# Environmental Assessment

For

a Candidate Conservation Agreement / Candidate Conservation Agreement with Assurances

for the

Lesser Prairie-chicken (*Tympanuchus pallidicinctus*) and

Sand Dune Lizard (*Sceloporus arenicolus*)

in New Mexico

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# 1.0 INTRODUCTION

If and when a species becomes listed under the Endangered Species Act of 1973 (ESA), as amended (16 U.S.C. § 1531, et seq.), that action triggers both a regulatory and a conservation responsibility for Federal, State, and private landowners. These responsibilities stem from section 9 of the ESA that prohibits "take" (i.e., harass, harm, pursue, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct) of listed species. Along with the section 9 prohibitions, Federal agencies must ensure that their actions will not jeopardize the continued existence of the listed species. For many years the U.S. Fish and Wildlife Service (Service) has worked with partners to help them develop Candidate Conservation Agreements (CCAs). CCAs primarily have been developed by Federal agencies to cover Federal lands, and several have resulted in significant conservation efforts. To provide an incentive for voluntary conservation of species that are candidates for listing and are located on non-Federal lands, the Service adopted a policy and regulations in 1999 for Candidate Conservation Agreements with Assurances (CCAAs) under the authority of Section 10 of the ESA. Under a CCAA, a property owner voluntarily commits to implement specific conservation measures on non-Federal lands for species covered by the CCAA. In exchange, they receive a permit from the Service which provides assurances that additional conservation measures will not be required and additional land, water, or resource use restrictions under the ESA will not be imposed on them if the species becomes listed in the future, provided the CCAA is being properly implemented. These assurances provide considerable certainty to the property owner regarding their activity on non-Federal lands covered by the CCAA.

In the western U.S. many species that are candidates for listing under the ESA occur on both Federal and non-Federal lands. In this setting, property owners whose operations rely on using a combination of land ownership types are concerned that assurances provided to them under a CCAA do not apply to Federal lands, even if they implement conservation measures across all land ownership types where they operate. These property owners, as well as Federal leasees, operators, and permittees, are seeking greater certainty that if listing occurs, it will be less likely they be required to change their activities on Federal lands in a way that could significantly impact their operations. In New Mexico, private property owners, Federal leasees, operators, and permittees, the Service, and Bureau of Land Management (BLM) were concerned about activities on public/Federal lands that might affect the status of two candidate species, the lesser prairie-chicken (*Tympanuchus pallidicinctus*) (LPC) and the sand dune lizard (*Sceloporus arenicolus*) (SDL), formally known as the dunes sagebrush lizard.

As a result of these concerns, in January 2003, a working group composed of local, State and Federal officials, along with private and commercial stakeholders, was formed to address conservation and management activities for the LPC/SDL. This working group, formally named the New Mexico Lesser Prairie-Chicken/Sand Dune Lizard Working Group, worked for 2.5

years and published the Collaborative Conservation Strategies for the Lesser Prairie-Chicken and Sand Dune Lizard in New Mexico (Strategy) in August 2005 (New Mexico LPC/SDL Working Group 2005). This Strategy provided guidance in the development of BLM's Special Status Species Resource Management Plan Amendment (RMPA), approved in 2008, which also addresses the concerns and future management of the LPC and SDL habitats (BLM 2008). Both the Strategy and RMPA prescribe active cooperation among all stakeholders to reduce and/or eliminate threats to these species in New Mexico. As an outcome, the land use prescriptions contained in the RMPA now serve as baseline mitigation (for both species) to those operating on Federal lands or minerals.

The approval and implementationment of a conservation agreement (CCA or CCAA) would provide a mechanism for implementing and monitoring conservation measures that are not explicitly addressed or applicable by the RMPA. Any conservation measures undertaken by Participating Cooperators as a result of a conservation agreement would be measures above and beyond those prescribed in the RMPA. A future decision to list either species would take into consideration actions planned and/or implemented pursuant to the CCA or CCAA as well as land use prescriptions contained in the RMPA. However, such a decision would also need to consider threats facing the LPC and SDL now and into the foreseeable future throughout all or a significant portion of their current range. Since a CCA is designed to address the activities of leasees, operators, and permittees on Federal lands, a companion CCAA would also need to be used to address the needs of both species on State and private lands within New Mexico.

## 1.1 Description of the Proposed Action

The proposed action is the issuance of a section 10(a)(1)(A) enhancement of survival permit and implementation of a CCA and CCAA that would result in the conservation of the LPC and SDL in southeastern New Mexico. Specifically, the covered area would include all or portions of the counties of Lea, Eddy, DeBaca, Curry, Roosevelt, Quay, and Chaves. As discussed above, the CCA and the CCAA are separate agreements; one would apply to participants on Federal lands (CCA), and one would apply to participants on State and/or private lands (CCAA). The following is a brief description of each of these agreements:

> CCAA – The Center of Excellence for Hazardous Materials Management (CEHMM) would apply to the Service for an Enhancement of Survival Permit pursuant to Section 10(a)1(A) of the ESA, as amended (16 U.S.C. 1531 et seq.). The permit application would include a proposed CCAA for the LPC and SDL. CEHMM would implement conservation measures for the LPC and SDL within the covered area by providing technical assistance through which cooperating private and State landowners can implement these voluntary measures for the LPC and SDL on their properties or

contribute funds to have conservation measures implemented in other high priority areas. CEHMM would enroll cooperating participants through issuance of Certificates of Inclusion (CI). In return for implementing the conservation measures, the Service would provide the enrollees assurances that, for the duration of the CCAA and its associated Section 10(a)1(A) Enhancement of Survival Permit, no additional conservation measures or additional land, water, or resource use restrictions beyond those voluntarily agreed to and described in the CI would be required by the Service for the LPC or SDL should they become listed in the future.

CCA - A separate CCA for the LPC and SDL would be approved and implemented with the BLM and CEHMM to address the conservation of the LPC and SDL on Federal lands within the covered area. CEHMM would enroll participating cooperators through issuance of Certificates of Participation (CP). The BLM, CEHMM, and Federal leasees, permittees, and operators (participating cooperators) would work collaboratively so that these participating cooperators would adopt the same practices on the Federal lands as have been adopted on non-Federal lands (as specified under the CCAA). This landscape-scale, integrated approach to conservation across a mix of land ownerships provides the greatest likelihood that listing will not be necessary, and thus the greatest certainty that additional conservation measures beyond those in the CCA will not be required. Participating cooperators in the CCA would also have the additional option of contributing funds to be used to implement conservation measures in other high priority areas. The parent CCA and its accompanying CCAA represent a collaborative effort between the Service, BLM, and CEHMM.

