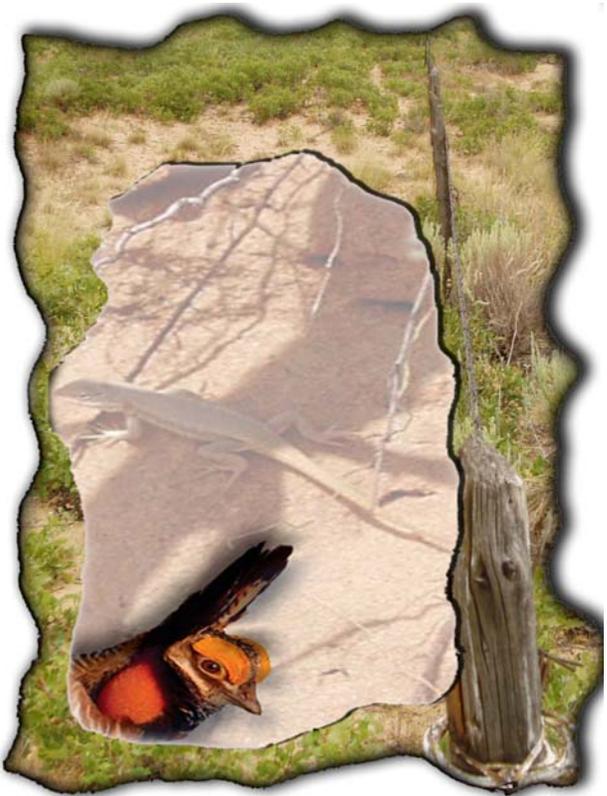


# Appendix 10



APPENDIX 10

Biological Assessment  
And  
U.S. Fish & Wildlife Service Response

**United States Department of the Interior**  
**BUREAU OF LAND MANAGEMENT**

Pecos District Office  
Roswell Field Office  
2909 West Second Street  
Roswell, New Mexico 88201  
<http://www.blm.gov/rfo/index.htm>

IN REPLY REFER TO:  
1610 (510)

September 25, 2006

Memorandum

To: Benjamin Tuggle, Regional Director, Region 2, U. S. Fish and Wildlife Service, Albuquerque, New Mexico

From: Doug Burger, District Manager, Pecos District, Bureau of Land Management

Subject: Biological Assessment for the Special Status Species Draft Resource Management Plan Amendment/Environmental Impact Statement (DRMPA/EIS)

On October 20, 2006, a notice of availability will be published in the *Federal Register* announcing the beginning of a 90-day public comment period for the Special Status Species Draft Resource Management Plan Amendment/Environmental Impact Statement (DRMPA/EIS). The Bureau of Land Management (BLM) Pecos District Office (Carlsbad and Roswell Field Offices) has prepared a biological assessment and requests for Section 7 consultation under the Endangered Species Act of 1973, as amended.

The Pecos District has prepared this biological assessment (BA) to analyze the potential effects of the Preferred Alternative as described in the Special Status Species DRMPA/EIS within Chaves, Eddy, Lea, and Roosevelt Counties. This BA addresses the Bureau of Land Management's actions and evaluates all listed, proposed, and candidate species potentially found within Chaves, Eddy, Lea, and Roosevelt Counties.

Specifically, the DRMPA/EIS analyzes proposed changes to the 1988 Carlsbad RMP, the 1997 Carlsbad RMPA, and the 1997 Roswell RMP. These proposed changes are designed to protect habitat for the lesser prairie-chicken (*Tympanuchus pallidicinctus*) and the sand dune lizard (*Sceloporus arenicolus*). Your office will receive a copy of the Special Status Species DRMPA/EIS in addition to this BA. We would appreciate a response by the close of the comment period which is scheduled to be January 18, 2007.

If you have questions about the BA or need clarification please contact Howard Parman, planning team leader, at 505-627-0212.

**BIOLOGICAL ASSESSMENT**  
**SPECIAL STATUS SPECIES PLAN AMENDMENT AND**  
**ENVIRONMENTAL IMPACT STATEMENT**

**United State Department of the Interior**  
**Bureau of Land Management**  
**Pecos District, New Mexico**

**September 25, 2006**

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## **Introduction**

The Bureau of Land Management (BLM) Pecos District Office (Carlsbad and Roswell Field Offices) has prepared this Biological Assessment (BA) to analyze the potential effects of the Preferred Alternative as described in the Special Status Species Plan Amendment and Environmental Impact Statement within Chaves, Eddy, Lea, and Roosevelt Counties. This BA addresses the Bureau of Land Management's management actions and evaluates all listed, proposed, and candidate species potentially found within Chaves, Eddy, Lea, and Roosevelt Counties.

Nineteen Federally-listed, proposed, and candidate species are known or have the potential to occur within Chaves, Eddy, Lea, and Roosevelt Counties (See Table 1). However, because of the land ownership patterns and the specific habitats used by these species, these animals/plants may occur within the broad borders of the counties, but not specifically on public lands within planning area. The potential for these species' presence, their habitats within the area, and any potential impacts on them resulting from implementation of Alternative B (Preferred Alternative) are examined in this document.

## **Description of the Preferred Alternative**

The BLM Pecos District Office has prepared an Draft Environmental Impact Statement (DEIS) to address management prescriptions for the protection and enhancement of special status species and their habitat (particularly for the Lesser Prairie Chicken and Sand Dune Lizard) within Chaves, Eddy, Lea, and Roosevelt Counties (referred to as the Planning Area). However, protecting and enhancing habitat for these two species will also protect and enhance habitat for numerous other wildlife species throughout Southeast New Mexico. The objective of the Preferred Alternative is to modify existing uses (e.g., federal minerals development, livestock grazing, recreation-off highway vehicles, etc.) occurring on public lands to protect special status species while sustaining the local economy.

The Pecos District proposes to broaden the scope of this plan to an ecosystem level approach. An ecosystem approach offers the best opportunity to arrest the decline of biodiversity and eliminate or minimize the need for further listings. The Preferred Alternative and management decisions apply only to public lands and federal minerals. It is the main goal of the proposed action to protect and restore the health and productivity of the land in Shinnery Oak and Sand Dune Habitats that support two federal candidate wildlife species; the lesser prairie chicken and sand dune lizard.

### Lands and Realty

The BLM would consider acquisition of lands in the Planning Area for special status species habitat when the opportunity arises from willing sellers as identified in the Lesser Prairie Chicken Working Group's Draft Conservation Strategy. There would be a priority on exchanges (surface and minerals) with the State Land Office within the Core Management Area. BLM has previously identified 22,000 acres of public land as suitable for disposal in Appendix 7 of the 1997 Roswell RMP. Criteria for acquisitions can be found in Appendix 5 of the 1997 Roswell RMP, and would be applied to potential acquisitions regardless of their location in the Planning Area.

**TABLE 1**  
**THREATENED    ENDANGERED, PROPOSED    CANDIDATE SPECIES**

| Species   | Classification   | Determination  | County  |
|---|--|--|---|
| Black Footed Ferret<br>Northern Aplomado Falcon<br>Interior Least Tern<br>Pecos Gambusia<br>Kuenzler's Hedgehog Cactus<br>Sneed Pincushion Cactus | Endangered<br>Endangered<br>Endangered<br>Endangered<br>Endangered<br>Endangered | No Affect<br>No Affect<br>No Affect<br>No Affect<br>No Affect<br>No Affect | All<br>Chaves/Eddy/Lea<br>Chaves/Eddy<br>Chaves/Eddy<br>Chaves/Eddy<br>Eddy |
| Koster's Springsnail<br>Pecos Assiminea Snail<br>Roswell Pyrg Springsnail<br>Noel's Amphidpod   | Proposed End.<br>Proposed End.<br>Proposed End.<br>Proposed End.                 | No Affect<br>No Affect<br>No Affect<br>No Affect                           | Chaves<br>Chaves<br>Chaves<br>Chaves  |
| Bald Eagle<br>Mexican Spotted Owl<br>Pecos Bluntnose Shiner<br>Pecos Sunflower<br>Gypsum Wild-Buckwheat<br>Lee Pincushion Cactus                  | Threatened<br>Threatened<br>Threatened<br>Threatened<br>Threatened<br>Threatened | No Affect<br>No Affect<br>No Affect<br>No Affect<br>No Affect<br>No Affect | All<br>Chaves/Eddy<br>Chaves/Eddy<br>Chaves<br>Eddy<br>Eddy                 |
| Lesser Prairie Chicken<br>Sand Dune Lizard<br>Texas Hornshell Mussel  | Candidate<br>Candidate<br>Candidate  | May Affect*<br>May Affect*<br>No Affect                                    | All<br>All<br>Chaves/Eddy   |

\* May Affect – Not Likely to Adversely Affect

Acquisition, in the public interest, would be acquired via exchange, purchase (of land and easements), and donation if they:

- Improve management of natural resources through consolidation of BLM, State, and other federal lands where agencies have compatible land management missions.
- Secure property necessary to protect special status species, promote biological diversity, enhance wildlife habitat, provide access to public waters and public lands, and preserve archaeological and historical resources.

Lands acquired as habitat for Special Status Species would be added to the right-of-way avoidance areas. Rights-of-way for projects and facilities such as fences, range and wildlife water pipelines, power distribution lines, access to oil and gas facilities, or oil and gas collection or distribution pipelines would be considered in avoidance zones on a case-by-case basis.

In order to provide opportunities for expansion of lesser prairie-chicken habitat within the Planning Area and to reduce the impacts of electric power lines, applicants for electric power lines would participate in a power line removal credit (PLRC). Under this program applicants would be required to remove 1.5 miles of idle power lines (wire and poles) within prairie-chicken habitat management unit (CMA, PPA, SSPA and IPA) and habitat type (occupied or suitable/potentially suitable) before receiving authorization to construct 1.0 mile of new power line. Appendix 6 of the DEIS, Monitoring and Implementation, contains the details of the implementation of the PLRC program.

BLM would consider granting exceptions to participation in the PLRC program on a case by case basis. Other mitigation measures that would be considered include, but are not limited to, those shown below. These mitigation measures are ranked in order of effectiveness of reducing impacts from power lines:

- Burying new distribution power lines within two miles of occupied lesser prairie-chicken habitat (measured from the lek) and in suitable lesser prairie-chicken habitat.
- Using internal combustion engines to power equipment at the well. Such engines would be muffled to 75 db measured at 30 feet from the source.
- Constructing new power lines in locations which avoid occupied and suitable lesser prairie-chicken habitat.
- In cases where overhead power lines already exist in occupied or suitable lesser prairie-chicken habitat, new power lines could be constructed immediately adjacent to an existing line but only to the extent of the existing overhead power lines. Where sections of the new power line cannot follow the existing line, it would have to be buried.
- Constructing all infrastructure supporting development of a well (including roads, power lines and pipelines) within the same corridor.

Within sand dune lizard habitat (See Map B-1 – in the DEIS), new surface disturbance in dune complexes would not be authorized. Exceptions to this requirement would be considered based on the proposed surface use and proposed mitigations indicating the proposal would not adversely affect the local sand dune lizard habitat.

The Core Management Area and occupied habitat within the Primary Population Area would be designated as right-of-way avoidance areas. The Mescalero Sands Area of Critical Environmental Concern (ACEC) and the Mathers research natural area would continue to be right-of-way exclusion areas. The Laguna Plata Archeological District, the Maroon Cliffs Archeological District, and the Mescalero Sands North Dune off highway vehicle area would continue to be right-of-way avoidance areas.

## Minerals

### **Reasonable Foreseeable Development**

Based on the Reasonable Foreseeable Development (RFD) for the Preferred Alternative, 49 wells (15-Gas and 34-Oil) are expected to be drilled within the Planning Area. These well would create 245 acres of direct disturbance on an annual basis (See Table 2), along with an indirect disturbance of approximately 6,174 acres annually. Over the lifetime of this plan (20-Year projection) there would be approximately 4,900 acres of direct disturbance and 123,480 acres of indirect disturbance. Based on the acreage within the Planning Area (1,852,946 acres), the total direct disturbance over the life of this plan would be less than ½ of one percent of the area.

In addition to disturbance from oil and gas development activities, there would be approximately 75 miles of geophysical activities occurring on an annual basis. This activity would create 75 acres of direct disturbance annually. Over the lifetime of this plan there would be approximately 1,500 acres of direct disturbance from geophysical activities.

Under an initial development scenario (single well pad with an access road, pipeline and powerline) there would be a direct disturbance of approximately 5 acres of habitat (1.4 acres-well pad, 1.5 acres-road, 1.6 acres-pipelines and .5 acre powerline). The noise and human activities would be constant for approximately 30-60 days of drilling causing an indirect disturbance to lesser prairie chicken and other wildlife species which would create an avoidance area (.25 mile radius - 126 acres) during the drilling phase. If the well is a non-producer and the site is abandoned and reclaimed, the lesser prairie chicken and other wildlife species would normally return to the area depending on the success of the reclamation of the site. However, re-vegetation of disturbed desert grasslands is typically very slow to recover (BLM 2001).

