Act, I certify that this action will not have a significant economic impact on a substantial number of small entities. This proposed rule will not impose any new requirements on any entities because it does not impose any additional regulatory requirements. This action also does not have Tribal implications because it will not have a substantial direct effect on one or more Indian Tribes, on the relationship between the Federal government and Indian Tribes, or on the distribution of power and responsibilities between the Federal government and Indian Tribes, as specified by Executive Order 13175 (65 FR 67249, November 9, 2000). This action also does not have Federalism implications because it does not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132 (64 FR 43255, August 10, 1999). This action also is not subject to Executive Order 13045 "Protection of Children from Environmental Health Risks and Safety Risks" (62 FR 19885, April 23, 1997). The requirements of section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) do not apply. This action does not impose an information collection burden under the provisions of the Paperwork Reduction Act of 1995 (44 U.S.C. 3501, *et seq.*). EPA's compliance with these statutes and Executive Orders for the underlying rule is discussed in the October 29, 2009, **Federal Register** document.

List of Subjects in 40 CFR Part 63

Environmental protection, Administrative practice and procedure, Air pollution control, Monitoring, Reporting and recordkeeping.

Dated: December 7, 2010.

Lisa P. Jackson,

Administrator.

[FR Doc. 2010–31330 Filed 12–13–10; 8:45 am]

BILLING CODE 6560–50–P

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

[Docket No. FWS–R2–ES–2010–0041; MO 92210–0–0008]

RIN 1018–AV97

Endangered and Threatened Wildlife and Plants; Endangered Status for Dunes Sagebrush Lizard

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: We, the U.S. Fish and Wildlife Service, propose to list the dunes sagebrush lizard (*Sceloporus arenicolus*), a lizard known from southeastern New Mexico and adjacent west Texas, as endangered under the Endangered Species Act of 1973, as amended. If we finalize the rule as proposed, it would extend the Act's protections to this species. We have determined that critical habitat for the dunes sagebrush lizard is prudent but not determinable at this time.

DATES: We will consider comments received or postmarked on or before February 14, 2011. We must receive requests for public hearings, in writing, at the address shown in the **FOR FURTHER INFORMATION CONTACT** section by January 28, 2011.

ADDRESSES: You may submit comments by one of the following methods:

- *Federal eRulemaking Portal: http://www.regulations.gov.* Search for docket FWS–R2–ES–2010–0041 and then follow the instructions for submitting comments.
- *U.S. mail or hand-delivery:* Public Comments Processing, Attn: FWS–R2–ES–2010–0041; Division of Policy and Directives Management; U.S. Fish and Wildlife Service; 4401 N. Fairfax Drive, Suite 222; Arlington, VA 22203.

We will post all information received on *http://www.regulations.gov.* This generally means that we will post any personal information you provide us (*see* the Public Comments section below for more details).

FOR FURTHER INFORMATION CONTACT: Wally "J" Murphy, Field Supervisor, New Mexico Ecological Services Field Office, 2105 Osuna, NE., Albuquerque, NM 87113; by telephone 505–761–4718 or by facsimile 505–346–2542. Persons who use a telecommunications device for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 800–877–8339.

SUPPLEMENTARY INFORMATION:

Public Comments

We intend that any final action resulting from this proposed rule will be based on the best scientific and commercial data available and be as accurate and as effective as possible. Therefore, we request comments or information from other concerned governmental agencies, Native American Tribes, the scientific community, industry, or any other interested parties concerning this proposed rule. We particularly seek comments concerning:

(1) The historical and current status and distribution of the dunes sagebrush lizard, its biology and ecology, and ongoing conservation measures for the species and its habitat.

(2) Information relevant to the factors that are the basis for making a listing determination for a species under section 4(a) of the Endangered Species Act of 1973, as amended (Act) (16 U.S.C. 1531 *et seq.*), which are:

(a) The present or threatened destruction, modification, or curtailment of the species' habitat or range;

(b) Overutilization for commercial, recreational, scientific, or educational purposes;

(c) Disease or predation;

(d) The inadequacy of existing regulatory mechanisms; or

(e) Other natural or manmade factors affecting its continued existence and threats to the species or its habitat.

(3) Which areas would be appropriate as critical habitat for the species and why they should be proposed for designation as critical habitat.

(4) The reasons why areas should or should not be designated as critical habitat as provided by section 4 of the Act of 1973, including whether the benefits of designation would outweigh threats to the species that designation could cause, such that the designation of critical habitat is or is not prudent.

Please note that submissions merely stating support for or opposition to the action under consideration without providing supporting information, although noted, will not be considered in making a determination, as section 4(b)(1)(A) of the Act directs that determinations as to whether any species is an endangered or threatened species must be made "solely on the basis of the best scientific and commercial data available."

You may submit your comments and materials concerning this proposed rule by one of the methods listed in the **ADDRESSES** section.

If you submit a comment via *http://www.regulations.gov,* your entire

submission—including any personal identifying information—will be posted on the Web site. If your submission is made via a hard copy that includes personal identifying information, you may request at the top of your document that we withhold this information from public review. However, we cannot guarantee that we will be able to do so. We will post all hardcopy comments on *http://www.regulations.gov.* Please include sufficient information with your comments to allow us to verify any scientific or commercial information you include.

Comments and materials we receive, as well as supporting documentation we used in preparing this proposed rule, will be available for public inspection on *http://www.regulations.gov,* or by appointment, during normal business hours, at the New Mexico Ecological Services Field Office (*see* **FOR FURTHER INFORMATION CONTACT**).

Background

Previous Federal Action

On December 30, 1982, we published our notice of review classifying the sand dune lizard (dunes sagebrush lizard) as a Category 2 species (47 FR 58454). Category 2 status included those taxa for which information in the Service's possession indicated that a proposed rule was possibly appropriate, but for which sufficient data on biological vulnerability and threats were not available to support a proposed rule. Please note that we will be referring to this species throughout this finding using the currently accepted common name of dunes sagebrush lizard (Crother *et al.* 2008, p. 39).

On September 18, 1985, we published our notice of review re-classifying the dunes sagebrush lizard as a Category 3C species (50 FR 37958). Category 3C status included taxa that were considered more abundant or widespread than previously thought or not subject to identifiable threats. Species in this category were not included in our subsequent notice of reviews unless their status had changed. Therefore, in our notice of review on November 21, 1991 (56 FR 58804), the dunes sagebrush lizard was not listed as a candidate species.

On November 15, 1994, our animal candidate notice of review once again included the dune sagebrush lizard as a Category 2 species (59 FR 58982), indicating that its conservation status had changed. On February 28, 1996, we published a Candidate Notice of Review (CNOR) that announced changes to the way we identify candidates for listing under the Act (61 FR 7596). In that document, we provided notice of our intent to discontinue maintaining a list of Category 2 species, and we dropped all former Category 2 species from the list. This was done in order to reduce confusion about the conservation status of those species, and to clarify that we no longer regarded them as candidate species. As a result, the dunes sagebrush lizard did not appear as a candidate in our 1996 (61 FR 7596; February 28, 1996), 1997 (62 FR 49398; September 19, 1997), or 1999 (64 FR 57534; October 25, 1999) notices of review.

In our 2001 CNOR, the dunes sagebrush lizard was placed on our candidate list with listing priority number (LPN) of 2 (66 FR 54807; October 30, 2001). Service policy (48 FR 43098, September 21, 1983) requires the assignment of an LPN to all candidate species that are warranted for listing. This listing priority system was developed to ensure that the Service has a rational system for allocating limited resources in a way that ensures that the species in greatest need of protection are the first to receive such protection. A smaller LPN reflects a need for greater protection than a larger LPN. The LPN is based on the magnitude and immediacy of threats and the species' taxonomic uniqueness with a value range from 1 to 12. A listing priority number of 2 for the dunes sagebrush lizard means that the magnitude and the immediacy of the threats to the species are high. Since 2001, the species has remained on our candidate list with an LPN of 2.

On June 6, 2002, the Service received a petition from the Center for Biological Diversity to list the dunes sagebrush lizard. On June 21, 2004, the United States District court for the District of Oregon (*Center for Biological Diversity* v. *Norton,* Civ. No. 03–1111–AA) found that our resubmitted petition findings for the southern Idaho ground squirrel, the dunes sagebrush lizard, and the Tahoe yellow cress that we published as part of the CNOR on May 4, 2004 (69 FR 24876), were not sufficient. The court indicated we did not specify what listing action is proposed for the higher priority species that precluded publishing a proposed rule for these three species, and that we did not adequately explain the reasons why actions for the identified species are deemed higher in priority, or why such actions result in the preclusion of listing actions for the southern Idaho ground squirrel, sand dune lizard, or Tahoe yellow cress. The court ordered that we publish updated findings for these species within 180 days of the order.

On December 27, 2004, the Service published its 12-month finding, which determined that listing was warranted, but precluded by higher priorities (69 FR 77167). In that finding, the species remains on the candidate list with a LPN of 2.

Species Information

The dunes sagebrush lizard is a small, light brown phrynosomatid lizard (family Phrynosomatidae, genus *Sceloporus*) with a maximum snout-to-vent length of 70 millimeters (mm) (2.8 inches (in)) for females and 65 mm (2.6 in) for males (Degenhardt *et al.* 1996, p. 160). Sabath (1960, p. 22) first described the occurrence of light-colored sagebrush lizards in southeastern New Mexico and western Texas. Kirkland L. Jones collected the type specimen for *Sceloporus arenicolus* on April 27, 1968, in eastern Chaves County, New Mexico (Degenhardt *et al.* 1996, p. 159). Degenhardt and Jones (1972, p. 213) described the dunes sagebrush lizard (*Sceloporus graciosus arenicolus*) as a subspecies of the sagebrush lizard (*Sceloporus graciosus*). The dunes sagebrush lizard was elevated to a species in 1992 and this elevation was validated with molecular and morphological evidence in 1997 (Painter *et al.* 1999, p. 3). Much of the previous literature concerning *Sceloporus arenicolus* refers to it by the common name of sand dune lizard (*e.g.,* Degenhardt *et al.* 1996, p. 159); however, the currently accepted common name is dunes sagebrush lizard (Crother *et al.* 2008, p. 39).

The dunes sagebrush lizard's nearest relative is the sagebrush lizard (*Sceloporus graciosus*), which is found in sagebrush habitat in northwestern New Mexico. The dunes sagebrush lizard and sagebrush lizard were isolated from each other about 15,000 years ago during the late Pleistocene era, when areas that had become warm and dry separated suitable habitat for each species. It is estimated that the shinnery oak sand dune habitat with which the dunes sagebrush lizard is associated was also formed during this time (Bailey and Painter 1994, p. 22; Chan *et al.* 2008, p. 8). The dunes sagebrush lizard is a habitat specialist that is native to a small area of shinnery oak dunes in southeastern New Mexico and adjacent western Texas. The shinnery oak dune habitat extends from the San Juan Mesa in northeastern Chaves County, Roosevelt County, through eastern Eddy and southern Lea Counties in New Mexico (Fitzgerald *et al.* 1997, p. 15). In Texas, the dunes sagebrush lizard is found in a narrow band of shinnery oak dunes in Gaines, Ward, Winkler, and Andrews Counties (Laurencio *et al.* 2007, p. 8).

Dunes sagebrush lizards are active between March and October and are dormant underground during the colder winter months. Mating has been observed in April and May (Sena 1985, p. 17). Females produce one to two clutches per year, with three to five eggs per clutch. Hatchlings appear between July and September (Hill and Fitzgerald 2007, p. 2; Sena 1985, p. 6).

Habitat

The dunes sagebrush lizard is considered to be a habitat specialist because it has adapted to thrive only in a narrow range of environmental conditions that exist within shinnery oak dunes. Its survival is directly linked to the quality and quantity of available shinnery oak dune habitat (Fitzgerald *et al.* 1997, p. 8). Shinnery oak dune habitat is dependent upon the existence of shinnery oak (*Quercus havardii*) in areas of appropriate sediment availability. Each shinnery oak tree occurs primarily under ground, with only one-tenth of the plant standing 0.6 to 0.8 meters (m) (2 to 3 feet (ft)) above ground level. Shinnery oaks are clonal, meaning that each plant in a clone is descended asexually from a single ancestor. One clone can cover up to 81 hectares (ha) (205 acres (ac)) and can live over 13,000 years, although individual stems on the surface may not be that old (Peterson and Boyd 1998, p. 5). These trees, with large root and stem masses and an extensive underground system of horizontal stems, support the dynamic dune system that is required by this lizard. Shinnery oak generally grows in permeable sandy soils, and does not grow in areas with high amounts of calcium carbonate or caliche, a hardened deposit of calcium carbonate (Peterson and Boyd 1998, p. 7), as discussed further below. Shinnery oak is very drought-tolerant and has a vertical root system that extends 4.6 to 6.1 m (15 to 20 ft) below the surface (Peterson and Boyd 1998, p. 5).