Under the CCA/CCAA, some examples of actions that may be taken on the ground include the following:

- Create and/or restore degraded LPC habitat through vegetation treatment, grazing management, caliche removal, noise abatement, interseeding native grasses or shrubs, and acquisition/protection of important habitat
- Reduce the likelihood of mortality of LPCs through fence marking/removal, power line removal, and drinker and well marker modifications
- Facilitate the propagation and/or translocation of LPCs through release site activities and sponsoring funding opportunities for LPC facilities or release pens
- Allow no surface occupancy within 200 meters of areas designated as occupied or suitable SDL habitat
- Remove unused power lines in shinnery oak dunes
- Place new pipelines and power lines outside of occupied and suitable SDL habitat

- Prohibit Tebuthiuron spraying within 500 meters of suitable and occupied SDL habitat or within corridors that connect dune complexes that are at least 2000 meters from each other

A team composed of representatives from the Service, BLM, and CEHMM will develop and review the CPs/CIs to ensure the greatest benefit is occurring for the LPC and SDL. The team will meet initially to review the participating cooperators application and develop the appropriate CP/CI for their lands. Subsequent meetings will be used to review the progress and success of conservation measures being implemented under CPs/CIs and to review new applications for participation in the CCA/CCAA.

## 2.0 PURPOSE AND NEED FOR ACTION

The purpose of the proposed action of granting a CCA to the BLM and a CCAA to private landowners is to conserve the LPC and SDL with the intention that such conservation will preclude the need to list these species pursuant to the ESA. The purpose contemplates the following:

- Issuing CEHMM an enhancement of survival permit for the LPC and SDL (effective upon a final listing rule for either species) related to conservation activities that have the potential to result in take, pursuant to the ESA section 10(a)(1)(A) and its implementing regulations and policies;
- Developing, coordinating, and implementing conservation actions to reduce and/or eliminate known threats to the LPC and SDL within the current and historic range of both species in New Mexico;
- Supporting ongoing efforts to re-establish and maintain viable populations of both species in currently occupied and suitable habitats;
- Encouraging development and protection of suitable LPC and SDL habitat by giving Participating Cooperators incentives to implement specific conservation measures

The need for the action is to conserve species that are candidates for listing pursuant to the ESA. For many years the Service has worked with partners to help them develop Candidate Conservation Agreements (CCAs). CCAs primarily have been developed by Federal agencies to cover Federal lands, and several have resulted in conservation efforts that made listing unnecessary. To provide an incentive for voluntary conservation of species-at-risk on non-Federal lands, the Service adopted a policy and regulations in 1999 for Candidate Conservation Agreements with Assurances (CCAAs) under the authority of section 10 of the ESA. Under a CCAA, a property owner voluntarily commits to implement specific conservation measures on non-Federal lands for species covered by the agreement. If either species is listed, then private landowners and Federal leasees, operators, or permittees that have joined a conservation

agreement as participating cooperators would have a high degree of certainty that additional restrictions would not be placed on their otherwise legal activities.

# 3.0 DESCRIPTION OF ALTERNATIVES

## 3.1 ALTERNATIVE A - No Action

Under the No Action Alternative, the Service, BLM, and CEHMM would not enter into a conservation agreement (CCA or CCAA) with willing participants. These participating cooperators (i.e. state and private property owners (CCAA); Federal leases, permittees, and operators (CCA)) would have little economic or legal incentive to voluntarily initiate conservation or management activities to benefit the LPC and SDL. In addition, conservation measures above and beyond those directed by existing Federal, State, and local laws, policies, or regulations would not be implemented. The conservation and management of SDL and LPC populations on BLM lands would continue to be guided by those prescriptions identified in the RMPA (BLM 2008).

The LPC is not a state-listed species in New Mexico and would continue to be afforded little protection on State lands. The SDL is listed as threatened under the New Mexico Wildlife Conservation Act; however, the New Mexico State Lands Office (NMSLO) does not provide any protective measures for this species on leased lands they administer. On private lands, where the state or Federal government has no authority to protect or direct the management of listed species' habitat, conservation activities would continue to be implemented entirely at the discretion of the landowner.

## 3.2 ALTERNATIVE B - Approval and Implementation of a CCA and CCAA (Preferred Alternative)

The preferred alternative would involve the approval and implementation of conservation agreements (CCA and CCAA) between the Service, BLM, CEHMM, and participating cooperators to address the conservation needs of the LPC and SDL in southeastern New Mexico. CEHMM would be responsible for enrolling participating cooperators through the CP/CI. A CP/CI is the mechanism for participating cooperators to voluntarily become part of a conservation agreement while the LPC and SDL are still in candidate status. The procedure would entail each participating cooperator signing a CP/ CI for a particular parcel of land (enrolled property), and agreeing to either implement conservation measures or provide funding for implementation of conservation measures for the species their actions may affect. Even

though the landowner, leasee, operator, or permittee may change over time, the CP/CI would remain tied to the enrolled property described in the certificate if the new landowner, leasee, operator, or permittee was interested in maintaining the agreement.

Since the Service and BLM would work cooperatively to determine which conservation measures are the highest priority, it is important to note that funds or in-kind work associated with a CP/CI would not need to be used on the enrolled property as described under its corresponding certificate since that area may not encompass the highest priority area identified for conservation actions by BLM and FWS.

Participating cooperators would benefit from voluntarily enrolling in the conservation agreement in several ways. Under a CCA, in the event the LPC and/or SDL become listed under the ESA, the participating cooperator would receive a high degree of certainty that the biological opinion would be unlikely to change from the conference opinion. As a result, it would be unlikely that more stringent restrictions or additional conservation measures would be required on Federal lands. Under a CCAA, the participating cooperator would receive assurances that no additional restrictions would be required on private or State land. The participating cooperator would continue working under the terms of the CP/CI without the additional requirement of a new Section 7 consultation, requiring more time to complete or until a programmatic Section 7 consultation was completed.

Participating cooperators would agree to protect and enhance existing populations and habitats, restore degraded habitat, create new habitat, augment existing populations of LPC, restore historic populations, or undertake other activities to improve the status of the LPC and SDL. The management activities included in the CCA and CCAA would reduce and/or eliminate threats to the species. Each CP/CI would be negotiated on a case-by-case basis so that participating cooperators would either; 1) contribute funds to accomplish conservation measures, or 2) implement agreed upon conservation measures. While it would not be necessary to conduct all conservation measures on every property enrolled under the CCA and CCAA, approved conservation measures would be undertaken as necessary to reduce and/or eliminate a particular threat. CEHMM would have the ability to use contributed funds on any lands where the landowners agree to allow the implementation of conservation measures and provide written permission to do so. The goal would be to implement the highest priority conservation measures needed (regardless of land ownership), which would be determined by the Service and BLM with input by CEHMM to reduce and/or eliminate threats to both species. As new information or empirical data becomes available, these conservation measures would be modified through adaptive management in order to achieve greater species conservation.

The ultimate goal of the conservation agreement would be to facilitate conservation of the LPC and SDL in southeastern New Mexico. Conservation measures to benefit the LPC would include, but not be limited to, improving habitat and increasing populations by coordinating vegetation treatments with ongoing activities, decreasing habitat fragmentation, propagating and

releasing and/or translocating individuals, and conducting research conducive to adaptive management of the LPC. Measures to benefit the SDL would include, but not be limited to, maintaining existing habitat, preventing further habitat fragmentation, and conducting research conducive to adaptive management of the SDL.

