

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-F-0020

22410-2009-FA-0100

March 24, 2011

Mr. Robert E. Hollis
Division Administrator
Federal Highway Administration
4000 North Central Avenue, Suite 1500
Phoenix, Arizona 85012-3500

RE: Interstate 40 Widening Project

Dear Mr. Hollis:

Thank you for your request for formal 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). Your request was dated October 26, 2010, and received by us on October 29, 2010. This consultation concerns the possible effects of widening Interstate 40 (I-40) from the Bellemont traffic interchange (TI) to the Winona TI (milepost [MP] 183 to MP 212), Coconino County, Arizona. The Federal Highway Administration (FHWA), in cooperation with the Arizona Department of Transportation (ADOT), has determined that the proposed action may affect the threatened Mexican spotted owl (*Strix occidentalis lucida*) (MSO).

You also determined that the proposed action would result in “no effect” to MSO critical habitat or to the endangered black-footed ferret (*Mustela nigripes*). “No effect” determinations do not require review from the FWS and are not addressed further.

This biological opinion is based on information provided in the October 26, 2010, Biological Assessment (BA), conversations and electronic correspondence with ADOT staff, and other sources of information. Literature cited in this biological opinion is not a complete bibliography of all literature available on the species addressed or on other subjects considered in this opinion. A complete administrative record of this consultation is on file at this office.

Consultation History

Details of the consultation history are summarized in Table 1.

Table 1. Summary of Consultation History

| Date | Event |
|---------------------------|---|
| April 30, 2009 to Present | We began discussions with FHWA, ADOT, and others regarding planning for the I-40 Widening Project, effects to wildlife, and potential wildlife crossings. |
| October 29, 2010 | FHWA requested formal consultation for potential adverse affects to the MSO resulting from implementation of the I-40 Widening Project. |
| November 15, 2010 | We acknowledged your request for formal consultation with a 30-day letter. |
| March 23, 2011 | ADOT provided a correction to the proposed action boundary description and we incorporated this correction. |

BIOLOGICAL OPINION

DESCRIPTION OF THE PROPOSED ACTION

This proposed project is located along I-40, within and near the city of Flagstaff, Arizona. The FHWA and ADOT are proposing to widen I-40 between the Bellemont TI at MP 183.6 (west of Flagstaff) and the Winona TI at MP 211.55 (east of Flagstaff) in Coconino County, Arizona (see Figures 1 and 2, pages 2-3 in the BA). Mainline improvements are needed to meet future travel demand within the study area. The 27.9-mile segment of I-40 between Bellemont and Winona is currently a four-lane divided highway. The proposed project generally involves widening I-40 within the median, expanding 10 existing TIs, and adding four new TIs. The proposed project would require new right-of-ways (R/W) for all new TIs and some existing TIs; mainline widening would occur within the existing R/W. The specific proposed roadway improvements/locations are listed in Tables 1 and 2 (page 4), Table 3 (pages 6-7), and Table 4 (pages 8-10) in the BA. In addition, vegetation removal would be required, but the location and extent of removal has not been determined.

Throughout this document, we will use the term “project limits” to represent the construction footprint (area of disturbance), while the term “project area” includes the surrounding lands outside, but adjacent to the project limits. The term “project vicinity” is used to denote a more expansive landscape context.

One travel lane would be added in each direction within the I-40 median and new auxiliary lanes would be added in three locations along I-40:

- Flagstaff Ranch/Dairy Road TI – New Woody Mountain Road TI
- I-40/I-17 System TI – New Lone Tree Road TI
- New Lone Tree Road TI – Butler Avenue TI.

Some of the bridges at existing cross roads do not have adequate horizontal or vertical clearance to accommodate mainline widening. Bridges with adequate clearance and loading capacity will be preserved in place and those that do not will either be replaced or widened to provide adequate clearance.