The unique shinnery oak dune ecosystem was formed in the late Pleistocene era when wind erosion of the Blackwater Draw formation and shinnery oak encroachment formed the dune system. The prevailing winds blow from the southwest to the northeast, creating the sand accumulation along the western edge of the Llano Estacado (a large mesa or tableland) (Muhs and Holliday 2001, p. 82). The dune fields of western Texas and eastern New Mexico are being stabilized by the shinnery oak cover and would flatten without the stability provided by this vegetation (Muhs and Holliday 2001, p. 75). The dune system is stable in most areas except where land practices have caused vegetation removal and shifting sands (Muhs and Holliday 1995, p. 198). It is estimated that shinnery oak historically covered 1,068,370 ha (2,640,000 ac) in New Mexico and 1,416,400 ha (3,500,000 ac) in Texas (Peterson and Boyd 1998, p. 2). Large portions of this shinnery oak habitat have been converted to cropland and rangeland. The shinnery oak community is not spreading, and its boundaries have not changed since early surveys, suggesting that new habitat is not being created (Peterson 1992, p. 2).

In 1982, it was estimated that there was one million acres (404,686 ha) of shinnery oak dunes in New Mexico (McDaniel *et al.* 1982, p.12). Currently, the amount of shinnery oak dune habitat is estimated to be 600,000 acres (248,811 ha), a 40 percent loss since 1982. Continued loss of shinnery oak dunes within the geographic range of the dunes sagebrush lizard since then has likely further decreased the amount of habitat available.

The connection between dunes sagebrush lizards and the shinnery oak dune system is very specific, and the range of the species is closely linked to the distribution of shinnery oak dunes (Fitzgerald *et al.* 1997, p. 4). The landscape created by the shinnery oak dune community is a spatially dynamic system. Shinnery oak and sand dunes form large dune complexes that are separated by flat areas without dunes called shinnery oak flats. It would be feasible to find dunes sagebrush lizards in shinnery oak flats that are adjacent to occupied dunes. Suitable habitat is separated by a mosaic of habitat types within or near the range of dunes sagebrush lizard. Landforms separating habitat may include mesquite hummocks, grasslands, and tabosa flats that are lacking shinnery oak and dominated by tabosa grass (*Hilaria mutica*) and scattered mesquite (*Prosopis glandulosa*).

Shinnery oak dune habitat is altered and moved by natural processes like wind and rain. Over time, with wind and rain eroding sand dunes, areas that contain dunes flatten out and new dunes form in the flats (Muhs and Holliday 2001, p. 75). These new dune complexes may then support dunes sagebrush lizards, so that areas that are currently unoccupied may become occupied with shifts in dunes over time (Fitzgerald *et al.* 1997, p. 27).

As discussed above, dunes sagebrush lizards are not found at sites lacking shinnery oak dune habitat (Fitzgerald *et al.* 1997, p. 2). Shinnery oak provides structure to the dune system, shelter for thermoregulation (regulation of body temperature), and habitat for the dunes sagebrush lizard's insect prey base (Bailey and Painter 1994, p. 22, Fitzgerald *et al.* 1997, p. 4). Within the shinnery oak dune system, dunes sagebrush lizards are found in deep, wind-hollowed depressions called blowouts, which are near vegetated edges where they escape under leaf litter or loose sand during the hot part of the day and at night (Painter *et al.* 2007, p. 3). The large, steep blowouts provide habitat for thermoregulation, foraging, predator avoidance, and the dunes sagebrush lizard's prey base. The diet of the dunes sagebrush lizard includes ants (Order Hymenoptera, Family Formicidae) and their pupae; small beetles (Order Coleoptera), including lady bird beetles (Family Coccinellidae) and their larvae; crickets (Order Orthoptera); grasshoppers (Order Orthoptera); and spiders (Order Araneae) (Degenhardt *et al.* 1996, p. 160).

Sand grain size appears to be a limiting factor in the distribution and occurrence of the dunes sagebrush lizard within the shinnery oak dunes. Laboratory and field experiments designed to determine sand grain preference demonstrated that dunes sagebrush lizards select sites with more medium sand grains and do not use finer sands (Fitzgerald *et al.* 1997, p. 6). Finer sand grain sizes are thought to limit the dunes sagebrush lizard's ability to effectively breathe when they bury themselves to avoid predators or to thermoregulate. Dunes sagebrush lizards instead prefer sand that is suitable for burying but not too fine to prevent respiration (Fitzgerald *et al.* 1997, p. 23). Sand grain size is also important in the establishment of dune blowouts and can influence the dune structure (Fitzgerald *et al.* 1997, p. 6).

The shinnery oak flats are used for movement of females to find nesting sites and for possible dispersal of recent hatchlings (Hill and Fitzgerald 2007, p. 5). Females often utilize more than one dune during the nesting season and have home range sizes of about 436 square meters (m^2) (4,693 square feet (ft^2)). The largest recorded home range is 2,799.7 m^2 (9,185.4 ft^2), which includes the movement of the tracked female from her primary home range to her nesting site (Hill and Fitzgerald 2007, p. 5). Females build nest chambers and lay eggs in the moist soil below the surface. Nests have been observed on west-facing, open sand slopes with little to no vegetation, approximately 18 centimeters (7.1 in) below the sand surface (Hill and Fitzgerald 2007, p. 5).

Distribution

The dunes sagebrush lizard is limited to a narrow, isolated band of shinnery oak dunes between elevations of 780 and 1,400 m (2,600 and 4,600 ft) in southeastern New Mexico and adjacent western Texas. Populations are separated by vast areas of naturally unsuitable and unoccupied habitat (Painter *et al.* 1999, p. 1).

New Mexico

The known geographic range of the dunes sagebrush lizard in New Mexico includes portions of Chaves, Roosevelt, Lea, and Eddy Counties (Fitzgerald *et al.* 1997, p. 23). At its widest, the dunes sagebrush lizard's range is 2,693 hectares (6,654 ac) and in some areas is less than 233 hectares (576 ac) wide (Fitzgerald *et al.* 1997, p. 2).

The distribution of the dunes sagebrush lizard in New Mexico was not formally described until 1997, using the results of 169 standardized surveys conducted at 157 sites. Of the 157 sites surveyed, 72 sites were determined to be occupied by dunes sagebrush lizards. Thirty of these sites are in Chaves County, 8 in Eddy County, 4 in Roosevelt County, and 30 in Lea County (Fitzgerald *et al.* 1997, Appendix 1). During 2008, 54 of the 72 positive sites that were surveyed during the 1997 study were re-surveyed. Dunes sagebrush lizards were absent from 11 of the 54 sites (20 percent) in which they were recorded during the 1997 study (Painter 2008a, p. 1). Not all of the 72 positive sites surveyed during the 1997 study were re-surveyed in 2008 due to poor weather conditions or access issues. Additional surveys were conducted during 2010 to investigate the status of the population of dunes sagebrush lizards at the remaining sites. The total number of historic sites that were surveyed in 1997 was 72, and 17 of those (24 percent) no longer have lizards. Some of these sites have been sprayed with tebuthiuron (a herbicide used to remove shinnery oak), and some were in areas where the habitat was removed (Painter 2010, p. 1).

In New Mexico, there are three genetically and geographically distinct populations of dunes sagebrush lizards: the northern population (near Kenna, New Mexico), the central population (at the Caprock Wildlife Area, north of US Highway 380), and the southern population (near Loco Hills and Hobbs, New Mexico). These populations are separated by geologic and ecologic landscape barriers, such as the caliche caprock of the Llano Estacado plateau, mesquite hummock landscapes, highways, roads, and oil and gas pads, that form areas of unsuitable vegetation, and dune structure (Chan *et al.* 2008, p. 13). The northernmost population near Kenna is evolutionarily considered to be the youngest population that is now genetically isolated from the central and southern populations. Genetic divergence of the northern population from the central populations has occurred due to natural and human-caused habitat conversion, including mesquite hummock landscapes, road and pad construction associated with oil and gas development, land conversion for agriculture, and the presence of short and tall grass prairie (Chan *et al.* 2008, p. 13).

The southern population is considered to be the oldest population of dunes sagebrush lizard and is genetically isolated from the central population due to the presence of the uninhabitable caliche caprock of the Llano Estacado plateau. Due to the presence of the caprock, where dunes sagebrush lizards do not occur, suitable shinnery oak dune habitat is limited to a narrow 8-km (4.9-mile) patch between the southern and central populations. Data from Chan *et al.* (2008, p. 10) suggest that conservation of large areas that contain a network of dune complexes is needed to maintain historical levels of connectivity, and maintain the unique genetic qualities of the three dunes sagebrush lizard populations in New Mexico.

Texas

In Texas, the species was historically found in Andrews, Crane, Ward, and Winkler Counties. During 2006 and 2007, surveys were conducted to determine the current distribution of the dunes sagebrush lizard in the State. Surveys were conducted at 27 sites (19 of these sites were historical localities) that contained potential dunes sagebrush lizard habitat in Andrews, Crane, Cochran, Edwards, Ward, and Winkler Counties. Dunes sagebrush lizards were found at only 3 of the 27 sites surveyed (Laurencio *et al.* 2007, p. 7). Two of the sites were in large patches of shinnery oak dunes that stretch through Ward, Winkler, and Andrews Counties. In north and western Crane County, shinnery oak dune habitat exists, but dunes sagebrush lizards were not found. One dunes sagebrush lizard was found at a site in Gaines County that is within the easternmost contiguous habitat that stretches from the southernmost population in New Mexico (Laurencio *et al.* 2007, p. 11). The sites where dunes sagebrush lizards were detected in either 2006 or 2007 likely comprise the last occupied habitat for dunes sagebrush lizards in Texas (Laurencio *et al.* 2007, p. 11). During these surveys the search time to find dunes sagebrush lizards was between 68 and 115 person-minutes. The species is considered rare at sites where it takes more than 60 minutes to find a dunes sagebrush lizard. By comparison, at some sites in shinnery oak dune habitat in New Mexico, 74 percent of dunes sagebrush lizards are found within 31 person-minutes. The longer search time required to encounter individuals in a given area may represent a lower number of individuals in that area. Future surveys should incorporate detection probabilities and utilize standard survey techniques for the species, in order to more accurately compare results.

Dunes sagebrush lizard populations in Texas are all on private land except for the population at Monahans Sandhills State Park, a 1,554-ha (3,840-ac) park where dunes sagebrush lizards were thought to be extirpated after surveys were completed in 2007 (Laurencio *et al.* 2007, p. 11). In 2010, the park was again surveyed, and dunes sagebrush lizards were present (Fitzgerald 2010, p. 1). Monahans Sandhills State Park is a well-known historic locality that is the only area where dunes sagebrush lizards have been known to occur on public lands in Texas. It is evident that the dunes sagebrush lizard is still present at the park, but the negative survey data from 2007 suggests they may be present in small numbers, and that further monitoring should be done at this site.

Summary of Factors Affecting the Species

Section 4 of the Act (16 U.S.C. 1533), and its implementing regulations at 50 CFR part 424, set forth the procedures for adding species to the Federal Lists of Endangered and Threatened Wildlife and Plants. Under section 4(a)(1) of the Act, we may list a species based on any of the following five factors: (A) The present or threatened destruction, modification, or curtailment of its habitat or range; (B) overutilization for commercial, recreational, scientific, or educational purposes; (C) disease or predation; (D) the inadequacy of existing regulatory mechanisms; and (E) other natural or manmade factors affecting its continued existence. Listing actions may be warranted based on any of the above threat factors, singly or in combination. Each of these factors is discussed below.

A. The Present or Threatened Destruction, Modification, or Curtailment of Its Habitat or Range

In 1982, there was an estimated 400,000 ha (1,000,000 ac) of habitat suitable for the dunes sagebrush lizard in New Mexico. Today, there is an estimated 240,000 ha (600,000 ac) of suitable habitat, a decrease of 40 percent. Within the remaining suitable habitat, the current occupied range is estimated to cover 405,599 ac (165,759 ha) (McDaniel *et al.* 1982, p. 12). Other portions of the range have been developed for oil and gas infrastructure. The shinnery oak community that supports the dunes sagebrush lizard is now considered a highly threatened community (Dhillion *et al.* 1994, p. 52). Changes in either land management practices or climate that impact the vegetative community could destabilize the dunes and reduce the potential for the habitat to persist (Muhs and Holliday 2001, p. 86).