## 3.3 ALTERNATIVE C - Approval and Implementation of a CCA Only

Alternative C would involve the approval and implementation of a CCA between the Service, BLM, CEHMM, and participating cooperators to address the conservation needs of the LPC and SDL on Federal lands in southeastern New Mexico (approximately 22% of the covered area). This alternative would be the same as Alternative B, excluding the approval and implementation of the companion CCAA. As a result, there would not be an agreement in place to address the conservation needs of the LPC and SDL on private and State lands where there would be no Federal nexus. Private landowners would not be given the opportunity to implement proactive conservation measures in return for assurances from the Service that additional restrictions would not be required of them should either species' become listed in the future.

## 3.4 ALTERNATIVE D - Approval and Implementation of a CCAA Only

Alternative D would involve the approval and implementation of a CCAA between the Service, CEHMM, and participating cooperators to address the conservation needs of the LPC and SDL only on private and State lands in southeastern New Mexico (approximately 78% of the covered area). This alternative would be the same as Alternative B, excluding the approval and implementation of the CCA. As a result, there would not be an agreement in place to address the conservation needs of the LPC and SDL on Federal lands. Federal leasees, operators, and permittees, who currently conduct activities within a large portion of the area occupied by the LPC and SDL, would likely be less inclined to implement proactive conservation measures on Federal lands in order to increase the likelihood that additional restrictions would not be required of them should either species' become listed in the future. As a result, for any future actions they propose on Federal lands containing the LPC or SDL, if these species were listed they would be required to go through the standard section 7 consultation process with the Service or wait until a programmatic section 7 consultation was completed. This may result in delays to their proposed activities.

# 4.0 AFFECTED ENVIRONMENT

The conservation agreements (CCA and CCAA) would cover all lands currently occupied or potentially occupied by the LPC or SDL in New Mexico. This includes approximately 2,200 $mi^2$ in the southeastern section of the state within portions of the counties of Lea, Eddy, DeBaca, Curry, Roosevelt, Quay, and Chaves (Figure 1). Three major land resources areas (MLRA) occur in this portion of the state; Central Pecos Valleys and Plains, Southern High Plains, and Chihuahuan Desert Grassland (USDA 2006).

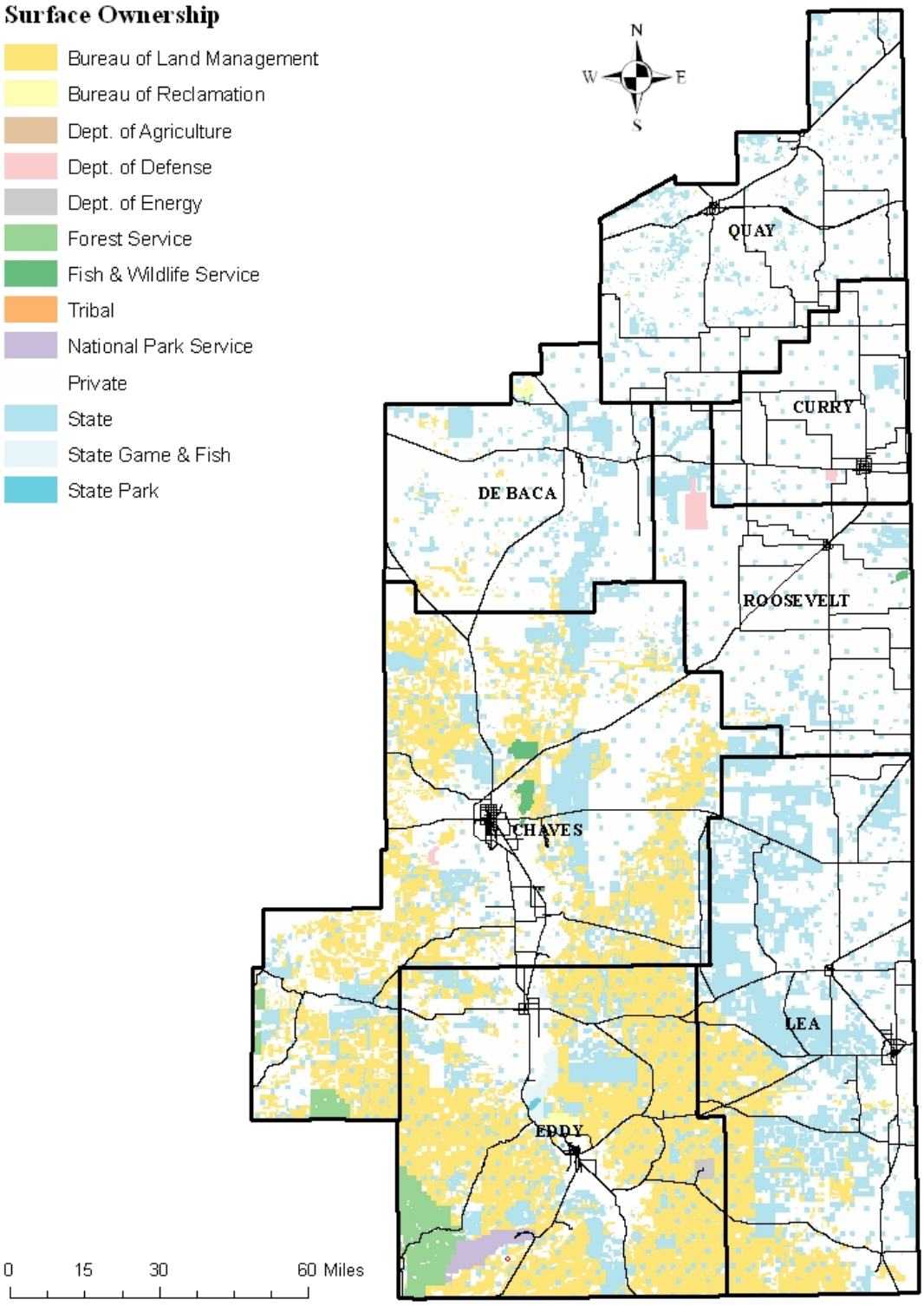
In southeastern New Mexico, LPC habitat occurs in sand shinnery communities dominated by shinnery oak and several species of bluestem, grama, and dropseed grasses. In ungrazed and lightly grazed areas, native tallgrass species such as sand bluestem may grow higher than the relatively low (1-3 feet) shinnery oak canopy. In east-central New Mexico, where shinnery oak does not occur, the shrub component of LPC habitat consists largely of sand sagebrush. The SDL occurs only in the microhabitat of dune "blowouts" (open, low lying areas between active dunes) in areas dominated by shinnery oak and scattered sand sagebrush. The SDL is not found at sites lacking shinnery dune habitat, including shinnery flats, except during dispersal (New Mexico LPC/SDL Working Group 2005).

Resources considered for analysis under this EA included soils, vegetation, wildlife, listed, proposed, and candidate species, land use and ownership, air quality, noise pollution, water resources, cultural resources, and socioeconomics. Of these, the resources selected for further evaluation include soils, vegetation, wildlife, listed, proposed, and candidate species, and land use and ownership. The remaining resources were excluded from further consideration because the proposed actions would be expected to have either no effect to these resources or the effects to these resources would be insignificant.