Rockfall mitigation is proposed in three locations within the project limits to prevent rocks from falling on the I-40 roadway. Construction activities associated with rockfall mitigation include removing steep, rocky hillsides adjacent to the roadway and creating more gently sloped hillsides with a ditch at the bottom to contain rocks that fall. The method of removal has not yet been determined, but may involve blasting. Rockfall mitigation is proposed in the following locations:

- Mainline: I-40 from MP 188.46 to MP 189.33 (new R/W required)
- A-1 Mountain WB Exit: westbound I-40 exit from MP 190.71 to MP 190.83 (new R/W required)
- 4th Street: Mainline I-40 from MP 199.10 to MP 200.40.

This project has not been programmed and funding has not been designated so a construction schedule has not been established. The project could occur at any time over the next ten years.

In addition to the lane construction, structural improvements, such as new bridges and fencing, are being evaluated to improve wildlife crossing opportunities, especially for elk, along the I-40 corridor and to reduce the frequency and severity of vehicle-wildlife collisions. The BA did not contain any specifics regarding these wildlife crossing construction actions as they are still being designed. However, ADOT and FHWA will continue to involve us, AGFD, and others in the planning of these crossings and will continue to report any listed or sensitive species mortalities found within the project area.

STATUS OF THE SPECIES

The MSO was listed as a threatened species in 1993 (USDI 1993). The primary threats to the species were cited as even-aged timber harvest and stand-replacing wildland fire, although grazing, recreation, and other land uses were also mentioned as possible factors influencing the MSO population. The FWS appointed the Mexican Spotted Owl Recovery Team in 1993, which produced the Recovery Plan for the Mexican Spotted Owl (Recovery Plan) in 1995 (USDI 1995). Critical habitat was designated for the MSO in 2004 (USDI 2004).

A detailed account of the taxonomy, biology, and reproductive characteristics of the MSO is found in the Final Rule listing the MSO as a threatened species (USDI 1993) and in the Recovery Plan (USDI 1995). The information provided in those documents is included herein by reference. Although the MSO's entire range covers a broad area of the southwestern United States 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 in the southwestern United States and Mexico.

The United States range of the MSO has been divided into six recovery units (RU), as discussed in the Recovery Plan. The primary administrator of lands supporting the MSO in the United States is the Forest Service. Most owls have been found within Forest Service Region 3 (which includes 11 National Forests in Arizona and New Mexico). Forest Service Regions 2 and 4 (which includes two National Forests in Colorado and three in Utah) support fewer owls. According to the Recovery Plan, 91 percent of MSO known to exist in the United States between 1990 and 1993 occurred on lands administered by 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 prevalent throughout Region 3 National Forest lands and is thought to have a negative effect on the availability of grass cover for prey species. Recreation 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 recreation areas are much more erratic in their movement patterns and behavior. Fuels reduction treatments, though critical to reducing the risk of severe wildland fire, 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 National Forest System 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, high-severity, stand-replacing wildland fire is probably the greatest threat to MSO within the action area. As throughout the West, fire severity and size have been increasing within this geographic area.

Global climate change may also be a threat to the MSO and synergistically result in increased effects to habitat from fire, fuels reduction treatments, and other factors discussed above. Studies have shown that since 1950, the snowmelt season in some watersheds of the western U.S. has advanced by about 10 days (Dettinger and Cayan 1995, Dettinger and Diaz 2000, Stewart et al. 2004). Such changes in the timing and amount of snowmelt are thought to be signals of climate-related change in high elevations (Smith et al. 2000, Reiners et al. 2003). The impact of climate change is the intensification of natural drought cycles and the ensuing stress placed upon high-elevation montane habitats (IPCC 2007, Cook et al. 2004, Breshears et al. 2005, Mueller et al. 2005). The increased stress put on these habitats is likely to result in long-term changes to vegetation, invertebrate, and vertebrate populations within coniferous forests and canyon habitats that effect ecosystem function and process.