In addition to habitat loss, habitat fragmentation breaks up large areas of suitable habitat into smaller patches. This causes the removal of interior habitat, the loss of vegetation and cover, and an increase in the proportion of habitat edge to interior. Habitat edge is the outer portion of a patch that abuts converted or otherwise unsuitable habitat, and it is where there are the greatest interactions between the shinnery oak dune natural habitat and human-altered unsuitable habitat (Dramsted *et al.* 1996, p. 27). Shinnery oak provides basic needs that impact survivorship, growth, and reproductive ability for the dunes sagebrush lizard. In general, interior habitat provides protection from predators, habitat for mating and foraging, shade, and habitat for the dunes sagebrush lizard's insect prey base (Degenhardt *et al.* 1996, p. 160). It is thought that habitat edges that are adjacent to well pads and roads do not provide the basic structure for survivorship, growth, and reproduction. In general, individuals that live near the habitat's edge have limited resources because the exterior areas do not provide adequate shade, cover, or resources for an insect prey base (Dramstad *et al.* 1996, p. 28).

We do not know how large habitat patches need to be in order to maintain viable populations of dunes sagebrush lizards. However, literature published on other lizard species has shown that populations within smaller habitat patches have a greater risk of extinction than those in large habitat patches because small patches support fewer individuals and have a higher proportion of less suitable edge habitat than more suitable interior habitat (Dramsted *et al.* 1996, p. 20). Larger habitat patches provide vegetative cover, maintain dune structure, and provide habitat for the insect prey base. Dunes sagebrush lizard populations move across the landscape with the movement of the shinnery oak dune system. The movement of this dynamic system could be interrupted by habitat fragmentation that would prevent the natural shift in dunes and cause the current dune structures to collapse. There is no evidence to suggest that dunes sagebrush lizards will traverse unsuitable habitat to find suitable habitat patches (Fitzgerald *et al.* 1997, p. 26). Connectivity and movement between patches could play an important role in determining the occupancy and sustainability of each patch (Barrows and Allen 2007, p. 66). Removal of a patch reduces the size of a population, increasing the probability of local extinctions and reducing the stability of the population (Dramsted *et al.* 1996, p. 23). If dunes sagebrush lizards are unable to move between habitat patches because of fragmentation and habitat loss, genetic diversity will be lost (Chan *et al.* 2008, p. 10). For this reason, areas of apparently suitable, but currently unoccupied habitat may be important to the long term survival of dunes sagebrush lizards, but we have no data to support this hypothesis for dunes sagebrush lizards.

In the dynamic shinnery oak dune system, habitat patches have not been consistent over time, and genetic diversity of populations has historically been linked to the connectivity of the entire system (Chan *et al.* 2008, p. 10). The habitat for the dunes sagebrush lizard is currently patchy and fragmented throughout the dunes sagebrush lizard's range, and populations are not connected by suitable habitat due to natural and human-caused processes (Chan *et al.* 2008, p. 10). Therefore, the loss of habitat and fragmentation can lower migration rates and genetic connectivity among remaining populations of dunes sagebrush lizards, reducing genetic variability and increasing extinction risk.

For the similar sand-dwelling Coachella Valley fringe-toed lizard (*Uma inornata*), a decrease in habitat patch size resulted in an increased probability of local extinction. For isolated habitat patches to sustain lizard populations, patch size needed to be at least 100 ha (247 ac) (Chen *et al.* 2006, p. 28). When large habitat patches are divided into smaller patches, there is increased edge habitat, decreased interior habitat, and increased probability of local extinction of the species within these patches. Lizards within smaller habitat patches have an increased chance of going extinct because they have less of a barrier between the core patch and the habitat disturbance. The probability of a species going extinct in local habitat patches increases with the increasing isolation and decreasing size of that patch (Dramstad *et al.* 1996, pp. 20–24). Additional research will verify if this is true for dunes sagebrush lizard.

The shinnery oak dune system has undergone extensive alteration and fragmentation because of past and present land uses, including oil and gas development, habitat conversion for cropland and rangeland, and off-highway vehicle (OHV) use (Painter *et al.* 1999, p. 1). Due to habitat conversion and fragmentation, there are historical areas that no longer support populations of dunes sagebrush lizards (Sias and Snell 1997, p. 1; Laurencio *et al.* 2007, p. 1; Chan *et al.* 2007, p. 337). In Texas, dunes sagebrush lizards no longer occupy 86 percent of the historically occupied sites (Laurencio *et al.* 2007, p. 5). Dunes sagebrush lizards were not found at 20 percent of historically occupied sites that were surveyed during distribution studies in New Mexico (Painter *et al.* 2008, p. 1). Other threats that are also expected to contribute to habitat loss, modification, or fragmentation in the future include wind and solar energy development, climate change (discussed in *Factor E,* below), and die-off of shinnery oak due to natural events.

Oil and Gas Development

The infrastructure for oil and gas development includes roads, pads where well pumps and drilling rigs are placed, battery tanks, power lines, pipelines, and injection wells. As discussed below, increased oil and gas development in the range of the dunes sagebrush lizard, including seismic exploration, has caused direct and indirect effects to dunes sagebrush lizard habitat. Removal and fragmentation of dunes sagebrush lizard habitat has been caused by a grid of roads and pads, pipelines, and power lines that are found throughout the entire range of the dunes sagebrush lizard. Oil and gas extraction activities have destroyed and fragmented dunes sagebrush lizard habitat and have resulted in population losses, including all localities within northeastern Crane County, Texas, where historical populations have been extirpated (Laurencio *et al.* 2007, p. 9). A 2007 report from the Bureau of Land Management (BLM) (pp. 3–16) states

that there have been significant reductions of dunes sagebrush lizard population sizes in New Mexico that are associated with surface disturbance and removal of shinnery oak due to activities such as oil and gas development, herbicide treatment, and the creation of roads associated with new rights-of-way. According to the BLM's data, 65 percent of occupied or suitable shinnery oak habitat across the lizard's range in New Mexico, has been fragmented with roads and well pads (Hill 2008, pers. comm.).

Much of the dunes sagebrush lizard's current range has been developed or is planned for future oil and gas development. In Texas, over 50 percent of oil production occurs in Districts 8 and 8A (Texas oil and gas districts); these districts overlap the known geographic range of dunes sagebrush lizards (Tarver and Dasgupta 1997, p. 3670).

Currently, 70 percent of land within the New Mexico range of the dunes sagebrush lizard has been leased by private entities, BLM, or the New Mexico State Land Office (NMSLO) for oil and gas exploration and development (Winter 2010, p. 2). Seventy-one percent of the minerals within the range of the dunes sagebrush lizard are Federally owned and fall under BLM lease stipulations and the Pecos District (NM) Special Status Species Resource Management Plan Amendment (RMPA). The RMPA was developed to address sensitive species conservation concerns and to establish the minimum requirements that will be applied to all future Federal activities covered by the RMPA for both the dunes sagebrush lizard and the lesser prairie chicken (*Tympanuchus pallidicinctus*), which share some common habitat in New Mexico.

Density of Wells and Well Pads

In New Mexico, Sias and Snell (1998, p. 3) reported a negative relationship between oil well density and dunes sagebrush lizard abundance and noted an environmental sensitivity not found in other reptile species. Dunes sagebrush lizard abundance declined by 25 percent when there were 13 oil or gas well pads per section (each section has an area of approximately 260 ha (640 ac)), and the number of dunes sagebrush lizards declined by 50 percent when there were 29 pads per section (Sias and Snell 1998, p. 3). Any shinnery oak dune habitat within 600 m (1968 ft) of any well supported 31 to 52 percent fewer dunes sagebrush lizards than areas farther than 600 m (1968 ft) from a well (Sias and Snell 1998, p. 1).

The 172,900 ha (427,200 ac) of shinnery oak dune habitat that have been fragmented with roads and well pads have 5,911 oil well pads or injection wells and 529 gas wells. Each oil pad averages 2 or 3 acres, and each gas pad averages 3 or 4 acres. Currently there are approximately 9,700 ha (24,000 ac) of well pad disturbance in New Mexico, not including roads, within the area occupied by the dunes sagebrush lizard (Hill *et al.* 2008, p. 1).

The oil field with the greatest impact to dunes sagebrush lizard habitat is in the southern part of the dunes sagebrush lizard's range, where the density of roads and well pads may be contributing to further separation of the southern population from the central population of dunes sagebrush lizards (Chan *et al.* 2008, p. 9). This development covers an area of shinnery oak dunes measuring 8 km (5 mi) by 26 km (16 mi) between U.S. Highway 82 and U.S. Highway 62 in Lea and Eddy Counties. In this area there are 142 sections (36,780 ha (90,880 ac)) where the well pad density is greater than 13 wells per section. Throughout the southern part of the dunes sagebrush lizard's range, the majority of these sections of land have greater than 20 wells per section, and some have greater than 40 wells per section. The highest density of well development in this area has more than 60 wells per section with a maze of associated roads (Hill *et al.* 2008, p. 1). In a special species planning area within BLM's Pecos District, which incorporates all of the dunes sagebrush lizard's habitat on BLM land in New Mexico, approximately 100 new wells per year are to be drilled over the next 20 years (BLM 2007, p. 4–37).

An example of the impacts of well placement on the dunes sagebrush lizard can be found in two sections (approximately 520 ha (1,280 ac)) of shinnery oak dune habitat in the area of Loco Hills in the southern part of the dunes sagebrush lizard's range in Eddy County (40 km (25 mi) east of Artesia). This area once supported one of the most persistent populations of dunes sagebrush lizards in the State and was used for many years as an observation site for students and researchers studying the dunes sagebrush lizard. As of 2003, over 40 oil wells had been placed on these sections; extensive surveys conducted in this area found no dunes sagebrush lizards present (Service 2007, p. 5; Fitzgerald 2008, p. 1).

Hatchling and adult dunes sagebrush lizards have been found in shinnery oak flats between large dunes, suggesting that the area between the sand dunes is important for dispersal. Surveys by the BLM recorded dunes sagebrush lizards in the shinnery oak flats (Bird 2007, p. 2). In the past, oil and gas development has been directed into the shinnery oak flats and out of the dune complexes to lessen the impact to the dunes sagebrush lizard. However, development in the shinnery oak flats may be affecting dispersal of the dunes sagebrush lizards from one dune complex to another (Painter *et al.* 2007, p. 3). Currently there are no considerations being made for maintaining these undeveloped corridors in shinnery oak flats between dune complexes, which may be a significant threat to dunes sagebrush lizard dispersal.

Roads and Well Pads

Based on various studies in similar lizard species, it would be expected that there would be negative impacts to dunes sagebrush lizard habitat as a result of roads and pads associated with oil and gas development. These impacts include soil compaction, decreased stability of microclimates, loss of habitat, decreased habitat quality, division of the ecosystem with artificial gaps, abrupt habitat edges, conversion of habitat interior to habitat edge, and introduction of nonnative weed species (Endriss *et al.* 2007, p. 320; Delgado-Garcia *et al.* 2007, p. 2949). Negative impacts of roads and pads to the lizard populations include the subdivision of populations into smaller and more vulnerable patches; inhibited access to resources for foraging, breeding, nesting, predator avoidance, and thermoregulation; behavior modification; and direct mortality due to collisions (Jaeger *et al.* 2005, p. 329; Ingelfinger and Anderson 2004, p. 385; Delgado-Garcia *et al.* 2007, p. 2949; Ballesteros-Barrera *et al.* 2007, p. 736; Sias and Snell 1995, p. 28). When the shinnery oak dune habitat is destroyed or fragmented by roads and pads, the resources provided by the shinnery oak are subsequently reduced. In studies of other lizard species where habitat is highly fragmented, lizards are limited to small habitat patches. These studies have also found increased mortality due to collisions with vehicles and inaccessibility to habitat, mates, and prey reduce the population size and population persistence (Delgado-Garcia *et al.* 2007, p. 2949).

A common method of creating roads and pads in dune areas is to truck caliche (soil with high amounts of calcium carbonate) into the sand system. Dunes sagebrush lizards are not found in areas with compact soil, like that of caliche roads and well pads (Fitzgerald *et al.* 1997, p. 3). Shinnery oak requires permeable sand in order to

establish and grow and does not grow in areas with high amounts of calcium carbonate (Peterson and Boyd 1998, p. 6).

The vast network of roads and pads throughout the shinnery oak dune habitat alters the habitat, making it difficult for shinnery oak to persist; the trees cannot grow through compacted areas, with increased calcium carbonate, or through permanently paved areas. Well pad and road construction removes shinnery oak, and further degrades the habitat by compacting the soil. After well pads are abandoned, shinnery oak does not reestablish unless the caliche is removed (Boyd and Bidwell 2002, p. 332).