**Table 2  
Twenty-Year Projection of Impacts**

| Type of Action                                    | Number of Actions on Federal Lands | Area Disturbed  | Approximate Total Acres Disturbed |           |
|---|------------------------------------|---|-----------------------------------|-----------|
|   |                                    |   | Short Term (3-Years)              | Long Term |
| Geophysical (miles)                               | 1,500                              | On existing roads and trails and off-road (1 acre/mile) | 1,500                             | Minimal   |
| Gas development wells                             | 304                                | Drill pads, access road, pipelines, and power lines     | 836                               | 684       |
| Oil development wells                             | 676                                | Drill pads, access road, pipelines, and power lines     | 1,859                             | 1,521     |
| Total Acres Disturbed by Drilling and Development |                                    |   | 2,695                             | 2,205     |
| Total Acres Disturbed by Geophysical Operations   |                                    |   | 1,500                             |           |

If the well shows enough potential reserves to progress into a full field development the following impacts could occur. Full field development has a total complement of roads, pads, gravel sources and pipelines (16 well pads-40 acre spacing). The direct disturbance from this full field development would increase to approximately 85 acres (22.4 acres-well pads, 24 acres-roads, 25.6 acres-pipelines, 8 acres-powerlines and 5 acre gravel pit). The combination of the density of roads, pipelines, pads, and powerlines on the leasehold, would change the short-term disturbance of the one well scenario into an industrial complex. Because of the infrastructure, this site would be continuously occupied and a large zone of avoidance (.75 mile radius – 1,183 acres) would develop with most if not all wildlife species avoiding the area.

Seismic operations would be scattered out over most of the area during the twenty-year life of this plan and would average approximately 75 miles per year (1,500 miles over the 20-year life of the plan). However, the exact acreage would vary from year to year. The indirect

disturbance from seismic operations would be relatively short term, not extending beyond the 1 to 3 days required to complete each segment of the geophysical work.

The direct disturbance to soil and vegetation is considered minimal and there would be no anticipated changes in the animal community, habitat structure, or change in plant species composition or density within the seismic operation area.

Within the Planning Area, any habitat that is currently designated as unsuitable for lesser prairie-chicken or sand dune lizard, but has potential to become suitable, and ultimately occupied, would be closed to leasing or leased with requirements for Plans of Development (PODs) and/or Conditions of Approval (COAs) to ensure orderly development with a minimum of surface impacts to lesser prairie-chicken and sand dune lizard habitats. These PODs and COAs would contain various strategies for minimizing impacts associated with new development and for reclaiming previously disturbed areas. Methods to achieve this would include, but not be limited to; vegetative treatments, rehabilitation of pads, roads, and rights of way, and reduction of infrastructure needed to support the lease. These strategies would be designed to improve habitat, enhance connectivity, reduce fragmentation, and move towards Desired Plant Community (DPC). Plans of Development may contain proprietary information and such information is not subject to disclosure under the Freedom of Information Act.

Unitization may be required on new leases in the Planning Area to ensure protection of special status species habitat; as allowed by lease notices. Existing lessees would be encouraged to join these units.

Within the Planning Area, coordinated efforts to reclaim and restore habitat in previously disturbed areas would be carried out when and where opportunities arise. Priority locations are areas in and around lesser prairie-chicken reserves and other important habitat areas, and locations where restoration can help restore connectivity between isolated habitat blocks of BLM administered lands. Attempts would be made to reclaim three previously disturbed acres for every one acre of new disturbance.

### **Lesser Prairie Chicken**

The Planning Area is divided into four categories: The Core Management Area, Primary Population Area, Sparse and Scattered Population Area, and the Isolated Population Area. Included in the Isolated Population Area are 17 Habitat Evaluation Areas. See Map B-1 in the DEIS for locations of these areas. Specific measures have been developed for each of the four categories to manage the oil and gas activities within lesser prairie chicken habitat.

Core Management Area (CMA) - The CMA would be expanded to include the existing Mescalero Sands Area of Critical Environmental Concern as one contiguous block. The CMA would be closed to new oil and gas leasing (See Table 3). Under certain limited exceptions, new oil and gas leasing may occur on a case-by-case basis; i.e., for pooling or drainage protection that does not impact suitable habitat. Within the CMA, no new mineral material sites will be authorized.

For existing leases, PODs and appropriate COAs would be required to ensure orderly development and would specify various strategies to reduce or eliminate impacts to special status species habitat. A POD would incorporate applicable best management practices (See Appendix 5 in the DEIS) and disclose all future well locations; the location and

arrangement of well infrastructure (e. g., tank batteries, compressors, power lines and poles); road locations; and rights-of-way.

**Table 3  
Acres of Leased and Unleased Federal Minerals**

| <b>Management Area</b>             | <b>Leased Federal Mineral</b> | <b>Unleased Federal Minerals</b> |
|------------------------------------|-------------------------------|----------------------------------|
| Core Management Area               | 43,338                        | 128,299                          |
| Primary Population Area            | 105,641                       | 93,157                           |
| Sparse & Scattered Population Area | 78,414                        | 51,781                           |
| Isolated Population Area           | 597,953                       | 46,741                           |
| <b>Totals</b>                      | <b>825,346</b>                | <b>319,977</b>                   |

Primary Population Area (PPA) – Areas designated as occupied, suitable, potentially suitable and unsuitable habitat within the PPA are shown on Map B-5 in the DEIS.

Occupied and suitable lesser prairie-chicken habitat in the PPA would be closed to new oil and gas leasing (See Table 3). However, certain exceptions would be considered on a limited, case-by-case basis when indicated due to presence of existing infrastructure, or as needed for pooling or drainage protection purposes; and if leasing and subsequent development would not impact habitat. In these cases, a No Surface Occupancy (NSO) stipulation would be applied to the lease. Within the PPA, no new mineral material sites will be authorized in occupied or suitable lesser prairie-chicken habitat.

Areas designated as potentially suitable lesser prairie-chicken habitat would be available for new oil and gas leasing. If leasing and development in these areas would impact suitable habitat, then areas designated as potentially suitable habitat would be closed to new oil and gas leasing. Areas of potentially suitable habitat where lands can be used to “block up” larger surrounding areas of suitable habitat would also be closed to new leasing. Table 4 identifies the Robel impact distances in mapping and calculating the extent of habitat available to lesser prairie-chicken. These distances are used to evaluate impacts of potential projects and were applied to existing infrastructure as part of the definition of suitable and potentially suitable lesser prairie-chicken habitat.

**Table 4  
Robel Impact Distances**

|                                       |          |
|---------------------------------------|----------|
| Oil or gas wellheads                  | .1 mile  |
| Sand/dirt 2-track roads               | 0        |
| Caliche roads, oil field access roads | .1 mile  |
| Paved roads                           | .5 mile  |
| Compressor stations                   | .75 mile |
| Houses                                | .5 mile  |
| Power lines                           | .25 mile |
| Center-pivot fields                   | .25 mile |

The BLM would consider new oil and gas leasing in occupied and suitable habitat throughout the Planning Area at such time the lesser prairie-chicken is no longer considered

for listing as a threatened and endangered species. At that time if new leases are offered, conditions would be attached to new leases that would preclude the lesser prairie-chicken returning to a Special Status Species.

New oil and gas leasing would be allowed in areas designated as unsuitable habitat subject to standard lease terms and appropriate timing and noise restrictions unless such habitat occurs inside the State Game Commission-owned Prairie-Chicken Area or where development would extend an impact/avoidance zone into suitable lesser prairie-chicken habitat. BLM would determine if habitat is suitable or unsuitable prior to issuing a new oil and gas lease.

Federal minerals within the State Game Commission-owned Prairie-Chicken Area (PCA) would be closed to new oil and gas leasing for the life of the plan amendment. However, new leasing within a PCA may be allowed with an NSO requirement, where this is determined to be appropriate, i.e., pooling or drainage protection that does not impact suitable habitat.

For existing leases, PODs and subsequent COAs would be required when requested. Included in PODs and COAs would be specifications for various strategies for minimizing impacts associated with new development and for reclaiming disturbed areas. A POD would incorporate applicable best management practices and disclose all future well locations; the location and arrangement of well infrastructure (e. g., tank batteries, compressors, power lines and poles); road locations; and rights-of-way.

Sparse and Scattered Population Area (SSPA) - Occupied lesser prairie-chicken habitat (within 1.5 miles from an active lek) would be closed to new leasing (See Table 3). New leasing with an NSO requirement may be allowed, where this is determined to be appropriate, i.e., pooling or drainage protection that does not impact suitable habitat. Within the SSPA, no mineral material sites will be authorized in occupied prairie-chicken habitat.

For existing leases, PODs and subsequent COAs would be required when requested. Included in PODs and COAs would be specifications for various strategies for minimizing impacts associated with new development and for reclaiming developed areas. A POD would incorporate applicable best management practices and disclose all future well locations; the location and arrangement of well infrastructure (e. g., tank batteries, compressors, power lines and poles); road locations; and rights-of-way.

Isolated Population Area (IPA) - Occupied lesser prairie-chicken habitat (within 1.5 miles from an active lek) would be closed to new leasing (See Table 3). New leasing with an NSO requirement may be allowed, where this is determined to be appropriate, i.e., pooling or drainage protection that does not impact suitable habitat. Within the IPA, no new mineral material sites will be authorized within 1.5 miles of an active lek.

For existing leases, PODs and subsequent COAs would be required in occupied, suitable and potentially suitable habitat. Included in PODs and COAs would be specifications for various strategies for minimizing impacts associated with new development and for reclaiming developed areas. A POD would incorporate applicable best management practices and disclose all future well locations; the location and arrangement of well infrastructure (e. g., tank batteries, compressors, power lines and poles); road locations; and rights-of-way.

Isolated Population Area (IPA) – Habitat Evaluation Areas (HEAs) - Habitat suitability analyses would be conducted in the 17 Habitat Evaluation Areas (See Map B-1 – in the DEIS). These areas would be prioritized for reclamation potential and for potential to re-established connectivity to adjacent isolated habitat blocks. Until the evaluation of an area is complete, new oil and gas leasing would be deferred. It may be determined, through the suitability analysis process, that these areas would be discretionarily closed to future oil and gas leasing. Criteria for closing these areas or making these areas available for lease can be found in Appendix 8. Areas determined to be lacking high conservation value would be managed according to the IPA prescriptions

Within the Planning Area timing (March 1<sup>st</sup> to June 15<sup>th</sup>, from the hours of 3:00 a.m. to 9:00 a.m.) and noise stipulations would be applied. Stipulations would be imposed in areas where the species habitat is present. These stipulations are intended to prevent disruption of mating and nesting by activities associated with energy exploration and development. Stipulations would be imposed in areas where the species habitat is present.

Exceptions to these requirements would be considered in emergency situations such as mechanical failures. These exceptions, however, would not be granted if BLM determines, on the basis of biological data or other relevant facts or circumstances, that the granting of an exception would disrupt prairie-chicken booming activity during the breeding season. Requests for exceptions on a non-emergency basis may also be considered, for the period of March 1<sup>st</sup> to June 15<sup>th</sup>, but these exceptions would not be granted if BLM determines that there is prairie-chicken habitat, prairie-chicken sightings, historic leks and or active leks within 1.5 miles of the proposed location, or any combination of the above mentioned criteria.

Exceptions to the Timing Stipulations/Conditions of Approval would not be granted in the following areas:

1. The CMA or PPA.
2. The IPA or SSPA within 1.5 miles of a lek that has been active for one out of the last 5 years.
3. The IPA or SSPA within 1.5 miles of sightings within the past 2 years. If lesser prairie chickens are not sighted by the end of the second year, exceptions would be considered for the area. However, if a new sighting occurs in the same area, the stipulations would be reapplied.
4. The 17 Habitat Evaluation Areas before and during the habitat evaluation process. Once the evaluation of the 17 Habitat Evaluation Areas is complete, the Habitat Evaluation Areas that do not meet the criteria for being an Habitat Evaluation Area would be considered for exceptions. Exceptions would continue to not be granted in the Habitat Evaluation Areas that do meet or exceed the criteria in Appendix 8.
5. Any new areas identified as Habitat Evaluation Areas that were not in the original 17 but meet or exceed the evaluation criteria.

If new lesser prairie chicken leks are discovered in the future within the Planning Area, the area around the lek would be considered occupied habitat and the prescriptions of this alternative would apply to proposed actions in and around that habitat.

## **Sand Dune Lizard**

Tracts not currently under lease within Lizard Habitat Boundary (See Map B-1 – in the DEIS) would be closed to new oil and gas leasing until BLM determines that development of tracts nominated for leasing can be developed without impacting dune complexes. Depending on the results of that determination, the closure of a particular tract may continue, or it may be offered for lease with an NSO requirement or other appropriate stipulations.

If, after acquiring a federal mineral lease with an NSO stipulation, the lessee can demonstrate through the use and application of peer-reviewed science that development of the lease will not adversely impact dune complexes, waivers, exceptions, or modifications to the NSO stipulation may be considered if it is determined by the Authorized Officer that the stipulation is not required to protect habitat in the dune complexes. The nominated tract will be subject to the Pecos District land use plans in effect at the time of consideration. Granting of a waiver, exception or modification are discretionary actions which the operator should not routinely expect.