## 4.1 Soils

The soils within the covered area can generally be described as mostly level with sandy textures and high concentrations of calcium carbonate in the substratum. These sandy soils are highly susceptible to wind erosion. Wind action has produced an undulating topography with frequent dunes (BLM 2008). These soils are primarily Aridisols, although small portions of the covered area contain Entisols and Mollisols. Aridisols are calcium carbonate-containing soils found in arid regions. They are characterized by being dry most of the year and having limited leaching. Aridisols contain subsurface horizons in which clays, calcium carbonate, silica, salts, and/or gypsum have accumulated. They are used mainly for range, wildlife, and recreation.

Figure 1. Map of Covered Area



## 4.2 Vegetation

The covered area supports a diversity of plant communities adapted to life in the arid climate of the southwest. These communities are affected by a number of factors including soil composition, topography, temperature, precipitation, elevation, and land management practices. Vegetation within the covered area can be classified into four broad communities; shinnery oak or sand sagebrush dominated shrublands, honey mesquite shrublands, grasslands, and Conservation Reserve Program (CRP) or agricultural fields (Neville et al. 2005).

The shinnery oak or sand sagebrush dominated shrublands occur on nearly level plains to semi-stabilized dunes up to 10m (32 feet) in height. Relative shrub to grass cover may range from 60-80% shrubs to 5-30% grasses, as estimated from ocular measurements of vegetative cover. This plant community is typically found on well-drained sandy soils. Common species may be shinnery oak (*Quercus havardii*), sand sagebrush (*Artemesia filifolia*), little bluestem (*Schizachyrium scoparium*), sand bluestem (*Andropogon hallii*), soapweed yucca (*Yucca glauca*), purple threeawn (*Aristida purpurea*), hairy grama (*Bouteloua hirsuta*), black grama (*Bouteloua eriopoda*), fall witchgrass (*Digitaria cognata*), New Mexico needlegrass (*Stipa neomexicana*), and dropseeds (*Sporobolus* spp.).

The honey-mesquite shrublands typically occur on nearly flat plains, but can also occur in dunelands. Shrub to grass cover ranges from 13-56% shrubs to <5-40% grasses, as estimated from ocular measurements of vegetative cover. This plant community is associated with soils that are deep, well-drained, fine, sandy loams on gently sloping alluvial material. Common species may be honey mesquite (*Prosopis glandulosa*), shin-oak, black grama, blue grama (*Bouteloua gracilis*), bush muhly (*Muhlenbergia porteri*), soapweed yucca, snakeweed (*Gutierrezia sarothrae*), fourwing saltbush (*Atriplex canescens*), and mesa dropseed (*Sporobolus flexuosus*).

Grasslands occur throughout the covered area in flat and rolling plains interspersed within shin-oak dominated areas. Soils are typically fine and loamy fine sands. These grasslands sometimes form in areas that have been treated by herbicide to remove the woody species. The dominant shrub species is commonly soapweed yucca. Other common species include sand bluestem, giant dropseed (*Sporobolus giganteus*), snakeweed, honey mesquite, tobosa (*Hilaria mutica*), little bluestem, sand sagebrush, catclaw mimosa (*Mimosa aculeaticarpa* var. *biuncifera*), shin-oak, and collegeflower (*Hymenopappus flavescens*).

Agricultural fields within the covered area are typically planted in corn, milo, alfalfa, or cotton. CRP fields are made up of lands previously seeded with either native or non-native grasses and often appear monotypic.

## 4.3 Wildlife

A wide variety of wildlife species utilize the shinnery oak shrublands and grasslands habitats of southeastern New Mexico. According to the RMPA, which covered a portion of the area proposed under the conservation agreements (CCA and CCAA), approximately 31 species of reptiles, 10 species of amphibians, 60 species of birds, and 43 species of mammals are known to occur in this area (BLM 2008).

Reptiles and amphibians that may be found within the covered area include species such as the plains leopard frog (*Rana blairi*), ornate box turtle (*Terrapene ornate*), collared lizard (*Crytaphytus collaris*), side-blotched lizard (*Uta stansburana*), six-lined racerunner (*Cnemidophorus sexlineatus*), barking frog (*Hylactophryne augusti*), coachwhip (*Masticophis flagellum*), and western diamondback rattlesnake (*Crotalus atrox*). Common bird species include the Northern harrier (*Circus cyaneus*), Swainsons hawk (*Buteo swainsoni*), golden eagle (*Aquila chrysaetos*), mourning dove (*Zenaida macroura*), curve-billed thrasher (*Toxostoma curvirostre*), and scissor-tailed flycatcher (*Tyrannus forficatus*). Mammals include the cave myotis (*Myotis velifer*), striped skunk (*Mephitis mephitis*), mountain lion (*Puma concolor*), badger (*Taxidea taxus*), desert pocket mouse (*Perognathus penicillatus*), thirteen-lined ground squirrel (*Spermphilus tridecemlineatus*), and porcupine (*Erethizon dorsatum*).

Hunting is a popular recreational activity within the covered area. Game species of interest include mule deer (*Odocoileus hemionus*), pronghorn (*Antilopcapra americana*), javelina (*Dicotyles tajacu*), scaled quail (*Callipepla squamata*), bobwhite quail (*Colinus virginianus*), desert cottontail (*Sylvilagus audubonii*), and black-tailed jackrabbit (*Lepis californicus*).

## 4.4 Listed, Proposed, and Candidate Species

Federally endangered species that may occur in the covered area include the interior least tern (*Sterna antillarum*), black-footed ferret (*Mustela nigripes*), Kuenzler's hedgehog cactus (*Echinocereus fendleri* var. *kuenzleri*), Pecos gambusia (*Gambusia nobilis*), Sneed pincushion cactus (*Coryphantha sneedii* var. *sneedii*), Noel's amphipod (*Gammarus desperatus*), Koster's springtail (*Juturnia kosteri*), Pecos assiminea snail (*Assiminea pecos*), and Roswell springsnail (*Pyrgulopsis roswellensis*). Federally threatened species that may occur in the covered area include the Pecos bluntnose shiner (*Notropis simus pecosensis*), Pecos sunflower (*Helianthus paradoxus*), Lee pincushion cactus (*Coryphantha sneedii* var. *leei*), gypsum wild-buckwheat (*Erigonum gypsophilum*), and Mexican spotted owl (*Strix occidentalis lucida*). However, due to differences in habitat requirements between most of these listed species and the two species of focus for these conservation agreements (CCA and CCAA), the lesser prairie-chicken and sand

dune lizard, it is unlikely that lands occupied by federally listed species will be enrolled in an agreement.

A reintroduced population of the northern aplomado falcon (*Falco femoralis septentrionalis*) has been designated as nonessential experimental within New Mexico and Arizona according to section 10(j) of the ESA. In recent years, individual falcons have been observed in the western portion of the covered area (T. Allen, BLM, personal communication). It is not anticipated that northern aplomado falcons will occupy lands enrolled in a conservation agreement due to differences in habitat requirements between this species and the SDL and LPC.