A reliable estimate of the numbers of owls throughout its entire range is not currently available (USDI 1995) and the quality and quantity of information regarding numbers of MSO vary by source. USDI (1991) reported a total of 2,160 owls throughout the United States. Fletcher (1990) calculated that 2,074 owls existed in Arizona and New Mexico. However, Ganey *et al.* (2000) estimates approximately $2,950 \pm 1,067$ (SE) MSOs in the Upper Gila Mountains RU alone. The Forest Service Region 3 most recently reported a total of approximately 1,025 PACs established on National Forest System (NFS) lands in Arizona and New Mexico (B. Barrera, pers. comm. June 18, 2007). The FS Region 3 data are the most current compiled information available to us; however, survey efforts in areas other than NFS lands have resulted in additional sites being located in all Recovery Units.

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 (Λ =Lambda) indicated that the Arizona population was stable (mean Λ 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 Λ 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. However, due to the high annual variation in recruitment, the MSO is then likely very vulnerable to actions that impact adult survival (e.g., habitat alteration, drought, etc.) during years of low recruitment.

Since the owl was listed, we have completed or have in draft form a total of 223 formal consultations for the MSO. These formal consultations have identified incidences of anticipated incidental take of MSO in 440 PACs over the course of 17 years. The form of this incidental take is almost entirely harm or harassment, rather than direct mortality, and many of these actions have resulted in single or short-term disturbance to owls that has not resulted in long-term harassment, habitat degradation, or habitat loss. These consultations have primarily dealt with actions proposed by Forest Service Region 3. However, in addition to actions proposed by Forest Service Region 3, we have also reviewed the impacts of actions proposed by the Bureau of Indian Affairs, Department of Defense (including Air Force, Army, and Navy), Department of Energy, National Park Service, and Federal Highway Administration. These proposals have included timber sales, road construction, fire/ecosystem management projects (including prescribed natural and management ignited fires), livestock grazing, recreation activities, utility corridors, military and sightseeing overflights, and other activities. Only two of these projects (release of site-specific owl location information and existing forest plans) have resulted in biological opinions that the proposed action would likely jeopardize the continued existence of the MSO. The jeopardy opinion issued for existing Forest Plans on November 25, 1997 was rendered moot as a non-jeopardy/no adverse modification BO was issued the same day.

ENVIRONMENTAL BASELINE

The environmental baseline includes past and present impacts of all Federal, State, or private actions in the action area, the anticipated impacts of all proposed Federal actions within 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 the action now under consultation.

Description of the Action Area

The project area is located mostly within the Petran Montane Conifer Forest Biotic Community, with the eastern 7.25 miles of the project limits located within the Great Basin Conifer Woodland Biotic Community. Localized pockets of Plains and Great Basin Grasslands are also present in the project area, sporadically interspersed among the other two community types. Elevations within the project limits range from 6,460 to 7,635 feet above mean sea level. Dominant vegetation in the project area is ponderosa pine (*Pinus ponderosa*) in the central and western portions of the project area, with juniper (*Juniperus* spp.) and pinyon pine (*Pinus edulis*)

becoming dominant toward the project's eastern end. At the western end of the project limits, the I-40 median is approximately 400 feet wide, and is vegetated with ponderosa pine trees. The median becomes much narrower toward the eastern end, with vegetation dominated by pinyon-juniper, and then only grasses at the very end. Other vegetation observed in the project area includes snakeweed (*Gutierrezia* spp.), rabbitbrush (*Chrysothamnus* spp.), cliffrose (*Purshia glandulosa*), Arizona dock (*Rumex hymenosepalus*), Apache plume (*Fallugia paradoxa*), and low-lying grasses and forbs.

No permanent water sources are present within the project limits or surrounding project area; however, numerous ephemeral drainages dissect the project limits, including Volunteer Wash, Sinclair Wash, Rio de Flag, San Francisco Wash, Walnut Creek, Youngs Canyon, and numerous unnamed washes. No riparian vegetation occurs within the project limits or in the surrounding project area.