- **WAIVER:** a permanent exemption for a lease stipulation and the stipulation would no longer apply anywhere within the lease. In the case of NSO the Authorized Officer may waive the stipulation if no portion of the proposed lease is within occupied or suitable habitat and development of the lease will not adversely impact suitable or occupied special status species habitat.
- **EXCEPTION:** is a case-by-case exemption for a lease stipulation and the stipulation would continue to apply to all other sites within the lease. In the case of NSO the Authorized Officer may authorize surface occupancy if an environmental analysis finds the nature of the proposed action could be conditioned so as not to adversely impact suitable or occupied special status species habitat.
- **MODIFICATION:** a fundamental change in the provisions of a lease stipulation, either temporarily or for the term of the lease. In the case of NSO modifications may be granted by the Authorized Officer pending determination that a portion of the proposed lease is not within suitable or occupied habitat of special status species and development of the lease will not adversely impact suitable or occupied special status species habitat.

Waivers, exceptions or modifications will also be subject to other applicable regulatory and environmental compliance requirements. The BLM reserves the right to impose other stipulations in the same area of this leasehold if a waiver, exception or modification is granted.

For existing leases in sand dune lizard habitat (See Map B-1 – in the DEIS) surveys would be required prior to permitting surface disturbing activities and conducted by personnel approved by BLM. Depending on the results of the survey, proposed well sites may not be available to be developed and directional drilling may be necessary to develop all spacing units within a lease.

Surveys for occupied sand dune lizard habitat would follow scientific protocol. The best time period for sand dune lizard surveys is June 1 through September 30 between the hours of 9:00 a.m. and 5:00 p.m., while avoiding the heat of mid-day. Since surveys must be completed before any surface disturbing activities would be approved, lessees that do not complete surveys in the proper time frame would have to wait up to eight months before starting surveys.

Existing leases would require PODs which incorporate the results of the lizard surveys. The purpose of a POD is to assist the operator and BLM with planning for orderly development as a means to reduce or eliminate impacts to special status species habitat. A POD would also incorporate applicable best management practices and disclose all future well locations; the location and arrangement of well infrastructure (e. g., tank batteries, compressors, power lines and poles); road locations; and rights-of-way.

If new sand dune lizard occupied habitat is discovered in the future within the Planning Area, the prescriptions of this alternative would apply in and around that habitat.

### Alternative Energy

There would be little or no opportunity for geothermal or biomass generation within the Planning Area. Therefore, these types of generating sites will not be considered.

The impacts of wind energy development and operation would be similar to those analyzed in the 2005 Wind Energy Programmatic EIS. Of the 13.4 million acres of public land within New Mexico, the EIS determined 9,800 acres were economically developable. None of these 9,800 is located within the Planning Area, therefore it is extremely unlikely that any wind generation would occur within the Planning Area.

Only commercial solar and wind generator sites would be considered in this plan amendment, however, wind and solar generation sites would be confined to areas that would have no negative impacts to occupied or suitable lesser prairie-chicken and sand dune lizard habitat.

### Vegetation

The Desired Plant Community (DPC) concept of the Roswell Field Office, as described in Appendix 11 of the Roswell Resource Area Draft Resource Management Plan/Environmental Impact Statement (September 1994) and implemented by the 1997 Approved Roswell RMP, would be adopted in the Carlsbad Field Office portion of the Planning Area.

Ecological site descriptions, currently being modified by NRCS to include plant communities and transitional pathways, would be used to assess the Standards for Rangeland Health.

Rangeland restoration and vegetation treatments would continue to be implemented to improve or maintain the plant community needed to achieve multiple use management goals. These goals would address watershed management, wildlife habitat, and livestock needs. Brush encroachment from mesquite and catclaw would be a primary target to restore native grassland ecosystems with a focus on lesser prairie-chicken habitat types. Following treatment, a minimum of two growing seasons rest would be required. Following this recovery period, livestock grazing would be allowed if monitoring indicates progress towards meeting the vegetative standard.

Within the Planning Area, any habitat that is currently designated as unsuitable for lesser prairie-chicken or sand dune lizard, but has potential to become suitable, and ultimately occupied, would be identified and targeted for treatment. Methods to achieve this potential would include, but not be limited to, vegetative treatments, rehabilitation of pads, roads, and rights of way, and would be designed to improve habitat, enhance connectivity, reduce fragmentation, and move towards DPC. Not all areas designated as unsuitable habitat,

however, can be converted to suitable since the soils in some of these areas are not capable of producing the necessary vegetation for lesser prairie-chicken or sand dune lizard habitat.

Although mineral extraction may occur on a given piece of land over a period of many years, eventually resources become exhausted and wells and related infrastructure are taken out of production. In some areas this has already occurred; elsewhere, some wells are nearing maturity and may be plugged and abandoned within the next decade. This would create opportunities to increase suitable habitat, and to create or expand lesser prairie-chicken management areas. Recent pilot projects have focused on reclamation of abandoned well-pads and access roads, and re-contouring these sites with the surrounding landscape. Rangeland restoration efforts would target disturbed areas such as plugged/abandoned pads, roads, and rights-of-ways in lesser prairie-chicken habitat areas. Techniques to accomplish this restoration include removal of caliche, re-contouring, reseeding, fertilizer/water application if appropriate, and temporary fencing to allow establishment of vegetation. A combination of techniques could be utilized and would be site specific, depending on habitat requirements.

Mesquite encroachment into sand-shinnery and sand-sage ecosystems reduces the amount of forage and creates habitat that is unsuitable for lesser prairie-chicken nesting or brood-rearing. Mesquite control may be used to improve rangeland health in areas not used by lesser prairie-chickens, thereby reducing grazing pressure in nesting areas. This also could help offset forage losses due to initiation of conservative grazing on other ranch lands that are important lesser prairie-chicken habitat. Thus, mesquite control would be considered a valuable management tool. For Fiscal Year (FY) 2006, approximately 47,000 acres of land are scheduled for brush control treatments, of this, about 32,000 acres are on Public Lands. The primary target is mesquite, with some broom snakeweed targeted as well. The intent of these treatments is to move towards the attributes of DPC described above.

Shinnery oak treatments would follow guidelines described under alternative A, with one exception. The requirement that dispersal corridors of untreated shinnery oak flats at least 500 meters wide should be retained between suitable habitats, both occupied and unoccupied, that are separated by less than 200 meters would be dropped.

The standard practices that would be employed to meet management objectives in each community are:

- Utilization levels not exceeding 45 percent of annual plant production. Utilization levels would be determined prior to green-up and measured on key forage species.
- Projects such as fences, exclosures, water developments, erosion control structures, reseeding, or vegetative sales would be developed to allow continued livestock use while improving habitat requirements for both lesser prairie-chickens and sand dune lizards.
- Grazing treatments such as rest, changes in season of use, class of livestock, or stocking rates.
- Vegetation treatments, including, prescribed fire or prescribed natural fire, fuel wood sales, and biological, chemical or mechanical controls.

- Treatment of salt cedar as conditions warrant. Considerations in determining whether to treat include location and density of salt cedar stands, available budget and staff to conduct treatment, and objectives of proposed treatment.
- Native, deciduous tree species in all plant communities, such as hackberry, black walnut, New Mexico walnut, and desert willow, would be protected from vegetation treatments and surface disturbance.

### **Grassland Community**

While this community has been broken up into several subtypes, the most common subtype within the Planning Area is the mesquite grassland. This subtype is found in the “sand country” east of the Pecos River and is characterized by level to gently rolling terrain, with dunes ranging from small stabilized hummocks to large active dunes. See Table 2-5 in the DEIS for vegetative community objectives for the grassland community.

Vegetation treatments to influence DPC would be considered at the following threshold levels:

- Mesquite 1/3 of the shrub cover composition
- Cholla 100 plants/acre
- Catclaw 5 percent vegetative cover
- Creosote 20% of the vegetative canopy
- Lechuguilla 20% of the vegetative canopy
- Tarbush 20% of the vegetative canopy
- Broom snakeweed 25% by weight of vegetative production
- Pinon/juniper 12 percent vegetative cover

### **Shinnery Oak-Dune Community**

Treatments may be conducted to achieve DPC objectives in areas that are not considered suitable or occupied habitat for special status species (e.g., the sand dune lizard). Suitable and occupied habitat will not be chemically treated unless the species is removed from state or federal listing, or a chemical application rate is developed that would not impair habitat. See Table 2-6 in the DEIS for vegetative community objectives for the shinnery oak-dune community.

Vegetation treatments to influence DPC would be considered at the following threshold levels:

- Mesquite 1/3 of the shrub cover composition
- Shinnery Oak 40 percent of vegetative cover by composition

### **Mixed Desert Shrub Community**

See Table 2-7 in the DEIS for vegetative community objectives for the mixed desert shrub community.

Vegetation treatments to influence DPC would be considered at the following threshold levels:

- Mesquite or Catclaw 1/3 of the shrub cover composition
- Cholla 100 plants/acre

- Creosote 20% of the vegetative canopy
- Lechuguilla 20% of the vegetative canopy
- Tarbush 20% of the vegetative canopy
- Broom snakeweed 25% by weight of vegetative production
- Pinon/juniper 12 percent vegetative cover

### Livestock Management

Under the Preferred Alternative, approximately 1.85 million acres, which includes about 850,000 acres of public land and makes up all or parts of 114 grazing allotments, would be available for livestock use. Currently, a total of 192,125 Animal Unit Months (AUMs) are permitted either by Grazing Permit or Grazing Lease. Actual use may vary due to adjustments of annual stocking rates and other management practices. These adjustments would be made based on monitoring data and through consultation, as discussed in 43 CFR 4100.

Since population numbers and habitat for the lesser prairie-chicken can be impacted by livestock grazing, management strategies would be implemented on allotments within the Planning Area. The strategies, based on monitoring data, include changing the time of year certain pastures are grazed, reducing/increasing allowable utilization levels, implementing pasture rotation schemes, and reducing/increasing the annual stocking rates on public land. Seasonal use restrictions would be applied, on a pasture basis, if monitoring indicates habitat requirements are not being met. An example would be removing livestock from a pasture during lesser prairie-chicken booming, and nesting seasons, then allowing livestock back into the pasture once this timeframe is past.

While the current grazing regulations (43 CFR 4100) provide flexibility and wide latitude to improve and maintain rangeland health, voluntary relinquishment would be one method to meet the goal of establishing habitat reserves for the lesser prairie-chicken within the Planning Area. Under this alternative, the decision to relinquish livestock grazing is totally voluntary on the part of the permittee/lessee. If a grazing permittee/lessee decides to voluntarily relinquish grazing on his/her allotment to resolve conflicts that exist between livestock grazing and protection of lesser prairie-chicken habitat, BLM would close the allotment to livestock grazing. This closure would continue for the life of this plan amendment and may or may not continue when the plan is revised. The criterion for BLM to accept a voluntary relinquishment and to close the allotment to grazing is that conflicts exist between livestock grazing and protection of lesser prairie-chicken habitat. The option to voluntarily relinquish grazing within the Planning Area would be carried forward in the next plan revision.

As part of livestock management guidelines, range improvement projects would be constructed where it is determined that these projects can enhance habitat. Improvements such as fencing, both traditional wire and "virtual" fences, and water development would be constructed to allow continued livestock use while improving habitat requirements for both lesser prairie-chickens and sand dune lizards. An example would be a cross fence in a large pasture, especially if only a portion of the pasture is suitable/occupied habitat that would divide the pasture along the suitable/occupied habitat line. By constructing the fence, livestock use could occur in the non-suitable portion during key time periods, while allowing growing season rest or no livestock in the suitable area while young are being reared. The same idea could be accomplished by adding additional water sources in a large pasture with few existing water sources. Adding another trough in non-suitable areas could draw livestock out of suitable areas during key time periods. As the technology becomes available, "virtual" fencing, which is a combination of

satellite/computer/ear tag technology that provides stimuli to livestock to guide their movement, could also be used to move livestock out of key areas for certain time periods.

Range improvement projects would not be allowed if it is determined that the project could have negative impacts to habitat. An example would be a water trough, or any activity, that would concentrate livestock at the edge of a dune complex that has occupied or suitable habitat for sand dune lizards. Concentrating animals in such an area could break down the dune and reduce or eliminate the ability of sand dune lizards to survive.

Lands acquired within the Planning Area for special status species habitat would not be managed under the Taylor Grazing Act.

### Wildlife

Under the Preferred Alternative most of the wildlife habitat needs or prescriptions are identified in other resource disciplines. Therefore refer to the minerals, livestock grazing, vegetation, recreation, land and realty and OHV for guidelines addressing sand dune lizard and lesser prairie-chicken habitats.

Predator control for the purpose of protecting sensitive wildlife species may be conducted on public lands within the Planning Area on a case by case basis. Any predator control actions would follow the protocol listed in the 1997 Roswell RMP.

Increased intensity in research and monitoring would be needed to evaluate changes in habitat condition, land use threats to the species, species use and distribution, reclamation efforts, propagation, and other projects that may help in enlarging the knowledge base of these species. Refer to Appendix 6 in the DEIS for a description of monitoring lesser prairie-chicken habitat.

BLM would support the propagation of lesser prairie-chicken and transplant efforts throughout the planning area, with an emphasis that the habitat parameters necessary for survival be in place prior to reintroduction; unless identified and needed for research projects. If necessary, BLM would pursue and propose changes to state wildlife management regulations on game species based on impacts to land resources and game populations.

BLM would continue reclamation practices on historical oil and gas disturbance areas for the betterment of rangeland health and wildlife species. These efforts would enhance distribution of special status species in appropriate habitats over the long term.