Candidate species that are known to occur within the covered area are the lesser prairie-chicken (*Tympanuchus pallidicinctus*), sand dune lizard (*Sceloporus arenicolus*), and Texas hornshell (*Popenaias popeii*). The Texas hornshell is a freshwater mussel known only to occur within the Black River, Eddy County, New Mexico. It is unlikely that lands occupied by the Texas hornshell would be enrolled in one of the conservation agreements.

## 4.5 Land Use and Ownership

Lands within the seven counties covered under the CCA and CCAA can be divided into three general surface ownership categories; Federal, State, or private. Specifically, the BLM has surface ownership of approximately 3 million acres (19%), the state of New Mexico has 2.8 million acres (19%), and private landowners have 9 million acres (59%). The U.S. Forest Service, National Park Service, and U.S. Fish and Wildlife Service combined have less than 3% of the lands within the covered area.

Land use within the covered area includes energy development activities, recreational use, livestock grazing, and agricultural activities. Energy development activities include the drilling of oil and gas wells, the development of infrastructure (i.e. roads, powerlines, and pipelines) associated with oil and gas wells, and the activities associated with oil and gas production. For the purposes of the conservation agreement, energy development relates to activities occurring on state, federal, or private lands. Recreational use within the covered area includes OHV use, hunting, fishing, hiking, watchable wildlife, and camping. Livestock grazing occurs on 600 allotments comprising approximately 6.8 million acres within the covered area. Management of these allotments is based on similar resource characteristics, management needs, and both resource and economic potential for improvement. Agricultural fields within the covered area are typically planted in corn, milo, alfalfa, or cotton.

# 5.0 ENVIRONMENTAL CONSEQUENCES

In this section, the beneficial and adverse effects of implementing the No Action and Action Alternatives (Alternatives B, C, and D) are described. A summary of the potential impacts from these alternatives to the major resource areas chosen for analysis is included in Table 1 below.

Table 1. Summary of Impacts to Resources

| ***Resources*** | ***No Action Alternative*** | ***Alternative B (Preferred Alternative)*** | ***Alternative C*** | ***Alternative D*** |
|---|---|---|---|---|
| **Soils** | Impacts to soils would continue at current levels. Impacts would be **moderate adverse** and **long-term.** | Conservation measures would be implemented that would minimize impacts to soils. Impacts would be **major beneficial** and **long-term**. | Similar to Alternative B. However, only Federal lands or activities with a Federal nexus would be impacted. Impacts would be **moderate beneficial** and **long-term**. | Similar to Alternative B. However, only private or state lands would be impacted. Impacts would be **major beneficial** and **long-term**. |
| **Vegetation** | Impacts to vegetation would continue to be managed through existing regulatory mechanisms. Impacts would be **moderate adverse** and **long-term.** | Reclamation efforts within the covered area would address and reduce fragmentation, restore native habitat, and promote SDL and LPC habitats. Impacts would be **major beneficial** and **long-term**. | Similar to Alternative B. However, only Federal lands or activities with a Federal nexus would be impacted. Impacts would be **moderate beneficial** and **long-term**. | Similar to Alternative B. However, only private or state lands would be impacted. Impacts would be **major beneficial** and **long-term**. |
| **Wildlife** | Impacts to wildlife would continue at current levels and would result from habitat fragmentation. Impacts would be **moderate adverse** and **long-term.** | All wildlife species would benefit from additional conservation measures within the covered area through improvements in native communities. Impacts would be **major beneficial** and **long-term**. | Similar to Alternative B. However, only Federal lands or activities with a Federal nexus would be impacted. Impacts would be **moderate beneficial** and **long-term**. | Similar to Alternative B. However, only private or state lands would be impacted. Impacts would be **major beneficial** and **long-term**. |
| **Listed, Proposed, or Candidate Species** | Management and protection of federally listed, proposed, and candidate species would continue to be guided by existing state and Federal regulations, laws, and policies. Impacts would be **moderate adverse** and **long-term.** | Candidate species would benefit directly from the conservation measures implemented on lands enrolled under the conservation agreements. No listed species would be impacted. Impacts would be **major beneficial** and **long-term**. | Similar to Alternative B. However, only Federal lands or activities with a Federal nexus would be impacted. Impacts would be **moderate beneficial** and **long-term**. | Similar to Alternative B. However, only private or state lands would be impacted. Impacts would be **moderate beneficial** and **long-term**. |

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| **Land Use and Ownership** | There would continue to be little incentive for private landowners and Federal leasees, operators, and permittees to engage in the voluntary conservation of candidate species. Impacts would be **moderate adverse** and **long-term.** | This alternative would result in an opportunity for the Service, BLM, and participants to manage land use impacts to listed or candidate species on a landscape level. Impacts would be **major beneficial** and **long-term.** | Participating cooperators would be able to continue their activities under the conditions of the CP. Additional land use restrictions would likely not be required if either the SDL or LPC is listed under the ESA. Impacts would be **moderate beneficial** and **long-term.** | Participating cooperators would be able to continue their activities under the conditions of the CI. Assurances would be given that additional restrictions would likely not be required if either the SDL or LPC is listed under the ESA. Impacts would be **moderate beneficial** and **long-term.** |

## 5.1 Soils

Thresholds for Intensity, Duration, and Type of Effect:

- **Negligible -** Soils would not be affected or effects would be below or at the lower levels of detection. Any effects to soil resources would be slight and no long-term effects would occur.

- **Minor -** The effects to soil resources would be detectable. Effects to soil erosion potential or productivity would be small, as would be the area affected. If mitigation were needed to offset adverse effects, it would be relatively simple to implement and would likely be successful.

- **Moderate -** The effects on soil erosion potential or productivity would be readily apparent and likely long-term. The resulting change to soil character would cover a relatively wide area. Mitigation measures would probably be necessary to offset adverse effects and would likely be successful.

- **Major -** The effect on soil productivity would be readily apparent, long-term, and substantially change the character of the soils at a landscape level (i.e. occurring across several different major land resource areas or ecological units within the covered area). Mitigation measures to offset adverse effects would be needed, extensive, and their success could not be guaranteed.

- **Duration:**

  - **Short-Term -** Lasting only during the proposed action or no longer than the first growing season thereafter.

  - **Long-Term -** A permanent impact.

### 5.1.1 Alternative A – No Action

Under the No Action Alternative, soils management and protection would continue to be guided by existing regulatory mechanisms. The BLM would continue to emphasize prevention or avoidance of further degradation of soil resources on lands they manage (BLM 2007). It is anticipated that impacts to soils from energy development activities, recreational use, livestock grazing, and agricultural activities within the covered area would continue at current levels. These impacts would continue to be managed on a case-by-case basis. Impacts to soils under this alternative would be **moderate adverse** and **long-term.**

### 5.1.2 Alternative B – Approval and Implementation of a CCA and CCAA (Preferred Alternative)

Under the Preferred Alternative, conservation measures would be implemented on lands enrolled under the conservation agreements (CCA and CCAA) that would minimize impacts from land-use activities to soils. There would be an opportunity to manage and protect soil resources from a landscape perspective within the covered area. With input from the Service and BLM, CEHMM would develop CPs/CIs that would include conservation measures such as directing surface disturbing activities to those areas containing soils unsuitable for use by the SDL or LPC. Participants would also be required to protect or conserve soils through restoration, rehabilitation, erosion control, or any other means above and beyond that which is required under current regulations. The measures outlined in a CP/CI would result in fewer impacts to soils and improvements to soil conditions by minimizing the number of well pads and associated development within oil and gas leases, managing livestock grazing to reduce impacts, limiting vegetation treatments, or restoring native plant communities. CEHMM, BLM, and the Service would work with participants to create Plans of Development (POD) that minimize habitat fragmentation while continuing to provide sufficient access and use of the land. Impacts to soils under this alternative would be **major beneficial** and **long-term**.