A. Status of the species within the action area

There is no MSO habitat (as defined in the Recovery Plan) or designated critical habitat within the project limits. However, a portion of one PAC occurs within the project area and MSO have been documented in the project vicinity. Twenty-seven protected activity centers (PACs) have been delineated within 10 miles of the project limits. The Dry Lake PAC (#040231) is located within one mile of the project limits and occurs on Coconino National Forest, Naval Observatory, and Arizona State Land Department lands. Specifically, the Dry Lake PAC is located south of I-40, from approximately MP 190.5 to MP 193.0, approximately 0.4 mile from I-40 at the closest point.

MSO habitat also occurs within the project vicinity. For example, the western edge of Camp Navajo contains restricted habitat in the Volunteer Mountain area and is located at the western edge of the project limits at Bellemont. A telemetry study in the fall of 1995 found that a dispersing juvenile MSO spent approximately 2 weeks in the immediate vicinity of Volunteer Mountain (within the project area) before dispersing onto the Kaibab National Forest (Joe Ganey, Forest Service Experimental Station, Flagstaff, AZ, pers. comm., 1995). Therefore, the protected and restricted habitat within the Camp Navajo facility could serve as an important corridor for dispersing owls. Since that time, additional detections of owls near Volunteer Mountain seem to indicate that spotted owls use this area, though we have not been able to locate resident owls outside of the Volunteer Canyon PAC, several miles to the south of Volunteer Mountain.

B. Factors affecting the species within the action area

Current activities affecting the species in the action area are associated with fuels reduction treatments on the Coconino National Forest (e.g., Woody Ridge Forest Restoration Project), Naval Observatory Flagstaff Station, Arizona State Land Department, and Camp Navajo. In addition, the I-40 corridor has seen increased urban and industrial development throughout the project area from Bellemont to Winona.

EFFECTS OF THE ACTION

Effects of the action means 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. The direct and indirect effects of the proposed action include the potential for MSO to be injured and/or killed by vehicles on I-40, as the freeway currently bisects an area that includes many PACs and restricted pine-oak habitat in the project vicinity. In addition, we have some data to indicate that there is a dispersal corridor near the western end of the project limits. There is no MSO habitat or critical habitat that will be directly or indirectly impacted by the proposed action.

No suitable nesting habitat for the MSO is present in the project limits. However, suitable foraging habitat exists in the project area. While project activities could cause MSO to avoid the immediate project area during periods of active construction, the project will not reduce the ability of MSO to forage in the project area and will not result in a reduction in prey availability. While critical habitat has been designated south of I-40 from approximately MP 190 to MP 193, and a PAC has been delineated approximately 0.4 mile south of I-40 within the designated critical habitat, no primary constituent elements of critical habitat or suitable nesting habitat are present in the project limits. Therefore, the project would not result in modification to designated critical habitat or suitable nesting habitat.

Occasionally, MSO are known to fly across roadways, even large interstates, during normal foraging and dispersal activities (Reichenbacher 2000). In some instances, a flight pattern across travel corridors may result in the direct mortality of owls from collisions with passing vehicles, and it not uncommon to see a variety of dead owl species along highways in western North America (Jackson 1986). Reichenbacher (2000) reported six recorded probable interactions between MSO and vehicles on highways in Arizona between 1964 and 1999. In addition, our office has documented two apparent MSO-vehicle collisions resulting in death of MSO on Highway 87 on the Coconino National Forest (FWS files). On July 1, 2009, a dead MSO apparently hit by a vehicle was found at the Kelly Canyon TI on I-17, approximately ten miles south of Flagstaff. The ultimate frequency of road crossings may depend upon the distance from the road to occupied territories, but MSO vehicle collisions can also occur far from known territories, as was recorded in 1989 when a second year male MSO was found dead near 16th Street and Bell Road, Phoenix, Arizona.

The “edge effect” created by roadway corridors can attract wildlife for the available habitat and prey, and it is well known that some species of raptors prefer to hunt along roadways, especially where constructed hunting perches exist (e.g., fence posts, power lines, etc.). Although it is unknown how extensively MSO may/may not use the highway edge for foraging, based upon adjacent habitats and occupied sites, it is not unreasonable to assume that MSO are present in the project area and likely stray into and/or cross the I-40 corridor on occasion.