### Recreation

Within the planning area, outside the Special Recreation Management Areas (SRMAs) there are Extensive Recreation Management Areas (ERMAs). Within these ERMAs recreation use includes hunting, OHV riding, photography, driving for pleasure, watchable wildlife, and dispersed camping.

Elements of public land users enjoy watching wildlife. Birdwatchers and photographers visit lek areas during booming season for the purpose of obtaining photographs and observing the lesser prairie-chickens engage in mating rituals. At present there is no data to support the premise that recreational activities within the planning area are the causes of species decline. However, through visitor monitoring in the planning area, if data becomes available that identifies recreational use as a factor in species decline, BLM would implement corrective

management actions such as; seasonal closures of roads leading to lek areas, noise restrictions in or around leks, or the issuance of Special Recreation Permits (SRP).

Based on monitoring visitor use and lesser prairie-chicken needs, if results indicate that a Special Recreation Permit (SRP) is the best method to regulate visitations in lek areas, then an SRP may be issued. If an SRP were to be issued, there would be no cost to the visitor/permittee. The SRP would allow visitations for the purpose of watching or photography to continue while tracking visitor use and spreading impacts so that one lek or group of leks does not bear the brunt of visitors. The issuance of a special recreation permit would contain specific stipulations regarding distance, noise, and interfering with the natural mating ritual of the lesser prairie-chicken. The Wildlife and Recreation Specialists in each Field Office would draft stipulations to be attached to a special recreation permit for the purpose of minimizing impact to mating areas.

During lesser prairie-chicken mating season, noise restrictions would be in effect from of March 1 through June 15 and from 3 a.m. to 9 a.m. Generators associated with recreation uses would not be allowed in or near identified mating areas during booming season. These conditions would be identified on interpretive signs and placed in key areas within the planning area.

#### Off-Highway Vehicle Management

Within the Planning Area, inventories, public review, and transportation planning would be conducted to support road by road designations for roads and trails suitable for Off Highway Vehicle (OHV) use. Pending completion of formal designations, the Planning Area would be managed as limited to existing roads and trails for off highway vehicle use. A preliminary road network is shown on Map R-1 in the DEIS.

Within the Planning Area, seasonal OHV use would be implemented based on monitoring of visitor use and needs of the lesser prairie-chicken and sand dune lizard. These restrictions would be implemented to protect booming areas adjacent to the OHV areas during booming season. If monitoring of special status species indicates the need for further restrictions, then no OHV use would be allowed in the Planning Area between the hours of 3 a.m. to 9 a.m. from March 1 through June 15.

Providing there would be no conflicts with lesser prairie-chicken and sand dune lizard habitat issues, the Mescalero Sands North Dune OHV Area would be expanded from the existing 562 acres to 1,674 acres in a three-phase plan based on monitored visitor use and demand. Phase One would be 418 acres to the North of the existing OHV boundary and would be limited to designated routes. Phase Two would be 295 acres south of the existing boundary designated open. Phase Three would be 399 acres east of the existing boundary designated open. A lesser prairie-chicken and sand dune lizard survey would be conducted prior to implementation of any phases since this OHV area borders the Core Management Area. See Map B-3 in the DEIS for the location of the phases.

Improvements to the existing facilities and the development of additional facilities would continue throughout the Mescalero Sands North Dune OHV Area, so long as they are compatible with management of special status species. Signage would be placed at key locations for interpretation and education of the recreating public and to show route designations.

The portion of the Hackberry Lake Intensive OHV Area (22,673 acres) located within the Planning Area, would be designated limited to existing designated routes with the exception of 132 acres of dune complex, known as the Shugart Dunes, which would remain open.

The Square Lake dune complexes are within the Planning Area and have historically been heavily used for OHV recreation. BLM would propose establishing the Square Lake OHV Area consisting of 5,974 acres designated as limited to existing routes and 817 acres of sand dunes designated as open. See Map B-4 in the DEIS for the location of the dunes and the designated roads and trails. Establishment of the proposed OHV area would be pending the results of the evaluation of the Habitat Evaluation Areas and a lack of conflicts with lesser prairie-chicken and sand dune lizard habitat protection.

The proposed Square Lake OHV Area would be limited to vehicles with a width of 50 inches or less. This would normally exclude the use of sand rails and dune buggies. Signage containing information and showing designated routes would be placed at key locations for interpretation and education of the recreating public.

Special Management Areas

The current designations for Areas of Critical Environmental Concern (ACECs) and special management areas (SMAs) would remain unchanged. The only ACEC in the Planning Area is the Mescalero Sands ACEC. The SMAs within the Planning Area are the Mathers Research Natural Area (RNA), Bear Grass Draw, Laguna Plata Archeological District, Maroon Cliffs Archeological District, and the Poco Site. (See Map NAA-1 – in the EIS)

**Planning Area**

The Planning Area amounts to about two percent of New Mexico and is located in the southeastern part of the State. The Planning Area comprises 1,852,946 acres of private, Federal and State Trust lands. Table 5 shows land ownership within the Planning Area.

**Table 5  
Land Ownership in the Planning Area**

| Ownership                    | Acres     | Percent of Planning Area |
|------------------------------|-----------|--------------------------|
| Public Land (Managed by BLM) | 847,491   | 45.7                     |
| Department of Energy         | 10,244    | 0.7                      |
| State Trust Lands            | 309,129   | 16.6                     |
| Private Lands                | 686,082   | 37.0                     |
| Total                        | 1,852,946 | 100.0                    |

## SPECIES EVALUATIONS

### ENDANGERED SPECIES

#### BLACK-FOOTED FERRET (*Mustela nigripes*)

##### Background

**Status:** The black-footed ferret was listed as endangered on March 11, 1967 (FWS 1989). The New Mexico Department of Game & Fish (NMDGF) also lists this species as “apparently extirpated wildlife” (NMDGF 1996).

**Description of the Species:** A weasel-like animal that has a yellow-buff coloration with black feet, tail tip and eye mask, and a blunt, light colored nose (FWS 1989). The body length is 38-46 centimeters (15-18 inches), tail length is 13-15 centimeters (5-6 inches) (*ibid*).

##### **Distribution:**

Range-wide: The black-footed ferret historically occurred throughout all or portions of the States of Colorado, Arizona, Utah, New Mexico, Kansas, Montana, Nebraska, Oklahoma, Texas, Wyoming, North and South Dakota, and the Provinces of Alberta and Saskatchewan, Canada (FWS 1989).

New Mexico: The black-footed ferret historically occurred over most of Northern and Central New Mexico (BLM 1984). The last confirmed sighting in New Mexico was in 1934 (BLM 1995). No black-footed ferrets are known to exist other than the captive and reintroduced populations in Wyoming, Montana, South Dakota, and Arizona. However, remnant populations may still exist in portions of the former range (*ibid*).

The best information available indicates that the black-footed ferret is extirpated from the wild in New Mexico (NMDGF 1996). However, in 1998, a captive breeding project was initiated in New Mexico at the Vermejo Park Ranch near Raton.

Chaves, Eddy, Lea, and Roosevelt Counties: Chaves, Eddy, Lea, and Roosevelt Counties are largely outside the historic range of the black-footed ferret (FWS 1989).

**Habitat:** This species is always associated with prairie dog towns in grassland plains, semi-arid grasslands and adjacent mountain basins up to 10,500 ft. (FWS 1989).

**Recent Consultations:** #1 - Within Sierra and Otero Counties (Federal Fluid Minerals Leasing and Development) in 2003 (Cons. #2-22-99-I-109A). The BLM made a “No Affect” determination. #2.- Fire and Fuels Management Plan Amendment and Environmental Assessment for Public Land in New Mexico and Texas (Potter County), July 2004 (Cons. #2-22-03-I-680). The BLM made a “No Affect” determination.

## **Effect Determination**

**Reasons for Decline/Vulnerability:** From the available literature, it appears the decline in prairie dog colonies, and consequently the black-footed ferret throughout the west was related to Federal, State and local poisoning programs. Also, land use practices reduced available habitat by converting vast areas of the Great Plains to agriculture and urban areas.

**Effects of the Proposed Action:** Chaves, Eddy, Lea, and Roosevelt Counties are largely outside the historic range of the black-footed ferret, and the NMDGF lists this species as “apparently extirpated wildlife” (NMDGF 1996, FWS 1989).

The most recent information from the Fish and Wildlife Service (FWS 1989) indicates that prairie dog towns of the following sizes need to be surveyed if any disturbance is planned: (a) 80 acres for black-tailed prairie dogs, and (b) 200 acres for Gunnison's prairie dogs. The Carlsbad and Roswell Field Offices have conducted surveys for prairie dogs within the Planning Area, and no prairie dog colonies of size necessary to be surveyed have been identified on BLM administered land within Chaves, Eddy, Lea, and Roosevelt Counties. The prairie dog population within Chaves, Eddy, Lea, and Roosevelt Counties fluctuate up and down on a regular basis, mainly due to plague that occurs throughout New Mexico, and currently, plague appears to be the limiting factor in controlling the size of prairie dog colonies.

The existing prairie dog colonies will be protected (no habitat modification) as part of the Preferred Alternative, by moving any ground disturbing activity away from existing populations.

Based on the facts that Chaves, Eddy, Lea, and Roosevelt Counties are largely outside the historic range of the black-footed ferret, no habitat currently exists (e.g., large prairie dog colonies) necessary to support this species, and existing prairie dog colonies will be protected, it is not anticipated that there would be any impacts to the black-footed ferret from any of the proposed actions.

### **Conservation Measures/Stipulations to Minimize or Eliminate Effects:**

- Each project will be scrutinized carefully for potential effects to existing prairie dog populations. If a prairie dog colony is found within a project area, the surface-disturbing activities will be managed so as not to affect the colony.

**BLM Determination:** Based on the analysis, the BLM has determined that implementation of the Preferred Alternative identified in the DEIS for Chaves, Eddy, Lea, and Roosevelt Counties would result in a "No Affect" situation for the black-footed ferret.

### **Rationale:**

- Chaves, Eddy, Lea, and Roosevelt Counties are largely outside the historic range of the black-footed ferret. The black-footed ferret is apparently extirpated from the wild in New Mexico.
- No habitat (large prairie dog colonies) necessary to support this species has been identified on BLM-administered land within Chaves, Eddy, Lea, and Roosevelt Counties.
- Implementation of mitigating measures for the protection of prairie dog colonies during oil and gas and other development activities.

**Cumulative Effects:** The Preferred Alternative is anticipated to result in an overall improvement of wildlife habitat conditions within the planning area. Because the proposed action for Chaves, Eddy, Lea, and Roosevelt Counties has a “No Affect” for the black-footed ferret, there would be no increase in the existing or foreseeable future cumulative impacts within Chaves, Eddy, Lea, and Roosevelt Counties for this species. The cumulative impacts presently existing (e.g., Federal, private, state) for this species would not change due to this action.

### **NORTHERN APLOMADO FALCON (*Falco femoralis septentrionalis*)**

*Note: Unless otherwise cited data is derived from the U.S. Fish and Wildlife Service Biological Opinion for the Bennett Ranch Unit Gathering System in Otero County (FWS 2001).*

#### **Background**

**Status:** The U.S. Fish and Wildlife Service listed the northern aplomado falcon as an endangered species on February 25, 1986 (FWS 2004). No critical habitat has been designated.

**Description of the Species:** Northern aplomado falcons are long-tailed falcons intermediate in size between the American kestrel (*Falco sparverius*) and prairie falcon (*F. mexicanus*). Female Aplomado falcons are larger than males; both sexes combined measure about 12-16 inches long and have a wingspan of about 31-inches. In the United States, aplomado falcons may occur sympatrically throughout the year with the American peregrine falcon, prairie falcon, American kestrel, merlin (*F. columbarius*) and the Arctic peregrine falcon outside of the breeding season. This emphasizes the need for careful observation to avoid confusion of suspected aplomado falcons with other more common falcons.

#### **Distribution:**

Range-Wide: Observations of aplomado falcons during the past decade have been reported sporadically throughout its historic range in the United States; however, many of these reports have been generally discounted due to lack of documentation. Historical and recent observations of aplomado falcons have been reported for New Mexico and west Texas.

New Mexico: Within New Mexico, aplomado falcons were historically reported from Dona Ana, Eddy, Grant, Hidalgo, Lea, Luna, Otero, and Sierra counties. The species formerly occurred regularly in summer (casual in winter) in the Southwest and possible farther east (Tularosa Basin), with the last specimen taken in 1939 and the last nesting documentation in 1952 (NMDGF 2002). Historic sightings are concentrated in the southwestern corner of New Mexico from Sierra and Dona Ana Counties to the Bootheel Region. In 2002, there was a confirmation of a breeding pair of aplomado falcons in southern in New Mexico (Howard 2003).

Chaves, Eddy, Lea, and Roosevelt Counties: There have been four sighting within Eddy and Lea Counties with the last one occurring in 1993 (See Table 6). There have been no sightings within Chaves or Roosevelt Counties. The Carlsbad and Roswell Field Offices manage very limited areas of mesquite and/or yucca grasslands habitat which is preferred by the falcon. Most of the land is a mosaic of Federal (BLM and military), State, and private ownership. A portion of the area falls within the northern extent of the aplomado falcon’s range (Portions of Eddy and Lea Counties) with Chaves and Roosevelt counties falling outside of the aplomado’s historical range.