### 5.1.3 Alternative C – Approval and Implementation of a CCA

Under this Alternative, conservation measures would be implemented on lands enrolled in the CCA that would minimize impacts from land-use activities to soils. Most of the impacts from implementing this Alternative would be the same as those described above for Alternative B. However, the impacts would be restricted to those resulting from energy development activities, recreational use, livestock grazing, and agricultural activities conducted on Federal lands (22%

of the covered area) or where a Federal nexus occurred. Impacts to soils under this alternative would be **moderate beneficial** and **long-term**.

#### 5.1.4 Alternative D – Approval and Implementation of a CCAA

Under this Alternative, conservation measures would be implemented on lands enrolled in the CCAA that would minimize impacts from land-use activities to soils. Most of the impacts from implementing this Alternative would be the same as those described above for Alternative B. However, the impacts would be restricted to those resulting from energy development activities, recreational use, livestock grazing, and agricultural activities conducted on private or state lands (78% of the covered area). Impacts to soils under this alternative would be **major beneficial** and **long-term**.

## 5.2 Vegetation

Thresholds for Intensity, Duration, and Type of Effect:

- **Negligible –** Direct or indirect impacts would have perceptible but small changes in the size, integrity, or continuity of vegetation within the covered area.

- **Minor –** Disturbance or protection, restoration, or rehabilitation of vegetation would be measurable or perceptible but limited in size. The overall viability of plant communities would not be affected and would recover.

- **Moderate –** Disturbance or protection, restoration, or rehabilitation of vegetation over a relatively wide area would occur. Impacts would cause a change in plant communities (e.g. abundance, distribution, quantity, or quality), but the impacts would remain localized.

- **Major –** Disturbance or protection, restoration, or rehabilitation of vegetation at a landscape level (i.e. occurring across several different major land resource areas or ecological units within the covered area). Any disturbance to federally listed plant species would be considered major adverse effects.

- **Duration:**

    - **Short-term –** The physical impact from the proposed actions would require less than one growing season for the full recovery of plant communities. Beneficial effects would be observed for one growing season.

- **Long-term –** The physical impact from the proposed actions would require more than one growing season for the full recovery of plant communities. Beneficial effects would be observed for more than one growing season.

### 5.2.1 Alternative A – No Action

Under the No Action Alternative, vegetation management would continue to be guided through existing regulatory mechanisms. On lands administered by the BLM, the goal of maintaining or improving vegetation with an emphasis on watershed protection and forage for wildlife would continue (BLM 2007). Brush control methods such as herbicide application and prescribed fire would continue to be implemented on private, state, and Federal lands to improve forage for livestock and wildlife within the covered area. Impacts to vegetation from energy development activities, recreational use, livestock grazing, and agricultural activities would continue at current levels. These impacts would be managed on a case-by-case basis. There would continue to be little incentive for Federal leasees, operators, and permittees or private or state landowners to voluntarily protect and manage plant communities and prevent habitat fragmentation for the benefit of the LPC and SDL. Reclamation efforts on abandoned pads, roads, and caliche pits on lands managed by the BLM would continue to address and reduce habitat fragmentation, restore native habitat, and promote lesser prairie-chicken and sand dune lizard habitat (BLM 2008). Impacts to vegetation under this alternative would be **moderate adverse** and **long-term**.

### 5.2.2 Alternative B – Approval and Implementation of a CCA and CCAA (Preferred Alternative)

The Preferred Alternative would result in the implementation of conservation measures aimed at restoring and protecting those plant communities preferred by the LPC and SDL on lands enrolled under the conservation agreements (CCA and CCAA). These measures would result in an increase in the amount of habitat available to the SDL and LPC within the covered area. In addition, habitat fragmentation and the direct loss of suitable habitat would be reduced on lands enrolled under the conservation agreements or on other lands that would be treated with contributed funds. Compared to lands not enrolled under one of the conservation agreements, this reduction would be significant. Impacts to vegetation from energy development activities, recreational use, livestock grazing, and agricultural activities would be managed through a comprehensive, landscape level approach. Large, contiguous blocks of suitable habitat would be targeted for improvement under the conservation agreements to provide the greatest benefit to the SDL and LPC. Participating cooperators would have an incentive to protect and manage plant communities and prevent habitat fragmentation for the benefit of the SDL and LPC. This incentive would be the likelihood that their operational activities, on lands enrolled in a

conservation agreement, would not likely be disrupted in the future if the SDL or LPC was listed under the provisions of the ESA. Reclamation efforts on abandoned pads, roads, and caliche pits within the covered area would address and reduce fragmentation, restore native habitat, reduce road mortality, and promote SDL and LPC habitats above and beyond that which is currently occurring. Impacts to vegetation under this alternative would be **major beneficial** and **long-term**.

#### 5.2.3 Alternative C – Approval and Implementation of a CCA

Under this Alternative, conservation measures would be implemented on lands enrolled in the CCA that would minimize impacts from land-use activities to vegetation. Most of the impacts from implementing this Alternative would be the same as those described above for Alternative B. However, the impacts would be restricted to those resulting from activities conducted on Federal lands (22% of the covered area) or where a Federal nexus occurred. Impacts to vegetation under this alternative would be **moderate beneficial** and **long-term**.

#### 5.2.4 Alternative D – Approval and Implementation of a CCAA

Under this Alternative, conservation measures would be implemented on lands enrolled in the CCAA that would minimize impacts from land-use activities to vegetation. Most of the impacts from implementing this Alternative would be the same as those described above for Alternative B. However, the impacts would be restricted to those resulting from activities conducted on private or state lands (78% of the covered area). Impacts to vegetation under this alternative would be **major beneficial** and **long-term**.

## 5.3 Wildlife

Thresholds for Intensity, Duration, and Type of Impact:

- **Negligible -** Wildlife would not be affected or the effects would be at or below the level of detection, would be short-term, and the changes would be so slight that they would not be of any measurable or perceptible consequence to the wildlife species' population.

- **Minor -** Disturbance or protection, restoration, or rehabilitation of wildlife habitat would be measurable and perceptible but limited in size.

- **Moderate -** Disturbance or protection, restoration, or rehabilitation of wildlife habitat would occur over a relatively wide area.

- **Major -** Disturbance or protection, restoration, or rehabilitation of wildlife habitat at a landscape level (i.e. occurring across several different major land resource areas or ecological units within the covered area).