The current existence and future establishment of roads and well pads throughout the dunes sagebrush lizard's habitat is a significant threat to the species throughout its range. Impacts from roads and well pads cause the loss of basic needs including habitat for foraging, breeding, nesting, predator avoidance, and thermoregulation.

Pipelines

Every oil or gas well has an associated pipeline, and each oil or gas company has a separate right-of-way for each pipeline. Pipelines located throughout suitable and occupied dunes sagebrush lizard habitat destabilize dunes because heavy equipment is used to remove shinnery oak and bury the lines in the sand. Pipelines also expose dunes sagebrush lizards to petroleum chemical leaks and an increased likelihood of being crushed by OHV travel due to maintenance crews using vehicles along pipelines (Sias and Snell 1998, p. 3). On May 16, 2010, a pipeline burst in dunes sagebrush lizard habitat, spraying oil into the air and across the landscape (Leavitt 2010, p. 1). These spills introduce toxins and contaminants into the soil and cover surrounding vegetation.

There have been numerous recorded instances of reptiles and amphibians being trapped in pipeline, waterline, and telecommunication line trenches (Hawken 1951, p. 81; Anderson *et al.* 1952, p. 276). For example, in 2001, a 4.8-km (3.0-mi) long telecommunication line trench (similar in structure to pipeline trenches) on Albuquerque, New Mexico's West Mesa was monitored for trapped animals. During 23 days of monitoring, 298 reptiles and amphibians, including several lizard species, were removed from the trench (Painter 2008, p. 1). There were no escape ramps along the trench, so it was impossible for animals to escape.

During a distribution survey for dunes sagebrush lizards in July 2008, the New Mexico Department of Game and Fish (NMDGF) found an open pipeline ditch that went through State, private, and BLM land. The open ditch was approximately 1.2 m (4 ft) wide and 1.2 m (4 ft) deep, bisecting a dune complex known to be occupied with dunes sagebrush lizards. The large, open ditch had formed a pitfall trap where animals could not escape if they fell in. There were no dunes sagebrush lizards found in the ditch at the time of the survey, but other reptiles were found in the ditch, and surveyors were concerned that dunes sagebrush lizards could easily be trapped in the ditch (Currylow *et al.* 2008, p. 1).

Some existing pipelines located within shinnery oak dunes provide temporary dune-like areas where dunes sagebrush lizards are found. Twenty-four percent of dunes sagebrush lizards found during BLM surveys were found along pipelines adjacent to shinnery oak dunes (Bird 2006, p. 2), although it is not known how dunes sagebrush lizards utilize existing pipelines (Sias and Snell 1998, p. 5; Bird 2005, p. 1; Bird 2006, p. 1; Bird 2007, p. 1), and it is unclear whether these areas provide permanent habitat.

Pipelines are located throughout the range of the dunes sagebrush lizard, are currently being built with every well pad, and will continue to be built in the future. There are no established corridors for pipelines and each pipeline has its own right-of-way, making for new disturbed areas each time a pipeline is established. We believe pipelines pose a significant threat to the dunes sagebrush lizard in areas where oil and gas infrastructure is most dense, especially as increases in oil and gas activities expand in the central and northern parts of the range of the species. Unless they are routed around habitat, the current existence and future establishment of pipelines throughout the dunes sagebrush lizard's habitat is a significant threat to the species throughout its range.

Seismic Exploration

Seismic exploration utilizes artificially induced shock waves to search for subsurface deposits of crude oil, natural gas, and minerals, and to facilitate the location of prospective drilling sites. Shock waves are produced by vibratory mechanisms mounted on specialized trucks known as thumper trucks that weigh approximately 60 tons. Seismic waves then reflect and refract off subsurface rock formations and travel back to acoustic receivers called geophones. The time it takes for seismic energy to return aids in the estimation of the structure and stratigraphy of subsurface formations (Pendleton *et al.* 2008, p. 1). Seismic exploration is conducted prior to the development of oil and gas fields, in order to determine the below surface availability of oil or gas and refine the placement of well pads.

Seismic exploration for oil and gas is a periodic threat to the dunes sagebrush lizard and its habitat. Threats to dunes sagebrush lizard habitat occur because heavy thumper trucks can cause the destabilization of dunes by driving through dune complexes (Painter 2004, p. 4). Seismic exploration can also pose a direct threat to the dunes sagebrush lizard. Dunes sagebrush lizards are dormant and immobile during colder winter months (October through March). If seismic exploration occurs during the winter months when dunes sagebrush lizards are dormant beneath the soil surface and unable to move, dunes sagebrush lizards could be crushed. If the exploration occurs during the nesting season, eggs that are buried below the surface could also be destroyed (Painter 2004, p. 4). Seismic exploration poses an imminent threat for a short period of time while the trucks are crossing a given area. Once an area has been surveyed, it will likely not be surveyed again. Proposed seismic explorations in an area north of the Loco Hills will cover up to 650 ha (1,600 ac) of suitable and occupied dunes sagebrush lizard habitat and pose an indirect threat through further development, which will lead to habitat fragmentation and isolation (discussed above) north of the already dense oil fields in Loco Hills. There are ongoing permit applications for seismic exploration within both occupied and unoccupied suitable habitat across the range of the dunes sagebrush lizard. We believe that seismic exploration is a localized threat with moderate impacts to individual dunes sagebrush lizards, but it is usually a prelude to the future expansion of oil and gas development in an area.

Wind and Solar Energy Development

Eastern New Mexico and western Texas are highly suitable areas for wind and solar energy development. The NMSLO has leased 1,520 ha (3,757 ac) of trust land in Chaves and Roosevelt Counties to Xcel Energy for a 120-megawatt (MW) wind farm. Additionally, two new wind projects are under development on State trust lands in Chaves County, and one in Eddy County. The Service has also been contacted by a consultant for a wind energy farm to be located in Lea County, near Tatum, New Mexico. The proposed

project area is near the range of the dunes sagebrush lizard (Riley 2008).

The infrastructure for wind and solar energy would cause similar habitat fragmentation as that produced by oil and gas development. Potential direct effects to the dunes sagebrush lizard from wind energy development include physical disturbance during construction and maintenance of a project, habitat loss, and habitat fragmentation associated with the infrastructure of the project. A wind farm infrastructure typically consists of: (1) The physical disturbance around a tower; the area of a turbine workspace during construction (temporary) is usually a 46 to 61 m (150 to 200 ft) radius around the turbine and permanently a 15 m (50 ft) radius; (2) Gravel access roads linking wind turbines strings to each other and to existing roads; (3) Area for a concrete batch plant, if required; and (4) Buildings housing electrical switchgear, supervisory control and data acquisition central equipment, and maintenance facilities. Additionally, vehicle traffic to turbines over the life of the facility, expected to average 20 years, could pose a threat similar to the infrastructure of oil and gas development to the dunes sagebrush lizard. Alteration of habitat related to wind energy development could influence habitat suitability for this species; however, we are unaware of any studies at wind energy development sites that have examined these effects.

Although there is no specific information available to implicate wind or solar energy development as a threat to the dunes sagebrush lizard at this time, there is concern regarding potential effects if wind and solar development were to occur in the species' habitat. More information is necessary to determine if any effects will result from specific alternative energy projects that will be located within dunes sagebrush lizard habitat. However, the BLM's RMPA states that applications to permit either solar or wind energy on public land within the RMPA planning area will not be approved unless the applicant can demonstrate, using peer-reviewed science, that there will be no negative impacts to dunes sagebrush lizards.

Off-Highway Vehicle (OHV) Use

An OHV is any motorized vehicle capable of or designated for travel on or immediately over land, water, or other natural terrain. This could include motorcycles and off-highway motor bikes, all terrain vehicles, dune buggies, snowmobiles, most four-wheel drive automobiles, and any other civilian vehicle specifically designed for off-road travel (Ouren *et al.* 2007, p. 4). Extensive use of OHVs can cause soil compaction, reduce plant cover, and degrade habitat (Ouren *et al.* 2007, p. 4), causing the loss of basic needs including habitat for foraging, breeding, nesting, predator avoidance, and thermoregulation for lizard species (Jaeger *et al.* 2005, p. 329; Ingelfinger and Anderson 2004, p. 385; Delgado-Garcia *et al.* 2007, p. 2949; Ballesteros-Barrera *et al.* 2007, p. 736). Research in other dune systems has found that in areas where plant cover is reduced, there are greater rates of erosion that would lead to dune destabilization. Routes used by OHVs form mazes through large areas of dunes, fragmenting the habitat and reducing habitat connectivity at a landscape level (Ouren *et al.* 2007, p. 5). Studies on other lizard species have found that OHV travel causes increased mortality due to lizard collisions with the vehicles themselves (Delgado-Garcia *et al.* 2007, p. 2949).

Use of OHVs has been determined to be one of the greatest threats to the Coachella Valley fringed toed lizard, which is another dune-restricted lizard species (Painter 2004, p. 5). The presence of OHV pathways throughout dunes sagebrush lizard's habitat led researchers to believe that high levels of OHV activities were the cause for population losses in Texas (Laurencio *et al.* 2007, p. 10), but that is likely not the primary cause of extirpations in New Mexico (Painter 2004, p. 5). Nevertheless, OHV use is a factor impacting the species within parts of its geographic range. For example, on BLM land in New Mexico, established OHV areas such as the Square Lake Dune Complex and the Mescalero Sands North Dune OHV Area are adjacent to or within habitat occupied by the dunes sagebrush lizard. These OHV areas were established to concentrate OHV use to designated areas, and BLM made some dune complexes off limits to OHV use. The OHV use planned for the Square Lake Dune Complex is limited to existing roads, trails, and unvegetated dunes (BLM 2007, p. 4–45). This area is currently being used by OHVs, and BLM plans to formally designate this area for OHV use. Because the shinnery oak dunes in this area are occupied by dunes sagebrush lizards (Fitzgerald *et al.* 1997, Appendix 1), any violation of the limitations of OHV use to existing roads, trails, and unvegetated dunes is likely to negatively impact the dunes sagebrush lizards in this shinnery oak habitat.

The Mescalero Sands North Dune OHV Area is considered an open area of more than 600 acres (243 ha), where vehicles are not restricted to designated trails (BLM 2007, p. 4–45), although this OHV area is occupied by dunes sagebrush lizards (Fitzgerald *et al.* 1997, Appendix 1). Authorized OHV activities have degraded shinnery oak dunes, potentially crushed dunes sagebrush lizards, and introduced weed species within the otherwise open dune blowouts (Hill 2008b, p. 1). At this OHV area, all surveyed dunes have multiple OHV trails, exposed shinnery oak roots, and erosion, and no dunes sagebrush lizards were detected in this area (Hill 2008b, p. 1).

In areas that are not designated for OHV use, there are no signs identifying that the area is closed to OHV traffic, and law enforcement is limited. There are restrictions to OHV use on lands managed by BLM and the State of New Mexico, but there is no signage and little enforcement. As a result, dune habitat is being destroyed and modified (Hill 2008b, p. 1). Although OHV use is not known to be occurring in all portions of the range of the dunes sagebrush lizard, we believe it is a significant threat to the species where occupied dunes are located in OHV areas and extensive habitat degradation occurs. Off-highway vehicle use is not considered to be the most significant threat to the dunes sagebrush lizard, but it does contribute to a decline of habitat in areas where it is prevalent.

Shinnery Oak Removal

Shinnery oak is removed for the purpose of clearing for agriculture and for grazing. Shinnery oak is toxic to cattle when it first produces leaves in the spring, and it also competes with more palatable grasses and forbs for water and nutrients (Peterson and Boyd 1998, p. 8). Shinnery oak is also managed for the control of boll weevil (*Anthonomus grandis*), which destroys cotton crops. Boll weevils overwinter in areas where large amounts of leaf litter accumulate. Fire is used to remove leaf litter, and then tebuthiuron, an herbicide, is used to remove shinnery oak (Plains Cotton Growers 1998, pp. 2–3). Over 40,000 ha (100,000 ac) of shinnery oak in New Mexico and 400,000 ha (1,000,000 ac) of shinnery oak in Texas have been lost due to the spraying of tebuthiuron and other herbicides (Peterson and Boyd 1998, p. 2).

A 5-year study was conducted to determine the effects of tebuthiuron application on the dunes sagebrush lizard. This study documented that dunes sagebrush lizards were absent at 50 percent of the previously occupied sites where spraying had occurred

(Painter *et al.* 1999, p. 2). Shinnery oak removal results in dramatic reductions and extirpations of dunes sagebrush lizards (Snell *et al.* 1997, p. 8). For example, the extirpation of dunes sagebrush lizards was repeatedly confirmed by Snell *et al.* (1997, p. 1) from areas that were treated with herbicides to remove shinnery oak. Dunes sagebrush lizard numbers dropped 70 to 94 percent in areas that were chemically treated, compared to adjacent untreated plots. Some plots experienced 100 percent population loss in areas treated with tebuthiuron. Painter *et al.* (1999, p. 38) estimated that about 24 percent of the total dunes sagebrush lizard habitat in New Mexico had been eliminated by 1999 due to herbicide spraying.