**TABLE 6**  
**HISTORICAL AND RECENT SIGHTINGS OF APLOMADO FALCONS BY COUNTY**

| County | Historical Sightings<br>1853 – 1952 | Recent Sightings<br>1962-2001   |
|--------|-------------------------------------|---|
| Eddy   |                                     | 12/1963 near Otis,<br>4/1988 30 mi E Carlsbad near Laguna Grande,<br>11/1993 Carlsbad |
| Lea    |                                     | 5/1962 San Simon Ranch  |

**Williams 1998**

**Habitat:** Habitat for the aplomado is variable over its range, but generally consists of open terrain with scattered trees or shrubs. The Chihuahuan Desert habitat consists of open grasslands with scattered mesquite and/or yuccas (*Yucca torreyi* and *Yucca elata*). These yucca plants that are used by the falcon and other raptors need to be large enough (e.g., generally branched) to support raptor nests.

Habitat components include; moderately low ground cover, an abundance of small to medium sized birds for forage, and a supply of nesting platforms, including large bromeliads and stick nests (FWS 2004). The falcons do not build their own nests; instead, they use old stick nests of other species sharing the same range and habitat. In desert habitats, nest availability is influenced by the presence of birds that build large size nests, such as crows, kites, ravens, or hawks (FWS 2004).

**Recent Consultations:** #1 - Within Sierra and Otero Counties (Federal Fluid Minerals Leasing and Development) in 2003 (Cons. #2-22-99-I-109A). The BLM made a “May Affect – Not Likely to Adversely Affect” determination and received concurrence from the U.S. Fish and Wildlife Service. #2. – Fire and Fuels Management Plan Amendment and Environmental Assessment for Public Land in New Mexico and Texas (Potter County), July 2004 (Cons. #2-22-03-I-680). The BLM made a “May Affect – Not Likely to Adversely Affect” determination and received concurrence from the U.S. Fish and Wildlife Service.

**Effect Determination**

**Effects of the Proposed Action:** Portions of Lea and Eddy Counties fall within the northern extent of the aplomado falcon’s range, while Chaves and Roosevelt Counties fall outside the aplomado falcons range. There have been four sightings of aplomado falcons in Eddy and Lea Counties, the last one in 1993.

Based on the Reasonable Foreseeable Development, it anticipates the Preferred Alternative would have 49 wells (15-Gas and 34-Oil) drilled on an annual basis (245 acres of direct disturbance and 6,174 acres of indirect disturbance). Over the lifetime of this plan (20-Year projection) there would be approximately 4,900 acres of direct disturbance, however when compared to the acreage within the Planning Area (1,852,946 acres), the total direct disturbance over the life of this plan would be less than ½ of one percent.

In addition to disturbance from oil and gas development activities, there would be approximately 75 miles of geophysical activities occurring on an annual basis. This activity would create 75 acres of direct disturbance annually. Over the lifetime of this plan there would be approximately

1,500 acres of direct disturbance from this activity. However, the exact acreage would vary from year to year. The indirect effects (disturbance) from seismic operations would be relatively short term, not extending beyond the 1 to 2 days required to complete each segment of the geophysical work. The direct disturbance to soil and vegetation is considered minimal and there would be no anticipated changes in the animal community, habitat structure, or change in plant species composition and density within the seismic operation area. If seismic operations were to occur during the avian nesting season (March-June) within habitats of ground/shrub nesting birds some loss of nests could potentially occur. However, based on the 75 acres per year scattered over the Planning Area (1,852,946 acres), the potential impacts of seismic operations on nesting birds would be considered insignificant. In addition, many of the seismic operations would occur outside of the nesting season or not within nesting habitats, lessening the potential impacts from seismic operations even further.

Because approximately 55% of the oil and gas development disturbance is short-term (<3 years) and other previously disturbance sites would be reclaimed by implementing the reclamation and vegetative treatment activities as described in the Preferred Alternative (Pages 2-17), would result in positive long-term benefits by restoring grassland and other habitats within the Planning Area. Ultimately, the Preferred Alternative would result in an overall improvement of habitat for various wildlife species. However, using a habitat model developed by New Mexico Cooperative Fish and Wildlife Research Unit (NMCWF&WRU 2002), the BLM has not identified any habitat for the aplomado falcon within the Planning Area (John Sherman - Per. Com. 2006).

#### **Conservation Measures/Stipulations to Minimize or Eliminate Effects:**

- Prior to initiating any projects during the raptor-breeding season, the project area shall be surveyed for raptor nests. Surveys shall be conducted by individuals approved by the Authorized Officer. All active raptor nests shall be avoided during the dates and by the distances listed below. An “active raptor nest” is defined as any raptor nest being used during the current nesting season.

Distance: Eagle – 0.5 mile (800 meters)

Peregrine Falcon – (900-3,400 meters)

All other raptor species - Aplomado Falcons 1/8 mile (200 meters)

Timing: Peregrine Falcon – variable (March 1-October 16)

Aplomado Falcon – January 1 – July 31

- Pre-project planning will ensure that the yucca component (large-branched specimens) within the Planning Area is not damaged or lost by protecting these yuccas from oil and gas activities (e.g., moving locations).
- Within the Planning Area, occupied, suitable, or potential to become suitable habitat associated with the lesser prairie-chicken or sand dune lizard would be closed to leasing or leased with requirements for PODs and subsequent COAs to ensure orderly development with a minimum of surface impacts. This protection of lesser prairie-chicken and sand dune lizard habitats will ultimately help conserve grassland and other habitats within the Planning Area. These PODs and COAs would contain various strategies for minimizing impacts

associated with new development and for reclaiming developed areas. Methods to achieve this potential would include, but not be limited to, vegetative treatments, rehabilitation of pads, roads, and rights of way, and reduction of infrastructure needed to support the lease. They would be designed to improve habitat, enhance connectivity, reduce fragmentation, and move towards Desired Plant Community.

- Within the Planning Area, coordinated efforts to reclaim and restore habitat in previously developed sites would be carried out when and where opportunities arise. Attempts would be made to reclaim three previously disturbed acres for every one acre of new disturbance.

**BLM Determination:** Since very few northern aplomado falcons have ever been observed within Lea and Eddy Counties (last observation in 1993), no habitat has been identified to support this species within the Planning Area, and with implementation of conservation measures as described above, there would be no anticipated effects to the aplomado falcon. Therefore, it is the BLM's determination that the implementation of the Preferred Alternative identified in the DEIS for Chaves, Eddy, Lea, and Roosevelt Counties would result in a "No Affect" situation for the northern aplomado falcon.

**Rationale:**

- Only a small portion of the planning area (Southern Eddy and Lea Counties) falls within the northern extent of the historic northern aplomado falcon's range. Chaves and Roosevelt Counties fall completely outside of the historical falcon range.
- Using a habitat model developed by New Mexico Cooperative Fish and Wildlife Research Unit (NMCWF&WRU 2002) the BLM has not identified any habitat to support the aplomado falcon within the Planning Area.
- Aplomado falcons have been seen only on a sporadic basis (four times within the last 40+ years) within Lea and Eddy Counties, with the last observation occurring in 1993.
- Conservation measures for nesting raptors would be utilized to help eliminate any potential impacts to nesting birds.
- Implementation of vegetative treatments, rehabilitation of pads, roads, and rights of way, and reduction of infrastructure needed to support leasing would help improve habitat, enhance connectivity, and reduce fragmentation.

**Cumulative Effects:** The Preferred Alternative is anticipated to result in an overall improvement of wildlife habitat conditions within the planning area. Because the proposed actions for Chaves, Eddy, Lea, and Roosevelt Counties has a "No Affect" for the Northern Aplomado Falcon, there would be no increase in the existing or foreseeable future cumulative impacts within Chaves, Eddy, Lea, and Roosevelt Counties for this species. The cumulative impacts presently existing (e.g., Federal, private, state activities) for this species would not change due to this action.

## INTERIOR LEAST TERN (*Sterna antillarum athalassos*)

### **Background**

**Status:** The interior least tern was listed as Endangered on May 28, 1985, without critical habitat (FWS 2004). It is also listed by the New Mexico Game & Fish as Threatened (*ibid*).

**Description of the Species:** Least terns are robin-sized birds about 21 cm (8 inches) long with a wingspan of 50 cm (20 inches). The sexes are alike, characterized in the breeding plumage by a black crown, white forehead, grayish back and dorsal wing surfaces, snowy white undersurfaces, yellow legs, and black-tipped yellow bill (FWS 2004).

### **Distribution:**

**Range-Wide:** The interior least tern was found along the sandbars and shorelines of the Colorado (Texas), Red, Rio Grande (Texas), Arkansas, Missouri, Ohio, and Mississippi River systems; the braided rivers of southwest Kansas and northwest Oklahoma; the salt flats in northwest Oklahoma, and playa lakes in New Mexico (FWS 2004).

**New Mexico:** In New Mexico, the interior least tern is found mainly in the southeast, in and around Bitter Lake National Wildlife Refuge.

**Chaves, Eddy, Lea, and Roosevelt Counties:** This species is presently known in Chaves County along the Pecos River within the Bitter Lake National Wildlife Refuge. It would only be considered an accidental migrant to Eddy, Lea, and Roosevelt Counties, and the remainder of Chaves County.

**Habitat:** Preferred tern habitat is associated with riverine areas where the birds use the sparsely vegetated sand and gravel bars within a wide river channel or salt flats along lake shorelines for nesting. This species is a colonial nesting shorebird and although it is associated with water, it spends most of its time on sand bars, playas, or snatching its food from the surface of the water. The riverine nesting areas of the tern are sparsely vegetated sand and gravel bars within a wide, unobstructed river channel or salt flats along lake shorelines.

**Recent Consultations:** #1 - Within Sierra and Otero Counties (Federal Fluid Minerals Leasing and Development) in 2003 (Cons. #2-22-99-I-109A). The BLM made a "May Affect – Not Likely to Adversely Affect" determination and received concurrence from the U.S. Fish and Wildlife Service. #2. – Fire and Fuels Management Plan Amendment and Environmental Assessment for Public Land in New Mexico and Texas (Potter County), July 2004 (Cons. #2-22-03-I-680). The BLM made a "May Affect – Not Likely to Adversely Affect" determination and received concurrence from the U.S. Fish and Wildlife Service.

### **Effect Determination**

**Effects of the Proposed Action:** No habitats (e.g., rivers/lakes) have been identified on BLM administered lands within the Planning Area that would support the interior least tern within Chaves, Eddy, Lea and Roosevelt Counties. This bird would only be considered an accidental migrant within Eddy, Lea and Roosevelt Counties.

**BLM Determination:** Based on the analysis, that no habitat to support this species is found within the Planning Area, and the only known nesting for this species occurs at Bitter Lakes Wildlife Refuge, which is outside of the Planning Area, the BLM has determined that implementation of the Preferred Alternative identified in the DEIS for Chaves, Eddy, Lea and Roosevelt Counties would result in a "No Affect" situation for the interior least tern.

**Rationale:**

- Known distribution of the interior least tern in New Mexico is very limited, with the only known nesting occurring in Chaves County at Bitter Lakes Wildlife Refuge (Which is outside the Planning Area). This bird would only be considered an accidental migrant within Eddy, Lea and Roosevelt Counties, and the remainder of Chaves County.
- No habitats (e.g., rivers/lakes) have been identified on BLM administered lands within the Planning Area that would support the interior least tern within Chaves, Eddy, Lea and Roosevelt Counties.

**Cumulative Effects:** The Preferred Alternative is anticipated to result in an overall improvement of wildlife habitat conditions within the planning area. Because the proposed actions for Chaves, Eddy, Lea and Roosevelt Counties has a "No Affect" for the interior least tern, there would be no increase in the existing or foreseeable future cumulative impacts within Chaves, Eddy, Lea and Roosevelt Counties for this species. The cumulative impacts presently existing (e.g., Federal, private, state activities) for this species would not change due to this action.

**KUENZLER'S HEDGEHOG CACTUS (*Echinocereus fendleri*)**

**Background**

**Status:** The Kuenzler's hedgehog cactus was listed as endangered on October 26, 1979 (FWS 2004). This species is also listed as endangered under the New Mexico Endangered Plant Species Act (*ibid*).

**Description of the Species:** This species is conical to short cylindrical, up to 25 centimeters (10 inches) tall (FWS 2004). It is dark green in color with bright magenta flowers (*ibid*).

**Distribution:**

Range-Wide/New Mexico: This species is presently only known from Chaves, Eddy, Lincoln, and Otero Counties, New Mexico (FWS 2004).

Chaves, Eddy, Lea, and Roosevelt Counties: Potential habitat has been identified for areas east of McGregor Range, southeast Otero County (BLM 1996). One population of Kuenzler's cactus was found in 1998 on BLM administered land in Eddy County, just across the line from Otero County (Ladyman et. al. 1998). However, based on habitat requirements no habitat is known to occur east of the Pecos River within Chaves or Eddy Counties (John Sherman/Dan Baggau – Per. Com. 2006). This species is not known to occur within Lea or Roosevelt Counties (FWS 2004).

**Habitat:** This species grows between rocks on gently sloping limestone outcroppings in pinion-juniper woodlands and grasslands at about 5,800-6,200 feet elevation (FWS 2004). This species is rare within its range (BLM 2002).