- **Duration:**

  - **Short-Term -** Complete disturbance recovery in less than five years. Beneficial impacts would occur for less than five years

  - **Long-Term -** Disturbance recovery requiring more than five years to return to pre-disturbance levels. Beneficial impacts would occur for greater than five years.

### 5.3.1 Alternative A – No Action

Under the No Action Alternative, wildlife would continue to be impacted at current levels by energy development activities, recreational use, livestock grazing, and agricultural activities. These impacts would be indirect and primarily result from habitat fragmentation and habitat degradation. Additional protection would not be afforded wildlife above and beyond what is currently provided through state and Federal regulations, laws, and policies. Reclamation efforts on abandoned pads, roads, and caliche pits on lands managed by the BLM would continue to address and reduce habitat fragmentation, restore native habitat, and promote lesser prairie-chicken and sand dune lizard habitat (BLM 2008). Impacts to wildlife under this alternative would be **moderate adverse** and **long-term**.

### 5.3.2 Alternative B – Approval and Implementation of a CCA and CCAA (Preferred Alternative)

The Preferred Alternative would result in the implementation of conservation measures aimed at protecting and managing the SDL and LPC. CEHMM, with input from the FWS and BLM, would develop CPs/CIs on lands enrolled under the conservation agreements (CCA and CCAA) that would indirectly benefit all wildlife species occupying the shinnery oak shrublands and grasslands preferred by the SDL and LPC. These CPs/CIs would include conservation measures such as protecting and enhancing habitat, restoring degraded habitat, creating new habitat, limiting development, treating undesirable vegetation, and developing noise abatement

programs. The conservation measures implemented under this alternative would be above and beyond those activities currently being implemented through existing state and Federal regulations, laws, and policies. Therefore, this alternative would result in additional conservation and protection of all wildlife species within the covered area. Impacts to wildlife under this alternative would be **major beneficial** and **long-term**.

### 5.3.3 Alternative C – Approval and Implementation of a CCA

Under this Alternative, conservation measures would be implemented on lands enrolled in the CCA that would minimize impacts from land-use activities to wildlife. Most of the impacts from implementing this Alternative would be the same as those described above for Alternative B. However, the impacts would be restricted to those resulting from activities conducted on Federal lands (22% of the covered area) or where a Federal nexus occurred. Impacts to wildlife under this alternative would be **moderate beneficial** and **long-term**.

### 5.3.4 Alternative D – Approval and Implmentation of a CCAA

Under this Alternative, conservation measures would be implemented on lands enrolled in the CCAA that would minimize impacts from land-use activities to wildlife. Most of the impacts from implementing this Alternative would be the same as those described above for Alternative B. However, the impacts would be restricted to those resulting from activities conducted on private or state lands (78% of the covered area). Impacts to wildlife under this alternative would be **major beneficial** and **long-term**.

## 5.4 Listed, Proposed, and Candidate Species

Thresholds for Intensity, Duration, and Type of Impact:

- **Negligible:** When a proposed action would have no measurable effects to a listed, proposed or candidate species.
- **Minor:** Effects on listed, proposed, or candidate species are expected to be discountable or insignificant.

- **Moderate:** When an effect to a listed, proposed, or candidate species may occur as a direct or indirect result of the proposed action or its interrelated or interdependent actions, and the effect is not discountable or insignificant.

- **Major:** When proposed activities could jeopardize the continued existence of a listed, proposed, or candidate species or adversely modify critical habitat. A major impact would also occur if the beneficial effects of the proposed action would likely reduce the need for the species to be listed in its current category (i.e. de-list or down-list).

- **Duration:**

  - **Short-Term -** Impacts from the proposed action would occur for less than 5 years.
  - **Long-Term -** Impacts from the proposed action would occur for greater than 5 years.

### 5.4.1 Alternative A – No Action

The No Action Alternative would result in continued management and protection of federally listed, proposed, and candidate species within the covered area through existing State and Federal regulations, laws, and policies. These existing regulations, laws, and policies may not be sufficient to prevent the listing of candidate species under the ESA without the voluntary cooperation of additional stakeholders. Reclamation efforts on abandoned pads, roads, and caliche pits on lands managed by the BLM would continue to address and reduce habitat fragmentation, restore native habitat, and promote LPC and SDL conservation (BLM 2008). Effects to candidate species would continue to be analyzed on a case-by-case basis with limited opportunity to manage their conservation from a landscape level. Federally listed, proposed, and candidate species would not benefit from additional conservation measures implemented under a conservation agreement (CCA and CCAA). Any future proposed activities that may affect a listed or proposed species within the covered area would undergo Section 7 consultations under the ESA. Impacts to listed, proposed, and candidate species under this alternative would be **moderate adverse** and **long-term**.

### 5.4.2 Alternative B – Approval and Implementation of a CCA and CCAA (Preferred Alternative)

Under the Preferred Alternative, candidate species would benefit directly from the conservation measures implemented on lands enrolled under the CCA and CCAA. . However, the effects to federally listed and proposed species would be similar to those under the No Action Alternative.

Participating cooperators would collaborate with the Service, BLM, and CEHMM to develop measures to minimize impacts from their energy development activities, recreational use, livestock grazing, or agricultural activities on the SDL or LPC. The SDL and LPC would benefit from less habitat fragmentation, less disturbance in occupied or suitable habitats, restoration and enhancement of otherwise unsuitable habitat, and protection of large blocks of contiguous habitat. Participating cooperators would have an incentive to contribute to the protection and management of the SDL and LPC. This incentive would be the likelihood that their operational activities, on lands enrolled under the conservation agreements, would not be disrupted in the future if the SDL or LPC was listed under the provisions of the ESA. Impacts to listed, proposed, and candidate species under this alternative would be **major beneficial** and **long-term**.

### 5.4.3 Alternative C – Approval and Implementation of a CCA

Under this Alternative, conservation measures would be implemented on lands enrolled in the CCA that would minimize impacts from land-use activities to listed, proposed, and candidate species. Most of the impacts from implementing this Alternative would be the same as those described above for Alternative B. However, the impacts would be restricted to those resulting from activities conducted on Federal lands (22% of the covered area) or where a Federal nexus occurred. Impacts to listed, proposed, and candidate species under this alternative would be **moderate beneficial** and **long-term**.

### 5.4.4 Alternative D – Approval and Implementation of a CCAA

Under this Alternative, conservation measures would be implemented on lands enrolled in the CCAA that would minimize impacts from land-use activities to listed, proposed, and candidate species. Most of the impacts from implementing this Alternative would be the same as those described above for Alternative B. However, the impacts would be restricted to those resulting from activities conducted on private or state lands (78% of the covered area). Impacts to listed, proposed, and candidate species under this alternative would be **moderate beneficial** and **long-term**.

## 5.5 Land Use and Ownership

Thresholds for Intensity, Duration, and Type of Effect:

- **Negligible –** Land owners or users would not likely be aware of the effects associated with the proposed action.

- **Minor -** Land owners or users would likely be aware of the effects associated with the proposed action; however the effects would be slight and likely short term.

- **Moderate -** Land owners or users would be aware of the effects associated with the proposed action. Effects would be readily apparent. Land owners or users may be subjected to use restrictions or delays in obtaining permits or leases. Beneficial moderate effects would occur when there are no use restrictions or delays and the impact is short-term.