Habitat loss and dunes sagebrush lizard declines are not linked to the actual application of tebuthiuron, but rather to the long-term effects associated with the removal of shinnery oak habitat (Snell *et al.* 1997, p. 3). Herbicide spraying removes or reduces natural shinnery oak vegetation and creates smaller habitat patches rather than naturally occurring large expanses of shinnery oak. Given the history and current practices of herbicide application within dunes sagebrush lizard habitat, much of the remaining areas are at risk. For example, if further parcels of suitable dunes sagebrush lizard habitat are treated, smaller habitat patches would be created, and we would expect the movement of dunes sagebrush lizards between local populations will be restricted. This could lead to further extirpations of dunes sagebrush lizards within patches.

On BLM lands, the RMPA states that tebuthiuron may only be sprayed in shinnery oak habitat if there is a 500-m (1,600-ft) buffer around dunes, and that no chemical treatments should occur in suitable or occupied dunes sagebrush lizard habitat (BLM 2007, p. 4–22). However, the NMSLO and private land owners continue to use tebuthiuron to remove shinnery oak for cattle grazing and agriculture. The Natural Resource Conservation Service's herbicide spraying has treated shinnery oak in at least 39 counties within shinnery oak habitat, which includes all of the counties with suitable and occupied habitat for the dunes sagebrush lizard (Peterson and Boyd 1998, pp. 4). The BLM also treats mesquite with herbicides to improve livestock forage. In order to treat encroaching mesquite, BLM aerially treats mesquite with a mix of the herbicides Remedy (triclopyr) and Reclaim (clopyralid). According to the RMPA, occupied and suitable habitat for the dunes sagebrush lizard should not be treated. These chemicals are used to treat the adjacent mesquite, but can also kill shinnery oak, depending on the concentration.

Ongoing removal of shinnery oak on State and private lands in New Mexico and Texas is an imminent threat to the dunes sagebrush lizard with long-term negative effects. Buffering an individual dune from shinnery oak spraying is not sufficient to keep the habitat intact. Because the majority of the shinnery oak plant is underground and acts to stabilize the dunes, its removal in the vicinity of the dune will cause the dune to collapse (Muhs and Holliday 2001, p. 75).

We believe that the removal of shinnery oak with herbicides such as tebuthiuron is a significant threat to the dunes sagebrush lizard throughout its range. Habitat in which shinnery oak is removed with herbicides fails to meet the basic needs of the dunes sagebrush lizard, including foraging, breeding, nesting, predator avoidance, and thermoregulation. Habitat fragmentation has caused and will continue to cause inaccessibility to habitat, mates, and prey that could reduce the population size; threaten population persistence; and potentially cause local extirpations of dunes sagebrush lizards.

Grazing

As discussed above, removal of shinnery oak to improve rangelands is a threat to the dunes sagebrush lizard; however, there may also be direct impacts of grazing on dunes sagebrush lizards. While there has been no specific research regarding the impacts of grazing on dunes sagebrush lizards, dunes sagebrush lizards have been found in areas that are moderately grazed (Painter *et al.* 1999, p. 32). In shinnery oak dune habitat, high densities of livestock can lead to overutilization and result in reduced ground cover, increased annual grasses and forbs, decreased perennial grasses, and increased erosion (Painter *et al.* 1999, p. 32). These conditions can be adverse for the dunes sagebrush lizard. Some research has shown that high levels of grazing removes grasses and forbs, compacts the soil, increases bare ground, and reduces water infiltration. These conditions could alter dune structure and decrease vegetation availability for foraging, mating, and predator avoidance (Smith *et al.* 1996, p. 1307; Castellano and Valone 2006, p. 87). While it is clear from this discussion that shinnery oak removal to improve rangeland conditions is a threat to the species, the direct impact of grazing on dunes sagebrush lizards is unknown at this time.

Other Factors Impacting Shinnery Oak

In discussions with BLM habitat specialists, the Service learned that there are many natural events that can impact the shinnery oak dune system and have results similar to spraying with herbicide. Sudden oak death, infestation by root-boring insects, and a known moth parasite can quickly defoliate and kill large stands of shinnery oak (Hill 2008a, pers. comm.). According to BLM habitat specialists, in a system that is susceptible to environmental extremes, events such as drought and late freezes could cause dramatic shifts in the available habitat. For example, in early May of 2008, thousands of acres of shinnery oak dune habitat in the Caprock Wildlife Area in east central Chaves County, New Mexico, were defoliated. After reviewing the situation, Service and BLM staff determined that the defoliation was caused by the combination of low precipitation during the winter and a late freeze that stressed the oak. By early June, the trees had leafed out and were once again providing habitat for the dunes sagebrush lizard (Hill 2008a, pers. comm.). Large habitat patches are more likely than small, fragmented sites to be resilient to natural events.

All of these factors could potentially cause the decline of shinnery oak habitat, and thus lead to the decline of dunes sagebrush lizards. The likelihood of habitat loss due to natural events is unknown and not predictable. Although these factors likely impact shinnery oak, we are unable to determine the long-term impact on shinnery oak dunes and dunes sagebrush lizards.

Summary of Factor A

Habitat specialists with limited geographic ranges, such as the dunes sagebrush lizard, are more vulnerable to habitat alterations than wide-ranging habitat generalists (Ballesteros-Barrera *et al.* 2007, p. 733). Habitat fragmentation and the overall reduction of shinnery oak dune habitat will impact survivorship, growth, and reproductive ability by increasing edge habitat and decreasing available cover. This will lead to smaller populations and will decrease connectivity between populations (Chan *et al.* 2008, p. 9). The size of the habitat patches and suitable dune complexes will influence the probability of individual habitat patches being eliminated in this dynamic system. It is important to maintain connectivity between shinnery oak dune patches in each of the geographic areas across the dunes sagebrush lizard's known range (Chan *et al.* 2008, p. 9).

Because the habitat in both New Mexico and Texas is narrow and isolated, the dunes sagebrush lizard may be vulnerable to habitat degradation and the potential for habitat and range expansion may be unlikely.

Removal of shinnery oak within occupied habitat poses a serious threat by generating or increasing a variety of stressors for the dunes sagebrush lizard, a species that depends on a very specialized dynamic system to survive. Shinnery oak stabilizes dunes in the short term, but overall the dunes are dynamic and slowly shifting across the landscape. Without shinnery oak, sands are not held in place and the entire dune community will be susceptible to wind erosion (Muhs and Holliday 1995, p. 198), thereby threatening the long-term persistence of the species. The dunes sagebrush lizard is threatened by habitat loss and fragmentation due to oil and gas development, and to shinnery oak removal for rangeland improvement and conversion to use for agriculture. Additionally, while renewable energy development, OHV use, and other impacts to shinnery oak are not considered to be major threats to the species, these activities represent additional stressors to the habitat of the species. For these reasons, we consider the cumulative habitat impacts in Factor A to be a threat to the dunes sagebrush lizard throughout its range, both now and continuing into the foreseeable future.

B. Overutilization for Commercial, Recreational, Scientific, or Educational Purposes

The dunes sagebrush lizard is not a commercially valuable species, but could be increasingly sought by collectors due to its rarity. Areas inhabited by this species are open to public access, and populations that are thought to be small and localized could be affected and possibly extirpated if collection pressures increase. Scientific collecting is not thought to represent a significant threat to localized populations. Further, the States of New Mexico and Texas require scientific collecting and research permits for the dunes sagebrush lizard (NMDGF 1978, p. 7; TX House Bill 12, 2007, p. 1). Therefore, we do not consider overutilization to be a threat now or in the foreseeable future.

C. Disease or Predation

Disease and Parasites

There are no specific studies on the impacts of disease or parasitism on dunes sagebrush lizards, but studies have been conducted on close relatives within the genus *Sceloporus.* *Sceloporus* lizards infected with malaria have reduced volumes of red blood cells, reduced hemoglobin (the protein that carries oxygen in the blood), impaired physical stamina, reduced fat stores, reduced number of offspring, and smaller testes (Klukowski and Nelson 2001, p. 289). The incidence of infection of malaria in *Sceloporus* lizards is dependent on the lizard's age, size, genetic background, and gender (Klukowski and Nelson 2001, p. 289). Other lizards in the genus *Sceloporus* have parasitic helminthes (a type of parasitic worm) in their gut. These helminthes have not been found in high number in dunes sagebrush lizards (Goldberg *et al.* 1995, p. 190). In general, other stressors in the environment, such as habitat degradation and pollution, may weaken species' immune systems and make them more susceptible to disease (Whitfield *et al.* 2000, p. 657). Disease and parasitism are not currently known to be threats to the dunes sagebrush lizard, but may need to be investigated in areas where their population declines and losses are unexplained.

Predation

During Hill and Fitzgerald's (2007) nesting ecology study, 25 percent of radio-tracked female dunes sagebrush lizards were eaten by coachwhips (*Masticophis flagellum*). Coachwhips are large, swift, diurnal snakes that feed primarily on lizard species. Another predator, the loggerhead shrike (*Lanius ludovicianus*), is found in the Mescalero Sands habitat. Loggerhead shrikes are birds that occur in many habitats from remote deserts to suburban areas. These small predators perch on trees, shrubs, poles, fences, and utility wires, and swoop down to capture and impale prey (Rappole 2000, p. 163). Increased perches and increased edge effects could lead to increased levels of predation that would impact the dunes sagebrush lizard.

Power line grids are located throughout oil and gas developments. The BLM and the NMSLO do not have a database of the power lines within the shinnery oak habitat and range of the dunes sagebrush lizard; however, all well pad operations and power plants are connected with a grid of transmission lines throughout the dunes sagebrush lizard's habitat. The ongoing threat associated with power lines and fences is that they provide perching habitat for predaceous birds throughout the shinnery oak dunes. The total miles of fence and power lines throughout the known range of the species has not been quantified. Although the presence of power lines likely increases perches for predators, we are currently unable to determine if predation has increased above natural levels or if the predation levels are a significant threat to the dunes sagebrush lizard.

Summary of Factor C

There are likely impacts to individuals or individual populations from the impacts under Factor C, particularly predation. However, we do not know the magnitude or the effect of these impacts on the long-term survival of the dunes sagebrush lizard at this time. Thus, we do not consider Factor C to be a threat to the species throughout its range, either now or in the foreseeable future.

D. The Inadequacy of Existing Regulatory Mechanisms

The dunes sagebrush lizard occurs on lands managed by the BLM, NMSLO, State of Texas, and private entities. There have been considerable efforts directed towards the protection of dunes sagebrush lizard habitat, starting with a multi-stakeholder group called the southeastern strategy. This group developed the Collaborative Conservation Strategy for the dunes sagebrush lizard and the lesser prairie chicken in 2005. This strategy was then used as the foundation for BLM to develop their RMPA and for the development of the Candidate Conservation Agreement (CCA) and Candidate Conservation Agreement with Assurances (CCAA). If implemented as intended, the conservation strategy, RMPA, and CCA/CCAAs could be significant contributions to the conservation of these two species.

BLM's RMPA

The BLM's RMPA addresses the threats of shinnery oak removal due to herbicide spraying, and oil and gas development. The plan provides for specific conservation requirements, lease stipulations, and the removal of 42,934 ha (106,091 ac) of dunes sagebrush lizard habitat from future oil and gas leasing. However, the plan provides for a variety of exceptions and has no schedule or planned monitoring to ensure that the protections are being provided. Future leasing would be allowed in closed areas of habitat if studies show that drilling and exploration would not impact the lesser prairie chicken or dunes sagebrush lizard, or, if at some time in the future, the lesser prairie chicken is no longer a candidate species (BLM 2007, p. 2–22). Currently, BLM is working with Texas A&M University to study the impacts of habitat fragmentation, and determine if

the measures outlined in the RMPA are effective at conserving habitat and dunes sagebrush lizard populations.

The RMPA outlines protective measures and basic guidelines for developing around dunes sagebrush lizard habitat. The RMPA provides guidance for the management of the lands with dunes sagebrush lizard habitat, but it lacks regulatory strength and is only effective when used. Future implementation will determine the overall efficacy of the plan in contributing to the conservation of the dunes sagebrush lizard.