**Recent Consultations:** #1 - Within Sierra and Otero Counties (Federal Fluid Minerals Leasing and Development) in 2003 (Cons. #2-22-99-I-109A). The BLM made a "May Affect – Not Likely to Adversely Affect" determination and received concurrence from the U.S. Fish and Wildlife Service. #2. – Fire and Fuels Management Plan Amendment and Environmental Assessment for Public Land in New Mexico and Texas (Potter County), July 2004 (Cons. #2-22-03-I-680). The BLM made a "No Affect" determination.

### **Effect Determination**

**Effects of the Proposed Action:** The occurrence of this species on BLM administered land within Chaves and Eddy Counties is extremely limited based on potential habitat (BLM 1996). This species habitat is not known to occur east of the Pecos River, which is outside the Planning Area (John Sherman/Dan Baggau - Per. Com. 2006).

Based on the Reasonable Foreseeable Development, it anticipates the Preferred Alternative would have 49 wells (15-Gas and 34-Oil) drilled on an annual basis (245 acres of direct disturbance). Over the lifetime of this plan (20-Year projection) there would be approximately 4,900 acres of direct disturbance, however when compared to the acreage within the Planning Area (1,852,946 acres), the total direct disturbance over the life of this plan would be less than ½ of one percent. All of this activity will occur outside the known population and/or habitat areas for this species.

In addition to disturbance from oil and gas development activities, there would be approximately 75 miles of geophysical activities occurring on an annual basis. This activity would create 75 acres of direct disturbance annually. Over the lifetime of this plan there would be approximately 1,500 acres of direct disturbance from this activity. However, the exact acreage would vary from year to year. All of this activity will occur outside the known population and/or habitat areas for this species.

**BLM Determination:** Based on the analysis, that this species' habitat is not found within the Planning Area, and the only known occurrence within Chaves and Eddy Counties are west of the Pecos River, which are outside of the Planning Area, the BLM has determined that implementation of the Preferred Alternative identified in the DEIS for Chaves, Eddy, Lea and Roosevelt Counties would result in a "No Affect" situation for the Kuenzler's hedgehog cactus.

Rationale:

- This species' habitat is not found within the Planning Area, and the only known occurrence within Chaves and Eddy Counties are west of the Pecos River, which are outside of the Planning Area.

**Cumulative Effects:** Because the proposed actions for Chaves, Eddy, Lea and Roosevelt Counties has a “No Affect” for the Kuenzler’s hedgehog cactus, there would be no increase in the existing or foreseeable future cumulative impacts within Chaves, Eddy, Lea and Roosevelt Counties for this species. The cumulative impacts presently existing (e.g., Federal, private, state activities) for this species would not change due to this action.

## **Pecos gambusia (*Gambusia nobilis*)**

### **Background**

**Status:** The Pecos gambusia, *Gambusia nobilis*, was federally listed as endangered on Oct. 13, 1970 (FWS 2004), and listed as endangered in 1975 by the State of New Mexico (19 NMAC 33.1).

**Description of the Species (FWS 2004):** (Pecos gambusia) is a small, livebearing member of the Poeciliidae. Poeciliids are characterized by strong sexual dimorphism. The anal fin of males is modified into a gonopodium, an intromittent organ used in copulation. Gonopodial structures distinguish *G. nobilis* from the other poeciliids (i.e., *Gambusia affinis* and *Gambusia geiseri*) known to occur within its native range. Spines of ray 3 elongated; hooks on rays 4p and 5a small and rounded; located near terminal end of gonopodium; elbow on ray 4a located opposite the serrae of 4p, composed of 3 or 4 fused segments. Color patterns are useful in making preliminary field identifications and morphometric characters, although environmentally plastic, aid in identification. In profile the back is arched; robust; caudal peduncle, depth approximately two thirds the head length. Margins of scale pockets are outlined in black. The dorsal fin has a subbasal row of spots. Females have a black area on the abdomen that surrounds the anus and anal fin. The caudal fin normally lacks spots but a faint median row may occur. The Pecos gambusia is metallic colored; best distinguished by the lack of extensive carotenoid (yellowish) pigmentation.

### **Distribution:**

**Range-Wide:** The Pecos gambusia is endemic to springs and spring systems of the Pecos River basin of southeastern New Mexico and western Texas (Hubbs and Springer, 1957). It apparently did not regularly inhabit the Pecos River itself (*ibid*). In Texas, the species historically inhabited Comanche Springs and the Leon Creek drainage (also referred to as Diamond Y Draw in some publications) and near Fort Stockton in a series of springs in the Toyah drainage near Balmorhea (Echelle and Echelle, 1980). In the Toyah Creek drainage, Pecos gambusia occur mainly in one gravity-flow spring (East Sandia) and in three artesian springs (Phantom, San Solomon, and Griffin) and their associated habitats. Generally, Pecos gambusias were common to abundant in spring habitats.

**New Mexico/Chaves, Eddy, Lea and Roosevelt Counties:** The springs and gypsum sinkholes on Bitter Lake National Wildlife Refuge (near Roswell) and Blue Spring and its outflow (near Whites City) apparently are the only areas of regular occurrence of Pecos gambusia in New Mexico (Bednarz, 1979; Echelle and Echelle, 1980). The largest population is at Blue Spring, where many thousands of these fish occur (Koster 1957). The state's other, much smaller population occupies a rather different habitat that being the limestone sinks and associated areas on Bitter Lake National Wildlife Refuge. In Blue Spring, Pecos gambusia were

common in headwaters and diminished in abundance in the spring run as it flowed to its confluence with Black River (Bednarz, 1979; Echelle and Echelle, 1980). Within ponded habitats and gypsum sink holes on Bitter Lake NWR and Blue Spring, New Mexico, the Pecos gambusia appears stable.

**Habitat:** The Pecos gambusia is most common in heads and runs of springs, where it uses such cover as aquatic vegetation for refuge (Bednarz 1975, 1979). The Pecos gambusia associates in loose schools that spend much of the time near the surface, typically near the edges of any body of water. The Pecos gambusia inhabits shallow areas of alkaline waters with aquatic vegetation for cover.

**Recent Consultations:** Fire and Fuels Management Plan Amendment and Environmental Assessment for Public Land in New Mexico and Texas (Potter County), July 2004 (Cons. #2-22-03-I-680). The BLM made a "No Affect" determination.

### **Effect Determination**

**Effects of the Proposed Action:** The known distribution of the Pecos gambusia in New Mexico is very limited, with the only known populations occurring in springs and gypsum sinkholes on the at Bitter Lakes Wildlife Refuge and at Blue Springs near White City (FWS 2004). Both of these locations are outside of the Planning Area boundary.

**BLM Determination:** Based on the analysis that this species does not occur and no habitat to support this species is found on BLM administered land within the Planning Area, the BLM has determined that implementation of the Preferred Alternative identified in the DEIS for Chaves, Eddy, Lea and Roosevelt Counties would result in a "No Affect" situation for the Pecos gambusia.

### **Rationale:**

- This species is found only within the Bitter Lakes Wildlife Refuge and at Blue Springs near White City, which are both outside the Planning Area boundary.
- No habitat exists on BLM administered land within the Planning Area to support this species.

**Cumulative Effects:** The Preferred Alternative is anticipated to result in an overall improvement of wildlife habitat conditions within the planning area. Because the proposed actions for Chaves, Eddy, Lea and Roosevelt Counties have a "No Affect" for the Pecos gambusia, there would be no increase in the existing or foreseeable future cumulative impacts within Chaves, Eddy, Lea and Roosevelt Counties for this species. The cumulative impacts presently existing (e.g., Federal, private, state activities) for this species would not change due to this action.

## **Sneed pincushion cactus (*Coryphantha sneedii* var *sneedii*)**

### **Background**

**Status:** Sneed pincushion cactus was listed as an endangered species on November 07, 1979 (FWS 2004).

**Description of the Species (FWS 2004):** In cultivation the pincushion is grown from seed and also readily propagated from offsets, and therefore readily available. It is tolerant of a wide range of conditions in cultivation. *Coryphantha sneedii* var. *sneedii* intergrades with *Coryphantha strobiliformis* in the Franklin Mountains, and its similarity to that species may cause some collectors to overlook it.

### **Distribution:**

**Range-Wide:** All known populations are located in Dona Ana and El Paso Counties, New Mexico and Texas, respectively (FWS, 2004).

**New Mexico:** Sneed pincushion cactus is known from the northern Chihuahuan Desert east of Las Cruces, New Mexico in Dona Ana County. It was discovered in 1921, and has been sought by collectors since that time, even though the plant can be propagated in cultivation (FWS 2004).

**Chaves, Eddy, Lea and Roosevelt Counties:** This species is not known to occur within Chaves, Eddy, Lea and Roosevelt Counties (FWS 2004).

**Habitat:** This plant species occupies rocky, limestone soils, steep slopes and broad alluvial fan communities.

**Recent Consultations:** Fire and Fuels Management Plan Amendment and Environmental Assessment for Public Land in New Mexico and Texas (Potter County), July 2004 (Cons. #2-22-03-I-680). The BLM made a "No Affect" determination.

### **Effect Determination**

**Effects of the Proposed Action:** This species is known only from east of Las Cruces, New Mexico in Dona Ana County, which is outside the Planning Area boundary. Because this species does not occur within the Planning Area, any proposed actions would have no effects on this species.

**BLM Determination:** Based on the analysis that this species does not occur within the Planning Area, the BLM has determined that implementation of the Preferred Alternative within the DEIS for Chaves, Eddy, Lea and Roosevelt Counties would result in a "No Affect" situation for the Sneed Pincushion Cactus.

### **Rationale:**

- This species does not occur within the Planning Area.

**Cumulative Effects:** Because the Preferred Alternative for Chaves, Eddy, Lea and Roosevelt Counties has a “No Affect” for the Sneed Pincushion Cactus there would be no increase in the existing or foreseeable future cumulative impacts within Chaves, Eddy, Lea and Roosevelt Counties for this species. The cumulative impacts presently existing (e.g., Federal, private, state activities) for this species would not change due to this action.

## **PROPOSED ENDANGERED SPECIES**

### **Koster’s springsnail (*Juturnia kosteri*) Proposed Critical Habitat**

#### **Background**

**Status:** The Koster’s springsnail was listed as “Proposed Endangered with Critical Habitat” in 2002 (FWS 2002).

**Description of the Species:** Koster's springsnail is a totally aquatic species that occurs in slow-velocity water in springs and streams (Taylor et al. 1985).

#### **Distribution:**

Range-Wide/New Mexico/Chaves, Eddy, Lea and Roosevelt Counties: Koster's spring snail is endemic to southeastern New Mexico (Taylor 1987). This species is known only from Chaves County, New Mexico with one population in a spring at the Roswell Country Club and four others on Bitter Lake National Wildlife Refuge (Taylor 1987). These areas are key habitat for the species in the state and overall (NMDGF, 2004).

The populations of this snail on the Bitter Lake National Wildlife Refuge are large and appear safe under present management practices (Taylor et al. 1985). The Roswell Country Club population is marginal, largely as the result of such management practices as landscaping, pesticide use, and ponding of the habitat.

**Habitat:** This species occupies mainly soft substrates, such as mud and organic debris. However, it occurs occasionally on pebbles and among vegetation at the Roswell Country Club.

**Recent Consultations:** Fire and Fuels Management Plan Amendment and Environmental Assessment for Public Land in New Mexico and Texas (Potter County), July 2004 (Cons. #2-22-03-I-680). The BLM made a “No Affect” determination.

#### **Effect Determination**

**Effects of the Proposed Action:** This species is known only from one population in a spring at the Roswell Country Club and four others on Bitter Lake National Wildlife Refuge, which are both outside of the Planning Area boundary. Because this species does not occur within the Planning Area, any proposed actions would have no effects on this species.

**BLM Determination:** Based on the analysis that this species is limited to the Roswell Country Club and the Bitter Lake National Wildlife Refuge, which are both outside the Planning Area boundary, the BLM has determined that implementation of the Preferred Alternative identified in the DEIS for Chaves, Eddy, Lea and Roosevelt Counties would result in a "No Affect" situation for the Koster's springsnail.

**Rationale:**

- This species does not occur within the Planning Area. Known distribution of the Koster's springsnail in New Mexico occurs within the Roswell Country Club and the Bitter Lake National Wildlife Refuge.

**Cumulative Effects:** Because the Preferred Alternative for Chaves, Eddy, Lea and Roosevelt Counties has a "No Affect" for the Koster's springsnail, there would be no increase in the existing or foreseeable future cumulative impacts within Chaves, Eddy, Lea and Roosevelt Counties for this species. The cumulative impacts presently existing (e.g., Federal, private, state activities) for this species would not change due to this action.

### **Pecos *assiminea* snail (*Assiminea pecos*) Proposed Critical Habitat**

#### **Background**

**Status:** The Pecos *assiminea* snail was listed as "Proposed Endangered with Critical Habitat" in 2002 (FWS 2002).

**Description of the Species:** Assimineas are essentially terrestrial snails, living on moist substrates within a few cm of the water surface.

#### **Distribution:**

Range-Wide: The Pecos *assiminea* is known only from the Pecos Basin of southeastern New Mexico and adjacent western Texas (Taylor 1987). The disjunctive population in Texas occurs in Diamond Y Draw, (Pecos Co.).