- **Major -** Land owners or users would be highly aware of the effects of the proposed action and would likely be subjected to significant use restrictions or delays in obtaining permits or leases. Beneficial major effects would occur when there are no use restrictions or delays and the impact is long-term.

- **Duration:**

  - **Short-Term -** Impacts from the proposed action would occur for less than one year.
  - **Long-Term -** Impacts from the proposed action would occur for greater than one year.

### 5.5.1 Alternative A – No Action

Under the No Action Alternative, there would continue to be little incentive for private landowners and Federal leasees, operators, and permittees to engage in the voluntary, proactive conservation of candidate species. Landowners and Federal leasees, operators, or permittees would continue to be concerned about the potential regulatory implications of having these species on their land. This atmosphere would continue to inhibit cooperation and collaboration regarding the conservation of candidate species. Reclamation efforts on abandoned pads, roads, and caliche pits on lands managed by the BLM would continue to address and reduce habitat fragmentation, restore native habitat, and promote the conservation of LPC and SDL habitat (BLM 2008). Energy development, recreational use, livestock grazing, and agricultural activities on lands containing candidate species would have the potential to be delayed or restricted as a result of section 7 consultation requirements should these species eventually become listed under the ESA. If these species become listed, there would be no certainty that additional restrictions would not be assessed on these lands. Impacts to Land Use and Ownership under this alternative would be **moderate adverse** and **long-term**.

### 5.5.2 Alternative B – Approval and Implementation of a CCA and CCAA (Preferred Alternative)

Under the Preferred Alternative, the approval and implementation of a CCA or CCAA would give landowners and Federal leasees, operators, and permittees (participating cooperators) an opportunity to receive a high degree of certainty under the CCA and assurances under the CCAA that more stringent restrictions or additional conservation measures would not be required of them in the event the SDL and LPC become listed under the ESA. By enrolling in one of the conservation agreements, energy development, recreational use, livestock grazing, and agricultural activities would likely continue under the conditions of the CP/CI without the additional requirements of a new section 7 consultation. This would keep them from being delayed while the new consultation is being completed (i.e. up to 145 days). In addition, participating cooperators would gain public relations benefits from their contributions towards candidate species conservation. This alternative would provide an opportunity for the Service and BLM to manage land use impacts to listed or candidate species on a landscape level. Impacts to Land Use and Ownership under this alternative would be **major beneficial** and **long-term**.

### 5.5.3 Alternative C – Approval and Implementation of a CCA

Under this Alternative, participating cooperators would be able to continue their activities under the conditions of the CP with the understanding that additional restrictions would likely not be required of them in the future if either the SDL or LPC is listed under the ESA. Most of the impacts from implementing this Alternative would be the same as those described above for Alternative B. However, without the approval and implementation of a CCAA private and state landowners would not have an opportunity to implement conservation measures on their lands in return for assurances that more stringent restrictions or additional conservation measures would not be required of them in the event the SDL and LPC become listed under the ESA. Impacts to listed, proposed, and candidate species under this alternative would be **moderate beneficial** and **long-term**.

### 5.5.4 Alternative D – Approval and Implementation of a CCAA

Under this Alternative, participating cooperators would be able to continue their activities under the conditions of the CI with assurances that additional restrictions would likely not be required of them in the future if either the SDL or LPC is listed under the ESA. Most of the impacts from implementing this Alternative would be the same as those described above for Alternative B. However, without the approval and implementation of a CCA Federal leasees, operators, and permittees would not have an opportunity to implement conservation measures in return for the likelihood that more stringent restrictions or additional conservation measures would not be required of them in the event the SDL and LPC become listed under the ESA. Impacts to listed, proposed, and candidate species under this alternative would be **moderate beneficial** and **long-term**.

# 6.0 CUMULATIVE EFFECTS

Cumulative impacts include the combined effect of past activities, specific planned projects and other reasonably foreseeable future actions that are reasonably certain to occur within the project area. The Federal action agency (the Service) must determine whether impacts of the proposed action, in this case the approval and implementation of conservation agreements (CCA and CCAA), when taken together with other actions would result in a significant environmental impact.

Ongoing activities within the project area such as oil and gas development, livestock grazing, recreational use, and agricultural activities would continue to have adverse impacts on the resources (i.e. soils, vegetation, wildlife, listed, proposed, and candidate species, and land use and ownership) identified and analyzed in this environmental assessment, with or without the approval and implementation of a CCA or CCAA. However, the conservation measures proposed in the CCA and CCAA (Preferred Alternative) when considered in addition to those recently approved in the BLM's RMPA (BLM 2008) would have net beneficial impacts to all of the resources, specifically the SDL and LPC.

Potential adverse cumulative effects may occur throughout the project area should the CCA and CCAA not be entered into. All actions which may occur in the area, including foreseeable non-Federal actions, may result in cumulative adverse impacts.

Whether or not the CCA or CCAA are implemented, land use practices such as additional oil and gas production would increase overall surface disturbance. However, when proper reclamation of abandoned oil pads and associated disturbance are followed by adequate precipitation, vegetation responds favorably. These acreages would recover naturally in three to five growing seasons. Additionally, livestock grazing in the covered area would increase overall surface disturbance. Consequently, habitat would decline in those allotments. However, habitat changes facilitated by cattle grazing can influence resource availability and habitat selection for

associated wildlife. When proper stocking rates, pasture rotation, and well-managed grazing methods are adhered to, vegetation could be manipulated in a manner advantageous to associated wildlife.

By its very nature, implementation of CCA and CCAA would reduce the increase in overall surface disturbance due to various land use practices. These cumulative beneficial impacts would serve to minimize or completely eliminate some of the threats to the SDL and LPC. If a significant number of the threats are addressed, this has the potential to positively impact the status of the species before listing decisions on these species are made in the future.

## 7.0 CONCLUSION

As a result of the analyses contained within this environmental assessment, it is anticipated that Alternative B (Approval and Implementation of a CCA and CCAA) will provide the greatest benefit to the resources within the covered area. Although the impacts to resources from Alternatives C and D would be moderate beneficial, the major beneficial impacts resulting from the activities associated with Alternative B would make this the Preferred Alternative. The Preferred Alternative and its associated activities will not have significant impacts to resources either by themselves or cumulatively. It has been determined that an environmental impact statement (EIS) will not be required for this project and thus will not be prepared for the implementation of the Preferred Alternative.

## 8.0 COORDINATION AND PREPARATION

The preparation of this environmental assessment was a coordinated effort between the Service and the BLM. Input was requested for the development of the CCA during two meetings held on August 11, 2008 in Artesia, New Mexico and on August 12, 2008 in Roswell, New Mexico. Public notification of the availability of the Draft Environmental Assessment and Conservation Agreements (CCA and CCAA) will be published in the *Federal Register*. All concerned individuals and agencies will be provided a hard copy upon request for review and comment.

The following individuals assisted in the preparation of this environmental assessment:

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Requests for additional information can be submitted to:

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# 9.0 REFERENCES

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