Candidate Conservation Agreements

A candidate conservation agreement (CCA) and candidate conservation agreement with assurances (CCAA) for the dunes sagebrush lizard and the lesser prairie chicken in New Mexico were finalized on December 8, 2008. These agreements allow private land owners and operators, such as ranchers and oil and gas companies, to participate in the conservation of the dunes sagebrush lizard. The agreements provide conservation measures that limit habitat modification and protect habitat corridors between shinnery oak dune complexes. The agreements also allow for reclamation of abandoned oil pads, removal of relic power lines, and restoration of shinnery oak dunes within suitable habitat. The CCA and CCAA are "umbrella" agreements under which individual entities participate. Currently, six private landowners and four oil companies (totaling approximately 200,000 acres) are enrolled within the range of the dunes sagebrush lizard. There are no enrolled properties that have certificates of inclusion/participation for both the ranching operations and oil and gas activities on the property. If a rancher enrolls a property in the CCA/CCAA, that rancher is responsible for the activities because he or she has discretion, and would not have control if oil and gas development occurs on their conservation acres. The same property would need to also be enrolled by the oil and gas operator to provide conservation measures for operator's activities on that property. The efficacy of the agreements depends on sustained future participation by all entities with controlling interests on properties with suitable and occupied habitat for the dunes sagebrush lizard. There are hundreds of oil and gas operators in the range of the dunes sagebrush lizard, and participation throughout the majority of the dunes sagebrush lizard habitat would be necessary for the conservation of the species.

In New Mexico, an estimated 35 percent of the occupied range of the dunes sagebrush lizard is on privately owned and State-managed lands. This is a substantial percentage of land occupied by the dunes sagebrush lizard, and these lands are significant to the dunes sagebrush lizard's continued existence. There are no local or State regulatory mechanisms pertaining to the conservation of dunes sagebrush lizard habitat on private or State lands in New Mexico, nor is there NMSLO policy in place to protect sensitive species. Nearly all of the dunes sagebrush lizard habitat on New Mexico State Trust lands has been leased for oil and gas development with no stipulations on that development. The only mechanism for the preservation of dunes sagebrush lizard habitat on State Trust Lands is by having those lands enrolled in the CCAA.

State Laws

Under New Mexico's Wildlife Conservation Act, on January 24, 1995, NMDGF listed the dunes sagebrush lizard as a group 2 Endangered Species (Painter *et al.* 1999, p. 1), which affords it protection from take, but not habitat destruction (NMDGF 1978, p. 9). The dunes sagebrush lizard is not listed as endangered or threatened in the State of Texas under the Texas Parks and Wildlife Code or the Texas Administrative Code (Texas Parks and Wildlife Department 1973, p. 1).

Summary of Factor D

Current regulations under State and local laws are not adequate to protect the dunes sagebrush lizard from known threats, because provisions that protect habitat are not included in these laws. In New Mexico, BLM's RMPA covers Federal surface and mineral activities within the species' range. Additionally, the CCA/CCAA includes the entire range of the dunes sagebrush lizard in New Mexico, but does not extend into Texas. Because participation in the CCA/CCAA by both oil and gas and ranching operators is not occurring throughout the range of the dunes sagebrush lizard, the efficacy of these conservation agreements has not yet been fully implemented and determined to be effective.

In order for the agreements to benefit the dunes sagebrush lizard, oil and gas operators need to enroll throughout the lizard's range, and habitat restoration and protection needs to occur in the dunes sagebrush lizard's habitat. The CCA/CCAA funded the initial investigation into the restoration of shinnery oak dunes, but for now there are no known methods to restore the dunes sagebrush lizard's habitat, and existing habitat should be protected by enrolling in the CCA/CCAA or with conservation easements. The current efforts have not provided the protection needed to remove or lessen the significant threats posed to the dunes sagebrush lizard.

E. Other Natural or Manmade Factors Affecting Its Continued Existence

Exposure to Pollutants

Though few studies have been conducted to determine the full effects of pollutants on reptiles, there is conclusive evidence of some adverse impacts to lizard species (Whitfield *et al.* 2000, p. 657). Sias and Snell (1998) studied the effects of oil and gas wells on dunes sagebrush lizard abundance from 1995 to 1997. The results of their research showed a strong negative relationship between dunes sagebrush lizard population density and proximity to well pads. Specifically, they found a 39 percent decrease in the abundance of dunes sagebrush lizards within 0 to 80 m (0 to 262 ft) of wells. Sias and Snell (1995, p. 30) believed that oil and gas extraction resulted in a reduction in abundance of dunes sagebrush lizards as a result of: (1) Direct habitat loss due to construction of roads and well pads (as discussed above in Factor A); (2) poisoning of dunes sagebrush lizards from oil spills, hydrogen sulfide gas emissions, and exposure to chemicals and other toxins in the vicinity of oil and gas wells; (3) mortality caused by increased traffic; and (4) giving a competitor of the dunes sagebrush lizard a competitive advantage (*see* "Competition" section below). Further, exposure to oil spills can cause dunes sagebrush lizards to become entrapped. During surveys for dunes sagebrush lizards in New Mexico, side-blotched lizards (*Uta stansburiana*) were found stranded in oil seepages, coated in oil and unable to move (Sias and Snell 1996, p. 28).

During petroleum extraction, hydrogen sulfide is removed from the petroleum and released into the air where it remains for up to one day. Hydrogen sulfide is heavier than air and tends to sink to the ground where it will remain until it is neutralized (Lusk and Kraft 2006, p. 1). Hydrogen sulfide is a highly toxic gas that is the dominant reduced (unoxygenated) sulfur gas in oil fields (Tarver and Dasgupta 1997, p. 3669). Most of the sulfur that is emitted by oil and gas infrastructure ends up in the soil (Tarver and Dasgupta 1997, p. 3674). Surface soil tests in active oil fields in Texas found sulfate (an oxygenated form of sulfur) levels in the

soil to range between 20 to 200 parts per million (ppm) near active facilities, as opposed to 1 ppm in similar soils not adjacent to oil facilities (Tarver and Dasgupta 1997, p. 3674).

Measurements of hydrogen sulfide have been taken at a site near Loco Hills, New Mexico (40 km (25 mi) east of Artesia), where large populations of dunes sagebrush lizards were found historically. Dunes sagebrush lizards dig just below the soil surface during hot parts of the day and at night, and would therefore be in direct contact with the sulfates in the soil. Sulfates increase the anaerobic activities in the soil, make the soil more acidic, and could cause protein and gene damage to organisms, depending on the duration of exposure (Escher and Hermens 2002, p. 4203). Air concentrations of hydrogen sulfide as high as 33 ppm were recorded for a period of 32 minutes in the Loco Hills area (Lusk and Kraft 2008, p. 19). Active dunes sagebrush lizards are predicted to show adverse effects at concentrations greater than 14 ppm (Lusk and Kraft 2008, p. 20). Lusk and Kraft (2008) recommend the adoption of interim air quality standards for the protection of wildlife at 1 ppm, the requirement of routine monitoring of hydrogen sulfide to identify sources in areas where ambient concentrations exceed 1 ppm, and the reduction of emissions to meet these wildlife conservation goals.

The long-term impacts of oil field pollutants to dunes sagebrush lizard populations, fecundity, and survivorship are unknown. Oil fields contain a variety of organic toxic pollutants including petroleum hydrocarbons, polycyclic aromatic hydrocarbons (PAHs), phenanthrene, fluoranthene, and benzo[a]anthracene. Two studies on the impacts of oil and gas pollution to another sand-dwelling lizard, the Nidua fringe-fingered lizard (*Acanthodactylus scutellatus*), a sand-dwelling species from the Middle East, were conducted in the oil fields in Kuwait. Tissue samples taken from both the fringe-fingered lizard and its insect prey base (ants) found the PAH concentrations in the fringe-fingered lizard and ant tissue increased with the exposure to the toxins. The levels of PAHs in the fringe-fingered lizard and ant tissues were high enough to impact the function of vital organs. Fringe-fingered lizards are not able to remove the toxins from their system quickly due to their slow metabolic rate and simple enzyme system (Al-Hashem *et al.* 2007, p. 555). Additionally, the exposure to oil field chemicals affected the behavior and foraging time for the fringe-fingered lizard by altering time of emergence and basking behavior (Abdulla *et al.* 2008, p. 589).

With much of the dunes sagebrush lizard's habitat located in small dune patches within oil and gas fields, the potential for exposure to hydrogen sulfide, PAHs, and oil spills is high. If dunes sagebrush lizards are exposed to this type of pollution, we may expect physiological dysfunction, impaired foraging abilities, increased mortality, and population declines. For this reason, we believe the exposure to pollutants from oil and gas production may be a factor affecting the survival of the species.

Climate Change

The Intergovernmental Panel on Climate Change (IPCC) states that warming of the climate system is unequivocal, based on observations of increases in global average air and ocean temperatures, widespread melting of snow and ice, and rising global average sea level (2007a, p. 5). For the next two decades, a warming of about 0.4 degrees Fahrenheit (°F) (0.2 degrees Celsius (°C)) per decade is projected (IPCC 2007a, p. 12). Temperature projections for the following years increasingly depend on specific emission scenarios (IPCC 2007a, p. 13). Various emissions scenarios suggest that average global temperatures are expected to increase by between 1.1 °F and 7.2 °F (0.6 °C and 4.0 °C) by the end of the 21st century, with the greatest warming expected over land (IPCC 2007a, p. 13). Warming in western mountains is projected to cause decreased snowpack, more winter flooding, and reduced summer flows, exacerbating competition for over-allocated water resources (IPCC 2007b, p. 14). The IPCC reports that it is very likely that hot extremes, heat waves, and heavy precipitation and flooding will increase in frequency (IPCC 2007b, p. 18).

It is anticipated that climate change will intensify the effects of other ongoing habitat impacts, including impacts of oil and gas development and shinnery oak removal (Sinervo *et al.* 2010, p. 894). The predicted changes in climate in the desert Southwest include higher temperatures and less rainfall, and changes in storm frequency and severity (Seager *et al.* 2007, p. 1183; Saunders *et al.* 2008, p. 5). Higher temperatures and lower rainfall, as predicted by various models for the southeastern part of New Mexico, could manifest as further degradation of the shinnery oak dune system (Seager *et al.* 2007, p. 1183). These increased temperatures could directly affect individuals by reducing habitat and by converting shinnery oak vegetation communities to communities with species such as yucca (*Yucca elata*), mesquite, and cacti (Family Cactacea). Predicted changes are not known for shinnery oak, but it is anticipated that large contiguous stands of shinnery oak will be necessary for the system to be resilient to climate change.

Climate change is predicted to cause a global decline in lizard populations, with an estimated 40 percent of lizard populations becoming extinct by 2080 (Huey *et al.* 2010, p. 832). In a recent study in Mexico, 12 percent of 200 lizard populations went extinct due to the magnitude of warming in the spring (Huey *et al.* 2010, p. 832). For the lizards studied, warming caused the lizards to avoid activities such as foraging or reproducing. In order to avoid becoming overheated, the lizards remained in cooler refuges. This research has shown evidence of actual extinctions of local populations linked to changes in climate in *Sceloporus* lizards (the genus of the dunes sagebrush lizard) (Sinervo *et al.* 2010, p. 894).

The severity of impacts to all plants and wildlife resulting from climate change will depend on the amount of habitat available for dispersal. The dunes sagebrush lizard is a habitat specialist, and its habitat is not expanding (Peterson 1992, p. 2). The dune system that the dunes sagebrush lizard inhabits is limited by the distribution of shinnery oak and may be vulnerable to rapid habitat changes (Muhs and Holliday 2001, p. 86). Organisms that are able to adapt to changing environments and shifts in habitat availability will likely be more apt to survive climate change (Massot *et al.* 2008, p. 466). The impacts of climate change to the shinnery oak dune system, including increased temperatures, decreased precipitation, increased sand supply, decreased vegetative cover, and increased evaporation, would all lead to increased movement of sand dunes and more unstable dunes (Muhs and Holliday 1995, p. 206). The shinnery oak dune habitat relies on the stability and underground structure of the shinnery oak. Without the shinnery oak, the dunes will be unstable and will move at a much faster pace (Muhs and Holliday 2001, p. 75). The historical mobilization of sand that forms the current shinnery oak dune system was caused by relatively minor changes in climate (Holliday 2001, p. 88).

Dunes sagebrush lizards are not found in areas that do not have shinnery oak dunes, and major shifts in habitat availability would impact the dunes sagebrush lizard (Painter *et al* 1999, p. 7). Climate change models for some

lizard species predict a complete loss of habitat by 2050 due to precipitation declines (Ballesteros-Barrera *et al.* 2007, p. 736). The limited dispersal ability of dunes sagebrush lizards means that the species as a whole could be isolated in areas with increased desertification and shinnery oak loss. The already fragmented habitat will limit the ability of the dunes sagebrush lizard to respond to climate-induced habitat changes. At this time, climate change is not considered to be the most significant threat to the dunes sagebrush lizard throughout its range; however, impacts from climate change in the future will likely exacerbate the ongoing threat of habitat loss caused by other factors, as discussed above.