New Mexico/Chaves, Eddy, Lea and Roosevelt Counties: In New Mexico, this species is now confined to an area along the Lost River in the Bitter Lake National Wildlife Refuge. This is the key habitat area for the species in the state and one of two for it overall. A population formerly occurred at the Roswell County Club, but it has been extirpated as the result of habitat loss or alteration, including destruction of vegetation and possibly the use of chemicals (NMDGF, 1988).

**Habitat:** They select a humid microclimate, such as within mats of sedges or beneath other vegetation along muddy shores next to flowing water. They feed, presumably, on bacteria, fungi, algae, and associated items.

**Recent Consultations:** Fire and Fuels Management Plan Amendment and Environmental Assessment for Public Land in New Mexico and Texas (Potter County), July 2004 (Cons. #2-22-03-I-680). The BLM made a "No Affect" determination.

## **Effect Determination**

**Effects of the Proposed Action:** This species is confined to the Bitter Lake National Wildlife Refuge, which is outside of the Planning Area boundary. It formerly occurred at the Roswell Country Club, but has been extirpated. Because this species does not occur within the Planning Area, any proposed actions would have no effects on this species.

**BLM Determination:** Based on the analysis that this species is limited to the Bitter Lake National Wildlife Refuge which is outside the Planning Area, the BLM has determined that implementation of the Preferred Alternative identified in the DEIS for Chaves, Eddy, Lea and Roosevelt Counties would result in a "No Affect" situation for the Pesos *assimine* snail.

### **Rationale:**

- This species does not occur within the Planning Area. Known distribution of the Pesos *assimine* snail in New Mexico is limited to the Bitter Lake National Wildlife Refuge.

**Cumulative Effects:** Because the Preferred Alternative for Chaves, Eddy, Lea and Roosevelt Counties has a "No Affect" for the Pesos *assimine* snail, there would be no increase in the existing or foreseeable future cumulative impacts within Chaves, Eddy, Lea and Roosevelt Counties for this species. The cumulative impacts presently existing (e.g., Federal, private, state activities) for this species would not change due to this action.

## **Roswell pyrg (*Pyrgulopsis roswellensis*) Proposed Critical Habitat**

### **Background**

**Status:** The Roswell pyrg was listed as "Proposed Endangered with Critical Habitat" in 2002 (FWS 2002).

**Description of the Species:** The Roswell pyrg is an aquatic, gilled species (Taylor et al. 1985). These animals feed on algae and organic detritus (*ibid*).

### **Distribution:**

Range-Wide/New Mexico/Chaves, Eddy, Lea and Roosevelt Counties: The Roswell pyrg is endemic to southeastern New Mexico (Taylor 1987). This snail occurs only in a spring at the Roswell Country Club and in three springs/seepage areas on the Bitter Lake National Wildlife Refuge (*ibid*).

**Habitat:** It is most common on limestone rubble in swift water emitting from springs. However, the species can survive in tiny seepage areas, as long as flows are perennial. Densities in this species are related to current velocity, the numbers of snails diminish as the current slows.

**Recent Consultations:** Fire and Fuels Management Plan Amendment and Environmental Assessment for Public Land in New Mexico and Texas (Potter County), July 2004 (Cons. #2-22-03-I-680). The BLM made a "No Affect" determination.

## **Effect Determination**

**Effects of the Proposed Action:** This species is known only from a spring at the Roswell Country Club and three others on Bitter Lake National Wildlife Refuge, which are both outside of the Planning Area boundary. Because this species does not occur within the Planning Area, any proposed actions would have no effects on this species.

**BLM Determination:** Based on the analysis that this species is limited to the Roswell Country Club and the Bitter Lake National Wildlife Refuge, which are both outside the Planning Area boundary, the BLM has determined that implementation of the Preferred Alternative identified in the DEIS for Chaves, Eddy, Lea and Roosevelt Counties would result in a "No Affect" situation for the Roswell pyrg.

### **Rationale:**

- This species does not occur within the Planning Area. Known distribution of the Roswell pyrg in New Mexico is limited to the Roswell Country Club and the Bitter Lake National Wildlife Refuge.

**Cumulative Effects:** Because the Preferred Alternative for Chaves, Eddy, Lea and Roosevelt Counties has a "No Affect" for the Roswell pyrg, there would be no increase in the existing or foreseeable future cumulative impacts within Chaves, Eddy, Lea and Roosevelt Counties for this species. The cumulative impacts presently existing (e.g., Federal, private, state activities) for this species would not change due to this action.

## **Noel's amphipod (*Gammarus desperatus*) Proposed Critical Habitat**

### **Background**

**Status:** The Noel's amphipod was listed as "Proposed Endangered with Critical Habitat" in 2002 (FWS 2002).

**Description of the Species:** Amphipods as a group are mainly active during darkness, spending the daylight hours hiding in vegetation and other cover (FWS 2004). Freshwater amphipods usually occupy cool, unpolluted waters with an abundance of oxygen (*ibid*).

### **Distribution:**

Range-Wide/New Mexico/Chaves, Eddy, Lea and Roosevelt Counties: Noel's amphipod is endemic to southeastern New Mexico (FWS 2004). The "Historic range" of Noel's amphipod includes areas of New Mexico, but has not been found beyond the state's borders (*ibid*). This species was described from North Spring on the Roswell Country Club (population not found in 1988), and similar animals have been found at nearby Lander Springbrook (population now extinct) and recently at Lost River on Bitter Lake National Wildlife Refuge (*ibid*). Amphipods taken near Carlsbad may also be referable to *G. desperatus*, but their taxonomic relationships have not yet been resolved (*ibid*).

**Habitat:** The habitat of Noel's amphipod consists of springs in areas derived from Permian marine sediments (FWS 2004). They are omnivorous in diet, feeding especially on algae and organic debris that includes carrion (*ibid*).

**Recent Consultations:** Fire and Fuels Management Plan Amendment and Environmental Assessment for Public Land in New Mexico and Texas (Potter County), July 2004 (Cons. #2-22-03-I-680). The BLM made a “No Affect” determination.

### **Effect Determination**

**Effects of the Proposed Action:** This species is now known only from the Bitter Lake National Wildlife Refuge and potentially the Roswell Country Club, which are both outside of the Planning Area boundary. Because this species does not occur within the Planning Area, any proposed actions would have no effects on this species.

**BLM Determination:** Based on the analysis that this species is limited to the Bitter Lake National Wildlife Refuge and potentially the Roswell Country Club, which are both outside the Planning Area boundary, the BLM has determined that implementation of the Preferred Alternative identified in the DEIS for Chaves, Eddy, Lea and Roosevelt Counties would result in a “No Affect” situation for the Noel's amphipod.

### **Rationale:**

- This species does not occur within the Planning Area. Known distribution of the Noel's amphipod in New Mexico is limited to the Bitter Lake National Wildlife Refuge and potentially the Roswell Country Club.

**Cumulative Effects:** Because the Preferred Alternative for Chaves, Eddy, Lea and Roosevelt Counties has a “No Affect” for the Noel's amphipod there would be no increase in the existing or foreseeable future cumulative impacts within Chaves, Eddy, Lea and Roosevelt Counties for this species. The cumulative impacts presently existing (e.g., Federal, private, state activities) for this species would not change due to this action.

## **THREATENED SPECIES**

### **BALD EAGLE (*Haliaeetus leucocephalus*)**

#### **Background**

**Status:** In July 1994, the U.S. Fish and Wildlife Service proposed to reclassify the bald eagle from endangered to threatened in the lower 48 states, including the southwestern region and Mexico. The bald eagle was re-classified on August 11, 1995 (FWS 2004). This species is also listed as threatened by the New Mexico Department of Game & Fish (*ibid*).

The bald eagle population is in an upward trend throughout the United States, where breeding pairs have increased from 417 in 1963 to 5,750 in 1998 (NMDGF 2000). The largest populations are found in Alaska and Canada, as well as significant populations in Washington, Oregon, Minnesota, Wisconsin, and Michigan (FWS 2004).

**Description of the Species:** The bald eagle is a large hawk-like bird that is 3 feet long and has a wingspan of 6-7 feet (FWS 2004). Adults have a white head, neck and tail, a curved yellow beak and un-feathered feet (*ibid*).

**Distribution:**

Range-Wide: Bald eagles ranged throughout the contiguous United States, Canada, and northern Mexico (FWS 2004). Historically this species was not very abundant in the southwestern United States (*ibid*).

New Mexico: This species occupies New Mexico primarily as a migrant and winter resident (FWS 2004).

Chaves, Eddy, Lea and Roosevelt Counties: Bald eagles are known to nest at only one site in Southern New Mexico, Caballo Reservoir in Sierra County (BLM 1996). No known nesting has been documented within Chaves, Eddy, Lea or Roosevelt Counties.

**Habitat:** Bald eagles are generally associated with medium to large perennial streams, rivers and other water bodies that provide an adequate prey base and appropriate nesting/roosting habitat. Outside of the major river corridors (e.g., Rio Grande, Pecos), the bald eagle has been observed to be a migrant only, due to the lack of appropriate habitats.

**Recent Consultations:** #1 - Within Sierra and Otero Counties (Federal Fluid Minerals Leasing and Development) in 2003 (Cons. #2-22-99-I-109A). The BLM made a "May Affect – Not Likely to Adversely Affect" determination and received concurrence from the U.S. Fish and Wildlife Service. #2. – Fire and Fuels Management Plan Amendment and Environmental Assessment for Public Land in New Mexico and Texas (Potter County), July 2004 (Cons. #2-22-03-I-680). The BLM made a "May Affect – Not Likely to Adversely Affect" determination and received concurrence from the U.S. Fish and Wildlife Service.

**Effect Determination**

**Effects of the Proposed Action:** Very limited habitat exists on BLM administered land within Chaves, Eddy, Lea and Roosevelt Counties that could support the bald eagle. The Pecos River and associated Brantley Reservoir are the only large riverine habitats within these counties and they are both outside the Planning Area boundary. Because no habitats (e.g., large riverine/lake systems) occur within the Planning Area boundary, any proposed actions would have no effects on this species.

Except for migration, there are no known uses of Chaves, Eddy, Lea and Roosevelt Counties by this species.

**BLM Determination:** Based on the analysis that no habitat occurs within the Planning Area to support this species, the BLM has determined that implementation of the Preferred Alternative identified in the DEIS for Chaves, Eddy, Lea and Roosevelt Counties would result in a "No Affect" situation for the bald eagle.

**Rationale:**

- Known distribution of the Bald Eagle in New Mexico is very limited, and the only known nesting in Southern New Mexico occurs at Caballo Reservoir in Sierra County. This bird would be considered only an accidental migrant within Chaves, Eddy, Lea and Roosevelt Counties.

- No habitat (e.g., riverine/lakes) have been identified on BLM administered land within the Planning Area boundary that would support the bald eagle.

**Cumulative Effects:** The Preferred Alternative is anticipated to result in an overall improvement of wildlife habitat conditions within the planning area. Because the proposed actions for Chaves, Eddy, Lea and Roosevelt Counties has a “No Affect” for the Bald Eagle, there would be no increase in the existing or foreseeable future cumulative impacts within Chaves, Eddy, Lea and Roosevelt Counties for this species. The cumulative impacts presently existing (e.g., Federal, private, state activities) for this species would not change due to this action.

## **MEXICAN SPOTTED OWL (*Strix occidentalis lucida*)**

### **Background**

**Status:** The Mexican spotted owl was listed as threatened on March 16, 1993 (FWS 1993). This species is currently not listed by the New Mexico Department of Game & Fish (*ibid*). No critical habitat has been designated by the FWS on any BLM administered land within the Planning Area.

**Description of the Species:** The Mexican spotted owl is a medium-sized owl with large dark eyes and no ear tufts that closely resembles the barred owl (FWS 1993). Plumage is brown with numerous white spots (*ibid*). The length is about 17 inches and wingspan is 3.3 feet (*ibid*).

### **Distribution:**

**Range-Wide:** The range for the Mexican spotted owl extended from the southern Rocky Mountains in Colorado and the Colorado Plateau in southern Utah southward through Arizona and New Mexico, and far western Texas, through the Sierra Madre Occidental and Oriental, to the mountains at the southern end of the Mexican Plateau (FWS 1993).

**New Mexico:** In New Mexico, the owl has been recorded in all montane regions from the San Juan, Jemez, and Sangre de Cristo Mountains in the north, to the Guadalupe and Animas Mountains in the south. The largest concentration occurs in the Mogollon and Sacramento Mountains. Other records exist for Navajo Lake, Mountainair, lower San Francisco Valley, Estancia, Grants, Hurley, Burro Mountains, Carlsbad Caverns National Park, and San Andres National Wildlife Refuge (FWS 1993).

**Chaves, Eddy, Lea and Roosevelt Counties:** This species is only known to occur within the Guadalupe Mountains (Forest Service) and Carlsbad Caverns National Park (FWS 1993).

**Habitat:** The Mexican spotted owl occupies mountainous areas, with its preferred habitat consisting of dense, multi-storied forests with moderately closed to closed canopies. In addition, these owls have been found in canyon systems with little or no tree cover and appear to provide the same or similar microclimate as dense multi-storied forests (FWS 1993).