Adding two travel lanes to I-40 may result in a higher rate of incidental mortality to MSO attempting to cross the freeway corridor than currently exists. The wider roadway will require more flight time by owls to cross, thereby increasing the total time an individual would potentially be present in the travelling path of a passing vehicle. The potential for increased mortality is especially important in areas where occupied MSO PACs, foraging, and dispersing activities occur in close proximity to the highway corridor. The Dry Lake PAC is the closest PAC to the project limits (0.4 mile), but other PACs occur in the project vicinity (e.g., Volunteer Canyon) and habitat is located north and south of the I-40 corridor. We are reasonably certain that MSO occupying these PACs and/or foraging in adjacent habitats are at risk from being struck by vehicles on I-40 and that this risk could increase when the road is widened.

Though a section of the project limits comes within 0.4 mile of the Dry Lake MSO PAC and construction and/or blasting will likely occur during the breeding season, we believe that this disturbance will be insignificant and discountable and is not the reason that formal consultation was initiated. Owls likely avoid the habitat closer to I-40 due to the daily noise and activity associated with the highway. Project-related noise is not expected to be greater than the ongoing, daily noise generated on I-40. The distance from the project limits to protected habitat is ≥ 0.25 mile from the project limits, and proposed blasting locations are ≥ 0.5 mile from the Dry Lake PAC boundary. Though managers have not delineated the nest core for the Dry Lake PAC, based upon what we know of the habitat, the best nesting and roosting habitat in the PAC is likely greater than 1.0 mile from the project limits. In addition, intervening topography (ridges) and forest vegetation between the construction areas and the PAC will significantly diminish construction noise. Therefore, we believe that potential project-related disturbance to owls associated with the Dry Lake PAC during the breeding season (March 1 through August 31) would be insignificant.

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 land within the project vicinity is almost exclusively managed by the Forest Service, most activities that could potentially affect listed species are Federal activities and subject to additional section 7 consultations. Future non-Federal actions within the project area that may be reasonably certain to occur include the potential development and/or modification of private property in-holdings along the I-40 corridor. These activities may result in localized disturbance to MSO and/or impacts to MSO habitat, but would not impact the long-term recovery and/or conservation of MSO and their habitat within the project area, Recovery Unit or critical habitat unit.

CONCLUSION

After reviewing the current status of the MSO, the environmental baseline for the action area, the effects of the proposed highway construction project, and the potential for cumulative effects, it is our biological opinion that implementation of the I-40 Widening Project, as proposed, is not likely to jeopardize the continued existence of the MSO.

We present this conclusion for the MSO for the following reasons:

1. MSO could be killed by collisions with vehicles on I-40, but this is expected to occur very infrequently and should not significantly impact our ability to recover owls in the Upper Gila Mountain RU.
2. The implementation of the proposed action is not expected to impede the survival or recovery of MSO within the Upper Gila Mountains Recovery Unit as no MSO habitat will be removed and/or modified.

The conclusions of this biological opinion are based on full implementation of the project as described in the Description of the Proposed Action section of this document, including any Conservation Measures that were incorporated into the project design.

INCIDENTAL TAKE STATEMENT

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

For the purpose of evaluating incidental take of MSO from the action under consultation, incidental take can be anticipated as either the direct mortality of individual birds, or the alteration of habitat that affects behavior (i.e. breeding or foraging) of birds to such a degree that the birds are considered lost as viable members of the population and thus "taken." They may fail to breed, fail to successfully rear young, raise less fit young, or desert the area because of disturbance or because habitat no longer meets the owl's needs.

In past Biological Opinions, we used the management territory to quantify incidental take thresholds for the MSO (see Biological Opinions provided to the Forest Service from August 23, 1993 through 1995). The current section 7 consultation policy provides for incidental take if an activity compromises the integrity of a PAC. Actions outside PACs will generally not be considered incidental take, except in cases when areas that may support owls have not been adequately surveyed. However, in this situation and based upon potential dispersal corridors that exist through the project area, it is possible that subadult and/or juvenile MSO not associated with a PAC could be killed moving through the project area. Though the Dry Lake PAC is located the closest to the highway, it is possible that MSO moving from the greater Oak Creek watershed or Walnut Canyon north and owls moving from the San Francisco Peaks area south, from PACs we cannot specifically identify, could be killed when crossing the widened highway.