Competition

The side-blotched lizard (*Uta stansburiana*) is a generalist lizard species that is found throughout the range of the dunes sagebrush lizard. Researchers studying the dunes sagebrush lizard have reported that the side-blotched lizard is a competitor for resources with the dunes sagebrush lizard (Sena 1985, p. 13) and has been observed directly competing for insect prey (Sias and Snell 1996, p. 6). In areas where there are large dune blowouts in shinnery oak dune complexes, the dominant lizard species is the dunes sagebrush lizard. As the habitat becomes marginal with smaller dune blowouts adjacent to shinnery oak flats or unsuitable habitat, there are greater numbers of side-blotched lizards and fewer dunes sagebrush lizards. In areas that have more habitat disturbance and greater edge effects, there are also more side-blotched lizards than dunes sagebrush lizards (Painter 2007, p. 2). The side-blotched lizard is the most abundant lizard found in the same habitat as the dunes sagebrush lizard. The side-blotched lizard uses more open, sandy substrate than the dunes sagebrush lizard, which uses the vegetative cover provided by shinnery oak. The side-blotched lizard also spends more time in the open sun and more time foraging (Sartotrius *et al.* 2002, pp. 1972–1975). As a generalist, the side-blotched lizard is not impacted by habitat disturbance and alteration in the way that dunes sagebrush lizard, a habitat specialist, is impacted (Sias and Snell 1996, p. 18; Painter *et al.* 2007, p. 3). Therefore, the side-blotched lizard likely outcompetes the dunes sagebrush lizard in these altered habitats. Increased temperatures, due to climate change, and changes to the vegetative community could increase the competition between dunes sagebrush lizards and side-blotched lizards.

Summary of Factor E

We do not know the magnitude or imminence of the direct or indirect impacts of competition and climate change on the status of the species at this time. However, we consider exposure to oil and gas pollutants to be a threat to the species throughout its range, both now and continuing into the foreseeable future.

Proposed Listing Determination

We have carefully assessed the best scientific and commercial information available regarding the past, present, and future threats to the dunes sagebrush lizard. The dunes sagebrush lizard faces immediate and significant threats due to oil and gas activities, and herbicide treatments. Habitat loss and fragmentation due to oil and gas development is a measureable factor impacting the species due to the removal of shinnery oak and creation of roads and pads, pipelines, and power lines that create habitat patches and increase the proportion of habitat edge to habitat interior. In addition, impacts that are not easily quantified such as climate change, competition, and pollution may exacerbate adverse effects caused by habitat loss. Cumulative threats to the dunes sagebrush lizard are not being adequately addressed through existing regulatory mechanisms. Oil and gas pollutants are a current and ongoing threat to the species throughout its range.

The Act defines an endangered species as "any species which is in danger of extinction throughout all or a significant portion of its range." We find that the dunes sagebrush lizard is presently in danger of extinction throughout its entire range, based on the immediacy, severity, and scope of the ongoing significant threats to the dunes sagebrush lizard, as described above. Therefore, on the basis of the best available scientific and commercial information, we propose to list the dunes sagebrush lizard as an endangered species in accordance with sections 3(6) and 4(a)(1) of the Act.

Under the Act and our implementing regulations, a species may warrant listing if it is endangered or threatened throughout all or a significant portion of its range. The dunes sagebrush lizard is highly restricted in its range, and the threats occur throughout its range. Therefore, we assessed the status of the species throughout its entire range. The threats to the survival of the dunes sagebrush lizard occur throughout its range and are not restricted to any particular portion of that range. Accordingly, our assessment and proposed determination applies to the dunes sagebrush lizard throughout its entire range.

Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain practices. Recognition results in public awareness and conservation by Federal, State, Tribal, and local agencies; private organizations; and individuals. The Act encourages cooperation with the States and requires that recovery actions be carried out for all listed species. The protection required by Federal agencies and the prohibitions against certain activities involving listed species are discussed, in part, below.

The primary purpose of the Act is the conservation of endangered and threatened species and the ecosystems upon which they depend. The ultimate goal of such conservation efforts is the recovery of these listed species, so that they no longer need the protective measures of the Act. Subsection 4(f) of the Act requires the Service to develop and implement recovery plans for the conservation of endangered and threatened species. The recovery planning process involves the identification of actions that are necessary to halt or reverse the species' decline by addressing the threats to its survival and recovery. The goal of this process is to restore listed species to a point where they are secure, self-sustaining, and functioning components of their ecosystems.

Recovery planning includes the development of a recovery outline shortly after a species is listed, preparation of a draft and final recovery plan, and revisions to the plan as significant new information becomes available. The recovery outline guides the immediate implementation of urgent recovery actions and describes the process to be used to develop a recovery plan. The recovery plan identifies site-specific management actions that will achieve recovery of the species, measurable criteria that determine when a species may be downlisted or delisted, and methods for monitoring recovery progress. Recovery plans also establish a framework for agencies to coordinate their recovery efforts and provide estimates of the cost of implementing recovery tasks. Recovery teams (comprised of species experts, Federal and State agencies, nongovernment organizations, and stakeholders) are often established to develop recovery plans. When completed, the recovery

outline, draft recovery plan, and the final recovery plan will be available on our Web site (*http://www.fws.gov/endangered*), or from our New Mexico Ecological Services Field Office (*see* **FOR FURTHER INFORMATION CONTACT**).

Implementation of recovery actions generally requires the participation of a broad range of partners, including other Federal agencies, States, Tribal and nongovernmental organizations, businesses, and private landowners. Examples of recovery actions include habitat restoration (*e.g.,* restoration of native vegetation), research, captive propagation and reintroduction, and outreach and education. The recovery of many listed species cannot be accomplished solely on Federal lands because their range may occur primarily or solely on non-Federal lands. To achieve recovery of these species requires cooperative conservation efforts on private, State, and Tribal lands.

If this species is listed, funding for recovery actions will be available from a variety of sources, including Federal budgets, State programs, and cost share grants for non-Federal landowners, the academic community, and nongovernmental organizations. In addition, under section 6 of the Act, the States of New Mexico and Texas would be eligible for Federal funds to implement management actions that promote the protection and recovery of the dunes sagebrush lizard. Information on our grant programs that are available to aid species recovery can be found at: *http://www.fws.gov/grants.*

Although the dunes sagebrush lizard is only proposed for listing under the Act at this time, please let us know if you are interested in participating in recovery efforts for this species. Additionally, we invite you to submit any new information on this species whenever it becomes available and any information you may have for recovery planning purposes (*see* **FOR FURTHER INFORMATION CONTACT**).

Section 7(a) of the Act, as amended, requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened and with respect to its critical habitat, if any is designated. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR part 402. Section 7(a)(4) requires Federal agencies to confer with the Service on any action that is likely to jeopardize the continued existence of a species proposed for listing or result in destruction or adverse modification of proposed critical habitat. We believe the following actions may jeopardize this species, and therefore we would seek to conference with BLM and NRCS on these actions:

- The lease of land for oil and gas drilling,
- Applications to drill,
- Applications for infrastructure through dunes (including, but not limited to pipelines and power lines),
- OHV activities,
- Seismic exploration,
- Continued oil and gas operations (release of pollution and routine maintenance),
- Grazing leases,
- Renewable resource activities, and
- Chemical and mechanical removal of shinnery oak habitat.

If a species is listed subsequently, section 7(a)(2) requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of the species or destroy or adversely modify its critical habitat. If a Federal action may adversely affect a listed species or its critical habitat, the responsible Federal agency must enter into formal consultation with the Service.

For the dunes sagebrush lizard, Federal agency actions that may require conference or consultation or both, as described in the preceding paragraph, include the provision of Federal funds to State and private entities through Federal programs, such as the Service's Landowner Incentive Program, State Wildlife Grant Program, and Federal Aid in Wildlife Restoration program, as well as the various grants administered by the Natural Resources Conservation Service. Other types of actions that may require consultation include BLM activities, such as the lease of land for oil and gas drilling, applications to drill, grazing leases, and removal of shinnery oak habitat. Possible measures that could be implemented to conserve the dunes sagebrush lizard and its habitat are:

- Maintain 500-m (1640-ft) wide dispersal corridors in shinnery oak dunes for the dunes sagebrush lizards to disperse between habitat patches;
- Discontinue chemical spraying within occupied or suitable habitat;
- Place well pads outside of shinnery oak dunes and corridors between dune complexes;
- Manage well density to limit development in habitat;
- Minimize well pad size and carry out site reclamation;
- Develop techniques to recreate shinnery oak dunes;
- Limit OHV use in occupied habitat;
- Minimize impacts of seismic exploration by thumper trucks;
- Develop a public awareness program;
- Do not place power lines and fences through shinnery oak dune complexes;
- Develop transmission corridors for pipelines and power lines;
- Limit pollution by inspecting pipelines and equipment;
- Develop and implement plans for cleaning oil spills;
- Limit hydrogen sulfide emissions;
- Maintain wells; and
- Limit any further infrastructure that would remove the shinnery oak dunes.

The Act and its implementing regulations set forth a series of general prohibitions and exceptions that apply to endangered species. The prohibitions of section 9(a)(2) of the Act, codified at 50 CFR 17.21 for endangered wildlife, in part, make it illegal for any person subject to the jurisdiction of the United States to take (includes harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt any of these), import, export, ship in interstate commerce in the course of commercial activity, or sell or offer for sale in interstate or foreign commerce any listed species. Under the Lacey Act (18 U.S.C. 42; 16 U.S.C. 3371–3378), it is also illegal to possess, sell, deliver, carry, transport, or ship any such wildlife that has been taken illegally. Certain exceptions to the prohibitions apply to agents of the Service and State conservation agencies. The dunes sagebrush lizard is listed as endangered by the State of New Mexico, and is currently protected under the Wildlife Conservation Act of 1978, which prohibits take of the species but has no protection for habitat (NMDGF 1978, p. 9). The Act will, therefore, offer additional protection to this species.

We may issue permits to carry out otherwise prohibited activities involving endangered and threatened wildlife species under certain circumstances. Regulations governing permits are codified at 50 CFR 17.22 for endangered species, and at 17.32 for threatened species. With regard to endangered wildlife, a permit must be issued for the following purposes: for scientific purposes, to enhance the propagation or survival of the species, and for incidental take in connection with otherwise lawful activities. We anticipate that the only permits that would be sought or issued for the dunes sagebrush lizard would be in association with research and recovery efforts, as this species is not common in the herpetocultural trade or in the wild. Requests for copies of the regulations regarding listed species and inquiries about prohibitions and permits may be addressed to the Field Supervisor at the address in the **FOR FURTHER INFORMATION CONTACT** section.

It is our policy, as published in the **Federal Register** on July 1, 1994 (59 FR 34272), to identify to the maximum extent practicable at the time a species is listed, those activities that would or would not constitute a violation of section 9 of the Act. The intent of this policy is to increase public awareness of the effect of a proposed listing on proposed and ongoing activities within the range of species proposed for listing. The following activities could potentially result in a violation of section 9 of the Act; this list is not comprehensive:

(1) Unauthorized collecting, handling, possessing, selling, delivering, carrying, or transporting of the species, including import or export across State lines and international boundaries, except for properly documented antique specimens of these taxa at least 100 years old, as defined by section 10(h)(1) of the Act;

(2) Introduction of nonnative species that compete with or prey upon the dunes sagebrush lizard; and

(3) The unauthorized release of biological control agents that attack any life stage of this species.

Questions regarding whether specific activities would constitute a violation of section 9 of the Act should be directed to the New Mexico Ecological Services Field Office (*see* **FOR FURTHER INFORMATION CONTACT**).

Critical Habitat

Background

Critical habitat is defined in section 3 of the Act as:

(i) The specific areas within the geographical area occupied by the species, at the time it is listed in accordance with the Act, on which are found those physical or biological features.

(I) Essential to the conservation of the species and

(II) Which may require special management considerations or protection; and

(ii) Specific areas outside the geographical area occupied by the species at the time it is listed, upon a determination that such areas are essential for the conservation of the species.

Conservation, as defined under section 3 of the Act, means to use and the use of all methods and procedures that are necessary to bring an endangered or threatened species to the point at which the measures provided under the Act are no longer necessary. Such methods and procedures include, but are not limited to, all activities associated with scientific resources management such as research, census, law enforcement, habitat acquisition and maintenance, propagation, live trapping, and transplantation, and, in the extraordinary case where population pressures within a given ecosystem cannot be otherwise relieved, may include regulated taking.

