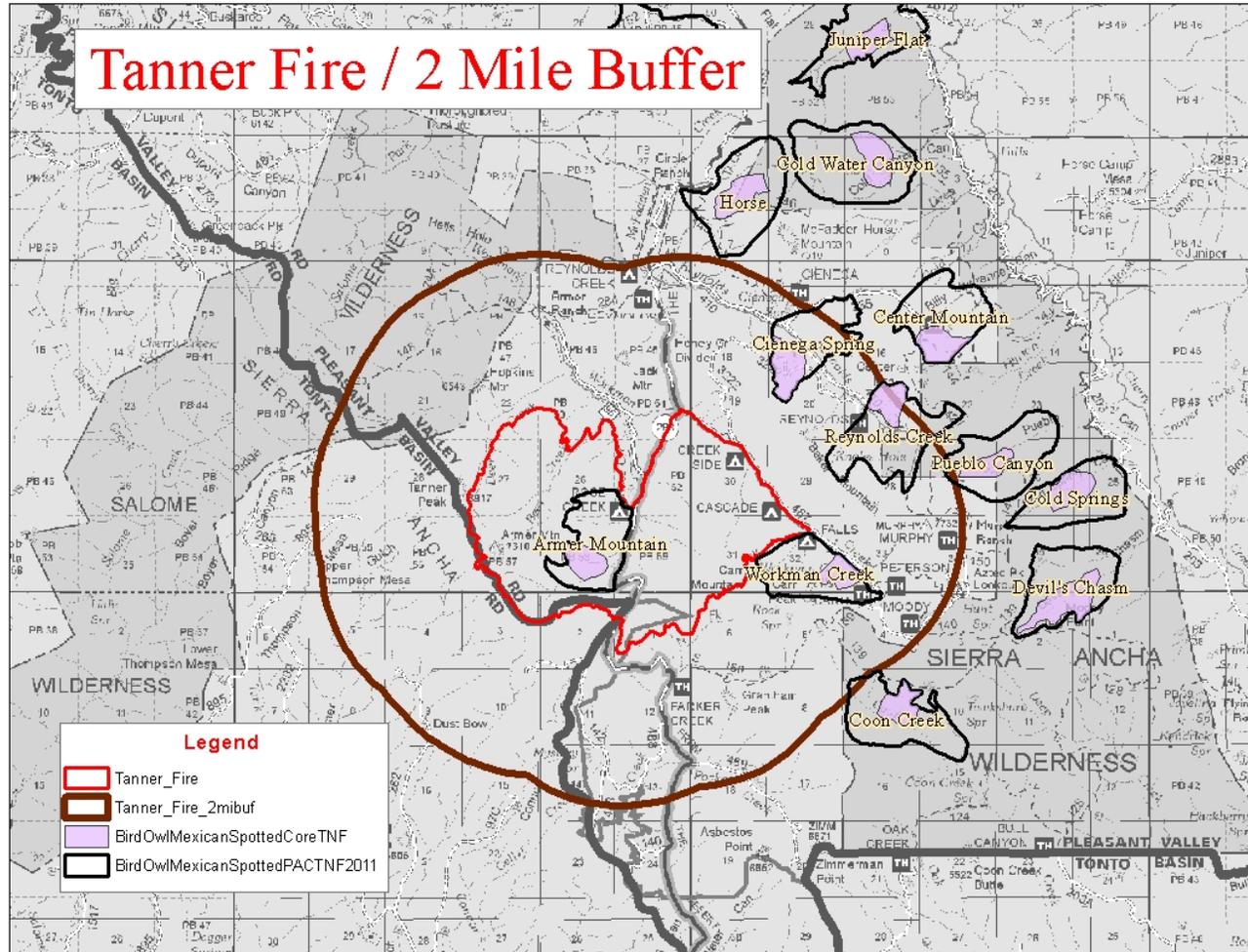
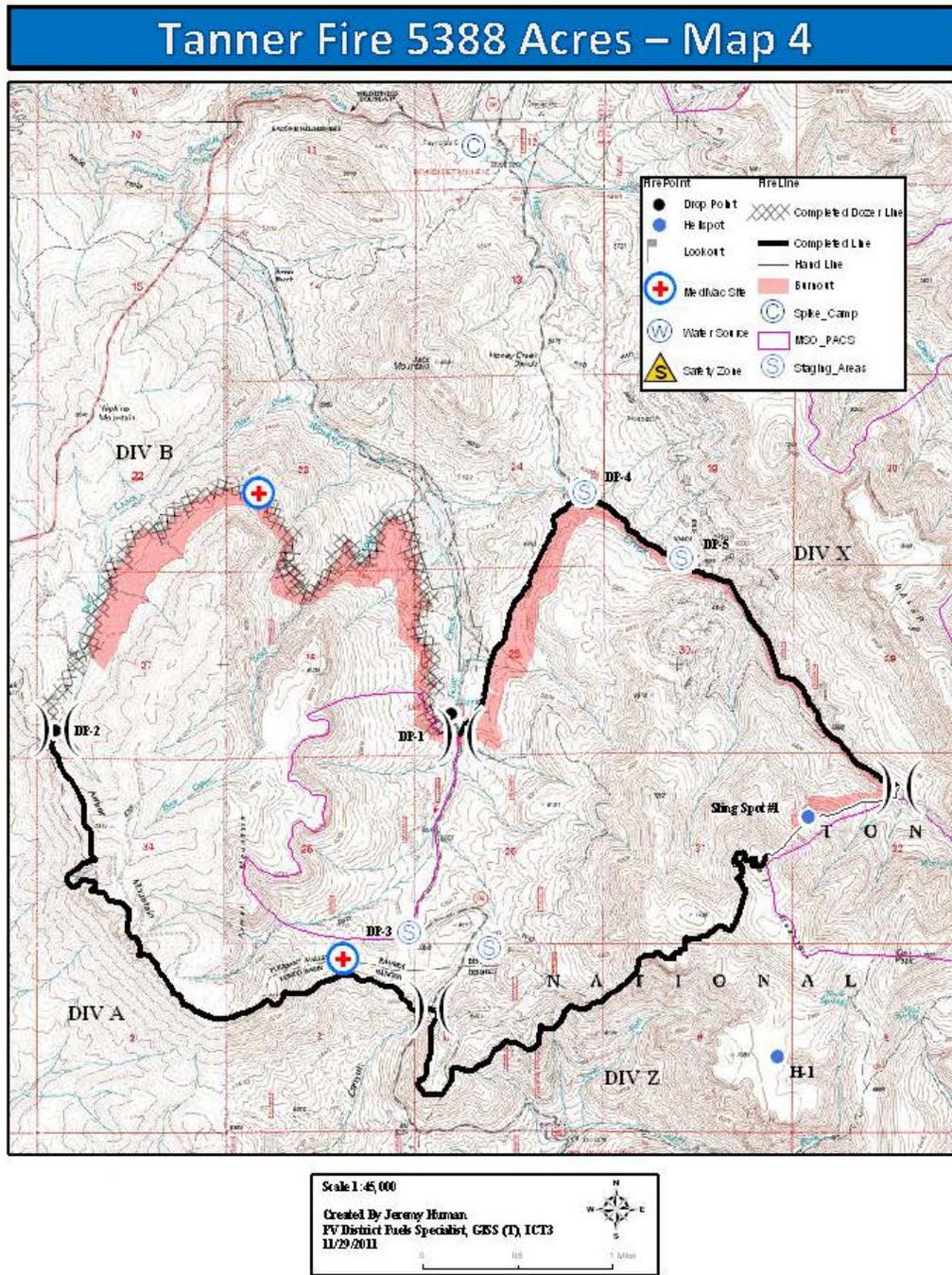


Figure 2: Map of the Tanner fire with ground suppression actions.



Mr. Neil J. Bosworth

Figure 3: Map showing aerial suppression actions