Using available information as summarized within this document, we have identified conditions of possible incidental take for the MSO associated with implementation of the I-40 Widening Project within. Based on the best available information concerning the MSO, the project description, and information in our files, take is anticipated for the MSO as a result of direct mortality from vehicle collision. This direct effect is likely unavoidable due to the high potential for MSO to occur along the freeway and the expansive habitat that occurs on either side of the interstate. However, based on the known incidence of MSO-vehicle collisions, we believe that collisions between MSO and vehicles on I-40 will be rare.

Amount or Extent of Take Anticipated

We anticipate that the proposed action is reasonably certain to result in incidental take of MSO. We anticipate that the take of MSO will be difficult to detect because finding a dead or impaired specimen is unlikely. However the level of incidental take can be anticipated by the information

we have regarding the potential for MSO to be hit by vehicles along this freeway (one death has already been documented). We believe that the potential for MSO-vehicle collisions will likely increase following the widening of the road due to the increased exposure of MSO crossing the highway to vehicles.

We anticipate the incidental take of one MSO in the form of harm and/or direct mortality due to vehicular collision on average once every ten years, for a 20-year period. Following 20 years or the discovery of two mortalities, we will re-review the project with FHWA and ADOT. Typically we would associate this take with a specific PAC; however, because there is ample opportunity for MSO from various occupied areas to attempt crossing the highway and potentially be injured or killed, we will associate this incidental take with MSO in the northern Upper Gila Mountain Recovery Unit.

Effect of the Take

In this biological opinion we determine that this level of anticipated take is not likely to result in jeopardy to the species considered herein.

Reasonable and Prudent Measures with Terms and Conditions

No reasonable and prudent measures are included in this incidental take statement as there are no reasonable means by which this incidental take may be minimized. The proposed action will not result in any direct or indirect effects to MSO habitat or result in noise disturbance to MSO and we are unable to provide any reasonable measures to reduce the potential for direct mortality. ADOT and FHWA have already agreed in the proposed action to continue to report any mortality of MSO or other sensitive species within the project area to the FWS and/or AGFD.

DISPOSITION OF DEAD, INJURED, OR SICK MSO

Upon locating a dead, injured, or sick listed species initial notification must be made to the FWS's Law Enforcement Office, 2450 W. Broadway Rd, Suite 113, Mesa, Arizona, 85202, telephone (480) 967-7900, within three working days of its finding. Written notification must be made within five calendar days and 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 in handling dead specimens to preserve the biological material in the best possible state.

If possible, the remains of intact species shall be provided to this office. If the remains of the species 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 species survive, contact our office regarding the final disposition of the animal.

CONSERVATION RECOMENDATIONS

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

1. We recommend that the FHWA and ADOT continue to work with AGFD, the FWS, and others to provide wildlife passage and travel corridors on I-40 and other major road barriers to wildlife in Arizona.

REINITIATION NOTICE

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

Thank you for your continued coordination. In all future correspondence on this project, please refer to the consultation number 22410-2011-F-0020. We also encourage you to coordinate the review of this project with the Arizona Game and Fish Department.

Should you require further assistance or if you have any questions, please contact Shaula Hedwall at (928) 226-0614 (x103) or Brenda Smith (x101) of our Flagstaff Suboffice.

Sincerely,

/s/ Brenda Smith for

Steven L. Spangle
Field Supervisor

cc (electronic):

Chief, Habitat Branch, Arizona Game and Fish Department, Phoenix, AZ

Field Supervisor, Arizona Game and Fish Department, Region 2, Flagstaff, AZ

Justin White, Environmental Planner, Arizona Department of Transportation, Flagstaff, AZ

Forest Biologist, Coconino National Forest, Supervisor's Office, Flagstaff, AZ

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