Critical habitat receives protection under section 7 of the Act through the prohibition of destruction or adverse modification of critical habitat with regard to actions carried out, funded, or authorized by a Federal agency. Section 7(a)(2) of the Act requires consultation on Federal actions that may affect critical habitat. The designation of critical habitat does not affect land ownership or establish a refuge, wilderness, reserve, preserve, or other conservation area. Such designation does not allow the government or public to access private lands. Such designation does not require implementation of restoration, recovery, or enhancement measures by non-Federal landowners. Where a landowner seeks or requests Federal agency funding or authorization for an action that may affect a listed species or critical habitat, the consultation requirements of section 7(a)(2) of the Act would apply, but even in the event of a destruction or adverse modification finding, Federal action agencies and the applicant's obligation is not to restore or recover the species, but to implement reasonable and prudent alternatives to avoid destruction or adverse modification of critical habitat.

For inclusion in a critical habitat designation, the habitat within the geographical area occupied by the species at the time it was listed must contain the physical and biological features essential to the conservation of the species, and be included only if those features may require special management considerations or protection. Critical habitat designations identify, to the extent known using the best scientific and commercial data available, habitat areas that provide essential life cycle needs of the species (areas on which are found the physical and biological features (PBFs) laid out in the appropriate quantity and spatial arrangement for the conservation of the species). Under the Act and regulations at 50 CFR 424.12, we can designate critical habitat in areas outside the geographical area occupied by the species at the time it is listed only when we determine that those areas are essential for the conservation of the species and that designation limited to those areas occupied at the time of listing would be inadequate to ensure the conservation of the species.

Section 4 of the Act requires that we designate critical habitat on the basis of the best scientific and commercial data available. Further, our Policy on Information Standards Under the Endangered Species Act (published in the **Federal Register** on July 1, 1994 (59 FR 34271)), the Information Quality Act (section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001 (Pub. L. 106–554; H.R. 5658)), and our associated Information Quality Guidelines, provide criteria, establish procedures, and provide guidance to ensure that our decisions are based on the best scientific data available. They require our biologists, to the extent consistent with the Act and with the use of the best scientific data available, to use primary and original sources of information as the basis for recommendations to designate critical habitat.

When we are determining which areas should be designated as critical habitat, our primary source of information is generally the information developed during the listing process for the species. Additional information sources may include the recovery plan for the species, articles in peer-reviewed journals, conservation plans developed by States and counties, scientific status surveys and studies, biological assessments, or other unpublished materials and expert opinion or personal knowledge.

Habitat is often dynamic, and species may move from one area to another over time. Furthermore, we recognize that critical habitat designated at a particular point in time may not include all of the habitat areas that we may later determine are necessary for the recovery of the species. For these reasons, a critical habitat designation does not signal that habitat outside the designated area is unimportant or may not be required for recovery of the species.

Areas that are important to the conservation of the species, but are outside the critical habitat designation, will continue to be subject to conservation actions we implement under section 7(a)(1) of the Act. Areas that support populations are also subject to the regulatory protections afforded by the section 7(a)(2) jeopardy standard, as determined on the basis of the best available scientific information at the time of the agency action. Federally funded or permitted projects affecting listed species outside their designated critical habitat areas may still result in jeopardy findings in some cases. Similarly, critical habitat designations made on the basis of the best available information at the time of designation

will not control the direction and substance of future recovery plans, habitat conservation plans (HCPs), or other species conservation planning efforts if new information available at the time of these planning efforts warrants otherwise.

Prudency Determination

Section 4(a)(3) of the Act, as amended, and implementing regulations (50 CFR 424.12), require that, to the maximum extent prudent and determinable, the Secretary designate critical habitat at the time the species is determined to be endangered or threatened. Our regulations (50 CFR 424.12(a)(1)) state that the designation of critical habitat is not prudent when one or both of the following situations exist: (1) The species is threatened by taking or other human activity, and identification of critical habitat can be expected to increase the degree of threat to the species, or (2) such designation of critical habitat would not be beneficial to the species.

There is no documentation that the dunes sagebrush lizard is threatened by collection and, therefore, is unlikely to experience increased threats by identifying critical habitat. Further, the potential benefits of critical habitat to the dunes sagebrush lizard include: (1) Triggering consultation under section 7 of the Act, in new areas for actions in which there may be a Federal nexus where it would not otherwise occur because, for example, it is or has become unoccupied or the occupancy is in question; (2) focusing conservation activities on the most essential features and areas; (3) providing educational benefits to State or county governments or private entities; and (4) preventing people from causing inadvertent harm to the species. Therefore, since we have determined that the designation of critical habitat will not likely increase the degree of threat to the species and may provide some measure of benefit, we find that designation of critical habitat is prudent for dunes sagebrush lizard.

As stated above, section 4(a)(3) of the Act requires the designation of critical habitat concurrently with the species' listing "to the maximum extent prudent and determinable." Our regulations at 50 CFR 424.12(a)(2) state that critical habitat is not determinable when one or both of the following situations exist:

(i) Information sufficient to perform required analyses of the impacts of the designation is lacking, or

(ii) The biological needs of the species are not sufficiently well known to permit identification of an area as critical habitat.

When critical habitat is not determinable, the Act provides for an additional year to publish a critical habitat designation (16 U.S.C. 1533(b)(6)(C)(ii)).

We are currently unable to determine which areas meet the definition of critical habitat because the location and distribution of physical and biological features that may be considered essential to the conservation of the species is not sufficiently understood at this time. Additional onsite work is needed for the purposes of delineating critical habitat boundaries and providing legal descriptions of those areas. Therefore, although we have determined that the designation of critical habitat is prudent for the dunes sagebrush lizard, we find that critical habitat for the dunes sagebrush lizard is not determinable at this time.

Peer Review

In accordance with our joint policy published in the **Federal Register** on July 1, 1994 (59 FR 34270), we will seek the expert opinions of at least three appropriate and independent specialists regarding this proposed rule. The purpose of such review is to ensure that our determination of status for this species is based on scientifically sound data, assumptions, and analyses. We will send peer reviewers copies of this proposed rule immediately following publication in the **Federal Register**. We will invite these peer reviewers to comment, during the public comment period, on the specific assumptions and conclusions regarding the proposal to list dunes sagebrush lizard as endangered, and our decision regarding critical habitat for these species.

We will consider all comments and information we receive during the comment period on this proposed rule during preparation of a final rulemaking. Accordingly, the final decision may differ from this proposal.

Public Hearings

The Act provides for one or more public hearings on this proposal, if requested. Requests must be received within 45 days after the date of publication of this proposal in the **Federal Register**. Such requests must be made in writing and be addressed to the Field Supervisor at the address in the **FOR FURTHER INFORMATION CONTACT** section. We will schedule public hearing on this proposal, if any are requested, and announce the dates, times, and places of those hearings, as well as how to obtain reasonable accommodations, in the **Federal Register** and local newspapers at least 15 days before the hearing.

Persons needing reasonable accommodations to attend and participate in a public hearing should contact the New Mexico Ecological Services Field Office at 505–761–4718, as soon as possible. To allow sufficient time to process requests, please call no later than one week before the hearing date. Information regarding this proposed rule is available in alternative formats upon request.

Clarity of the Rule

We are required by Executive Orders 12866 and 12988 and by the Presidential Memorandum of June 1, 1998, to write all rules in plain language. This means that each rule we publish must:

(a) Be logically organized;

(b) Use the active voice to address readers directly;

(c) Use clear language rather than jargon;

(d) Be divided into short sections and sentences; and

(e) Use lists and tables wherever possible.

If you feel that we have not met these requirements, send us comments by one of the methods listed in the **ADDRESSES** section. To better help us revise the rule, your comments should be as specific as possible. For example, you should tell us the numbers of the sections or paragraphs that are unclearly written, which sections or sentences are too long, the sections where you feel lists or tables would be useful, *etc.*

Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.)

This rule does not contain any new collections of information that require approval by Office of Management and Budget (OMB) under the Paperwork Reduction Act. This rule will not impose recordkeeping or reporting requirements on State or local governments, individuals, businesses, or organizations. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

National Environmental Policy Act

We have determined that environmental assessments and environmental impact statements, as defined under the authority of the National Environmental Policy Act of 1969 (42 U.S.C. 4321 *et seq.*), need not be prepared in connection with regulations adopted under section 4(a)(1) of the Act. We published a notice outlining our reasons for this determination in the **Federal Register** on October 25, 1983 (48 FR 49244).

References Cited

A complete list of all references cited in this proposed rule is available on the Internet at *http://www.regulations.gov* or upon request from the Field Supervisor, New Mexico Ecological Services Field Office (*see* **FOR FURTHER INFORMATION CONTACT** section).

Authors

The primary authors of this proposed rule are the staff members of the New Mexico Ecological Services Field Office (*see* **FOR FURTHER INFORMATION CONTACT**).

List of Subjects in 50 CFR Part 17

Endangered and threatened species, Exports, Imports, Reporting and recordkeeping requirements, Transportation.

Proposed Regulation Promulgation

Accordingly, we propose to amend part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations, as set forth below:

PART 17—[AMENDED]

1. The authority citation for part 17 continues to read as follows:

Authority: 16 U.S.C. 1361–1407; 16 U.S.C. 1531–1544; 16 U.S.C. 4201–4245; Public Law 99–625, 100 Stat. 3500; unless otherwise noted.

2. Amend § 17.11(h) by adding an entry for "Lizard, dunes sagebrush" in an alphabetical order under REPTILES to the List of Endangered and Threatened Wildlife to read as follows:

§ 17.11 Endangered and threatened wildlife.

* * * * *

(h) * * *

Species		Historic range	Family	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
*	*	*	*	*	*		*
REPTILES							
*	*	*	*	*	*		*
Lizard, dunes sagebrush.	*Sceloporus arenicolus.*	U.S.A. (NM, TX)	Phrynosomatidae	E	.....	NA	NA
*	*	*	*	*	*		*

* * * * *

Dated: December 1, 2010.

Rowan W. Gould,

Acting Director, Fish and Wildlife Service.

[FR Doc. 2010–31140 Filed 12–13–10; 8:45 am]

BILLING CODE 4310–55–P

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

[Docket No. FWS–R4–ES–2010–0024; MO 92210–0–0009–B4]

RIN 1018–AW89

Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for Mississippi Gopher Frog

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule; reopening of comment period, availability of draft economic analysis, and amended required determinations.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), announce the availability of the draft economic analysis (DEA) for the June 3, 2010, proposed designation of critical habitat for the Mississippi gopher frog (*Rana sevosa*) [= *Rana capito sevosa*] under the Endangered Species Act of 1973, as amended (Act). We also announce the reopening of the comment period and an amended required determinations section of the proposal. We are reopening the comment period for an additional 30 days to allow all interested parties an opportunity to comment simultaneously on the proposed critical habitat designation, the associated DEA, and the amended required determinations section. Comments previously submitted need not be resubmitted and will be fully considered in preparation of the final rule.

DATES: We will consider public comments received on or before January 13, 2011. Comments must be received by 11:59 p.m. Eastern Time on the closing date. Any comments that we receive after the closing date may not be considered in the final decision on this action.

ADDRESSES: You may submit comments by one of the following methods:

- *Federal eRulemaking Portal: http://www.regulations.gov.* Follow the instructions for submitting comments to Docket No. FWS–R4–ES–2010–0024.
- *U.S. mail or hand-delivery:* Public Comments Processing, Attn: FWS–R4–ES–2010–0024; Division of Policy and Directives Management; U.S. Fish and Wildlife Service; 4401 N. Fairfax Drive, Suite 222; Arlington, VA 22203.

We will post all comments on *http://www.regulations.gov.* This generally means that we will post any personal information you provide us (see the Public Comments section below for more information).

FOR FURTHER INFORMATION CONTACT: Stephen Ricks, Field Supervisor, Mississippi Fish and Wildlife Office, 6578 Dogwood View Parkway, Jackson, MS 39213; by telephone (601–321–1122); or by facsimile (601–965–4340). Persons who use a telecommunications device for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 800–877–8339.

SUPPLEMENTARY INFORMATION:

Public Comments

We will accept written comments and information during this reopened comment period on our proposed designation of critical habitat for the Mississippi gopher frog that was published in the **Federal Register** on June 3, 2010 (75 FR 31387), the DEA of the proposed designation of critical habitat for the Mississippi gopher frog, and the amended required determinations provided in this document. We will consider information and recommendations from all interested parties. We are particularly interested in comments concerning:

(1) The reasons why we should or should not designate areas as "critical habitat" under section 4 of the Act (16 U.S.C. 1531 *et seq.*), including whether there are threats to the Mississippi gopher frog from human activity, the degree of which can be expected to