**Recent Consultations:** #1 - Within Sierra and Otero Counties (Federal Fluid Minerals Leasing and Development) in 2003 (Cons. #2-22-99-I-109A). The BLM made a “No Affect” determination. #2. – Fire and Fuels Management Plan Amendment and Environmental Assessment for Public Land in New Mexico and Texas (Potter County), July 2004 (Cons. #2-22-03-I-680). The BLM made a “May Affect – Not Likely to Adversely Affect” determination and received concurrence from the U.S. Fish and Wildlife Service.

### **Effect Determination**

**Effects of the Proposed Action:** No suitable or potential forest/canyon habitats to support Mexican spotted owls have been identified on BLM administered land within the Planning Area. The woodland habitats within the planning area are comprised mainly of piñon-juniper stands, with a few scattered ponderosa pine trees. Based on the fact no habitat to support this species exists within the Planning Area boundary, there would be no effects from any proposed action on the Mexican spotted owl.

### **Conservation Measures/Stipulations to Minimize or Eliminate Effects:**

- No proposed actions will occur within any forest/canyon habitats that may be identified in the future that could support Mexican spotted owls.

**BLM Determination:** Based on the analysis that no habitat to support this species is found within the Planning Area boundary, and if any habitat were identified in the future it would be protected, the BLM has determined that implementation of the Preferred Alternative identified in the DEIS for Chaves, Eddy, Lea and Roosevelt Counties would result in a “No Affect” situation for the Mexican spotted owl.

### **Rationale:**

- No habitat (e.g., forest/canyon) exists on BLM administered land to support this species within the Planning Area boundary. The woodland habitat within the Planning Area is comprised of piñon-juniper stands, with a few scattered ponderosa pine trees.
- No proposed actions will occur within any forest/canyon habitats that may be identified in the future that could support Mexican spotted owls.

**Cumulative Effects:** The Preferred Alternative is anticipated to result in an overall improvement of wildlife habitat conditions within the planning area. Because the proposed actions for Chaves, Eddy, Lea and Roosevelt Counties has a “No Affect” for the Mexican Spotted Owl, there would be no increase in the existing or foreseeable future cumulative impacts within Chaves, Eddy, Lea and Roosevelt Counties for this species. The cumulative impacts presently existing (e.g., Federal, private, state activities) for this species would not change due to this action.

## **Pecos bluntnose shiner (*Notropis simus pecosensis*)**

### **Background**

**Status:** The Pecos bluntnose shiner was listed by the State of New Mexico as threatened (19 NMAC 33.1) in 1976 (FWS, 1987). The species is listed as endangered in Texas (TPWD 1993) and the Republic of Mexico (Mex. Ministry of Soc. Dev. 1991). Abundance of the Pecos bluntnose shiner has declined considerably in the past 50 years (NMDGF 2004).

**Description of the Species:** The bluntnose shiner is a relatively small, moderately deep-bodied minnow, rarely exceeding 80 mm. The Pecos bluntnose shiner is a pelagic broadcast spawner; females release their non-adhesive, semi-buoyant eggs in the water column and males immediately fertilize them (NMDGF 2004). After fertilization, the eggs drift with the current. Development of eggs is rapid and larvae hatch in 24 to 48 hrs (*ibid*).

### **Distribution:**

**Range-Wide/New Mexico:** The bluntnose shiner is endemic to the Rio Grande and Pecos Rivers in New Mexico and the El Paso/Cuidad Juarez area of Texas and Chihuahua (Gilbert 1980; Chernoff et al. 1982). Records attributed to this species from downstream reaches of the Rio Grande in Texas (Gilbert 1980) are actually of a similar species, the now extinct phantom shiner (Chernoff, et al. 1982).

**Chaves, Eddy, Lea and Roosevelt Counties:** Pecos bluntnose shiner historically occupied the Pecos River from near Santa Rosa downstream to the vicinity of Major Johnson Springs (now inundated by Brantley Reservoir) (Hatch et al. 1985). Currently, this shiner is found only in the Pecos River from about the U.S. 60 Highway Bridge near Fort Sumner downstream to Artesia, and seasonally within the inflow area of Brantley Reservoir.

Within the Carlsbad Field Office, designated critical habitat occurs from the Chaves/Eddy county line to Highway 82 running east Artesia, NM.

**Habitat:** Hatch et al. (1985) reported that Pecos bluntnose shiner may live three years, but most individuals probably survive less than two years. Most growth occurs in the first year of life. At least two or three age-classes normally are found in the Pecos River between Old Fort State Park and Roswell whereas the population between Roswell and Brantley Reservoir typically is composed of Age-0 or -1 fish. Maturity is attained by Age 1. Hatch et al. (1985) reported an Age-2 female with >1000 maturing and mature eggs, but most of each year's reproductive effort is by Age-1 individuals that produce fewer eggs (<500)/female).

**Recent Consultations:** Fire and Fuels Management Plan Amendment and Environmental Assessment for Public Land in New Mexico and Texas (Potter County), July 2004 (Cons. #2-22-03-I-680). The BLM made a "May Affect – Not Likely to Adversely Affect" determination and received concurrence from the U.S. Fish and Wildlife Service.

### **Effect Determination**

**Effects of the Proposed Action:** The Pecos River and associated Brantley Reservoir are the only areas this species is known to inhabit, which are both outside the Planning Area boundary. Based on the fact that this species does not occur within the Planning Area, there would be no effects from any proposed action on the Pecos bluntnose shiner.

**BLM Determination:** Based on the analysis that this species does not occur within Planning Area, the BLM has determined that implementation of the Preferred Alternative identified in the DEIS for Chaves, Eddy, Lea and Roosevelt Counties would result in a "No Affect" situation for the Bluntnose Shiner.

**Rationale:**

- This species does not occur within the Planning Area. Bluntnose shiner habitat is found only along the Pecos River and the inflow at Brantley Reservoir.

**Cumulative Effects:** The Preferred Alternative is anticipated to result in an overall improvement of wildlife habitat conditions within the planning area. Because the proposed actions for Chaves, Eddy, Lea and Roosevelt Counties has a "No Affect" for the Bluntnose shiner, there would be no increase in the existing or foreseeable future cumulative impacts within Chaves, Eddy, Lea and Roosevelt Counties for this species. The cumulative impacts presently existing (e.g., Federal, private, state activities) for this species would not change due to this action.

**Pecos sunflower (*Helianthus paradoxus*)**

**Background**

**Status:** This plant was listed as threatened on October 20, 1999 (FWS 2004).

**Description of the Species:** The Pecos sunflower differs from the common sunflower (*H. annuus*) in having narrower, lanceolate leaves (vs. deltoid leaves), fewer hairs on the leaves, nearly glabrous stems, lanceolate phyllaries (vs. deltoid phyllaries), slightly smaller flower heads with fewer ray flowers, and flowering confined to autumn (September, October) as compared to the spring through fall flowering of the common sunflower. The habitat of Pecos sunflower is also different from that of the common sunflower. Pecos sunflower grows in saturated, saline soils of marshes while the common sunflower usually occurs in disturbed soils that are dry during mid-summer. Pecos sunflower is the only sunflower in the Southwest United States that requires permanent wetlands for its survival.

**Distribution:**

Range-Wide/New Mexico: This species is found at widely separated locations in central and southern New Mexico and into Texas. It may once have been more common but suitable habitat within the range is declining. Texas has only one extant population. A couple of the New Mexico populations are large, but others are very small and non-viable. Species is very vulnerable to changes in natural hydrologic regimes. In New Mexico the population at the Bitter Lake National Wildlife Refuge is the most secure. The impoundments and springs at the wildlife refuge are relatively stable and it is not anticipated that they will be seriously altered. The other significant New Mexico population is near the town of Santa Rosa in the upper Pecos River basin. This largest and best population of Pecos sunflower is on private land that the owner would prefer to drain rather than conserve.

Chaves, Eddy, Lea and Roosevelt Counties: There only known population in Southern New Mexico is found at the Bitter Lake National Wildlife Refuge (Chaves County) which is outside the Planning Area boundary. There are no known populations of this species within Eddy, Lea or Roosevelt Counties or the remainder of Chaves County.

**Habitat:** Pecos sunflowers grow in saline soils that are permanently saturated. Areas that maintain these conditions are commonly called cienegas (desert wetlands) associated with springs. However the required conditions may be also be found at stream margins and at the margins of impoundments. Where plants are associated with the latter the impoundments have replaced the natural cienegas.

**Recent Consultations:** Fire and Fuels Management Plan Amendment and Environmental Assessment for Public Land in New Mexico and Texas (Potter County), July 2004 (Cons. #2-22-03-I-680). The BLM made a “May Affect – Not Likely to Adversely Affect” determination and received concurrence from the U.S. Fish and Wildlife Service.

### **Effect Determination**

**Effects of the Proposed Action:** This species is not known to occur within Chaves, Eddy , Lea or Roosevelt Counties except at the Bitter Lake National Wildlife Refuge which is outside the Planning Area boundary. No riparian/cienegas habitat exists within the Planning Area boundary necessary to support this species. Based on the fact that this species does not occur within the Planning Area, and no habitat has been identified to support this species there would be no effects from any proposed action on the Pecos sunflower.

**BLM Determination:** Based on the facts that this species is not known to occur and no habitat (e.g., riparian/cienegas) exists within the Planning Area necessary to support this species, the BLM has determined that implementation of the Preferred Alternative identified in the DEIS for Chaves, Eddy, Lea and Roosevelt Counties would result in a "No Affect" situation for the Pecos Sunflower.

### **Rationale:**

- This species is not known to occur within Chaves, Eddy, Lea or Roosevelt Counties except at the Bitter Lake National Wildlife Refuge which is outside the Planning Area boundary.
- No riparian/cienegas habitat exists within the Planning Area boundary necessary to support this species

**Cumulative Effects:** The Preferred Alternative is anticipated to result in an overall improvement of wildlife habitat conditions within the planning area. Because the Preferred Alternative for Chaves, Eddy, Lea and Roosevelt Counties has a “No Affect” for the Pecos Sunflower, there would be no increase in the existing or foreseeable future cumulative impacts within Chaves, Eddy, Lea and Roosevelt Counties for this species. The cumulative impacts presently existing (e.g., Federal, private, state activities) for this species would not change due to this action.

## **Gypsum wild-buckwheat (*Eriogonum gypsophilum*) Critical Habitat**

### **Background**

**Status:** On January 19, 1981, the Gypsum wild-buckwheat was designated as Threatened with critical habitat (FWS 2004).

**Description of the Species:** This member of the knotweed family is a small, erect, herbaceous perennial, which measures about 1.2-2 dm (8 inches) high, is restricted to gypsum soils. It is a perennial herb with a branching flower stalk arising from a cluster of basal leaves (FWS 2004).

### **Distribution:**

Range-Wide/New Mexico/Chaves, Eddy, Lea and Roosevelt Counties: This plant's entire range (15 populations at 3 general localities) is limited to a 0.2 square mile (130 acres) area in the Seven Rivers' Hills of Eddy County at elevations from 3,290 to 3,450 feet (FWS 2004). The area occupied by Gypsum wild-buckwheat is public land managed by the Bureau of Land Management and the Water and Power Resources Service. The Critical Habitat is located on land administered entirely by the Bureau of Land Management. Gypsum wild-buckwheat was first collected in 1908 southwest of Lakewood, New Mexico (Wooten and Standley, 1913).

**Habitat:** Gypsum wild-buckwheat is restricted to almost open, pure gypsum in grama grassland that is sparsely vegetated with other gypsophilous plants such as *Coldenia hispidissima*, *Mentzelia humilis*, and *Anulocaulis leiosolenus* at about 1,000-1,100 m (3,280-3,600 ft).

**Recent Consultations:** Fire and Fuels Management Plan Amendment and Environmental Assessment for Public Land in New Mexico and Texas (Potter County), July 2004 (Cons. #2-22-03-I-680). The BLM made a "No Affect" determination.

### **Effect Determination**

**Effects of the Proposed Action:** This species known distribution is limited to the Seven Rivers' Hills, which are outside the Planning Area boundary. Because this species does not occur within the Planning Area, any proposed actions would have no effects on this species.

**BLM Determination:** Based on the analysis that this species is limited to the Seven Rivers' Hills of Eddy County which is outside the Planning Area boundary, the BLM has determined that implementation of the Preferred Alternative identified in the DEIS for Chaves, Eddy, Lea and Roosevelt Counties would result in a "No Affect" situation for the Gypsum wild-buckwheat.

### **Rationale:**

- This species does not occur within the Planning Area. Known distribution of the Gypsum wild-buckwheat in New Mexico is limited to the Seven Rivers' Hills area.

**Cumulative Effects:** Because the Preferred Alternative for Chaves, Eddy, Lea and Roosevelt Counties has a "No Affect" for the Gypsum wild-buckwheat, there would be no increase in the existing or foreseeable future cumulative impacts within Chaves, Eddy, Lea and Roosevelt Counties for this species. The cumulative impacts presently existing (e.g., Federal, private, state activities) for this species would not change due to this action.

## Lee pincushion cactus (*Coryphantha sneedii* var *leei*)

### **Background**

**Status:** Lee pincushion cactus was first listed as a threatened species on October 25, 1979.

### **Distribution:**

Range-Wide/New Mexico/Chaves, Eddy, Lea and Roosevelt Counties: This cactus is known from 10 populations in Carlsbad Caverns National Park, New Mexico. In 1982 and 1983, BLM biologists conducted extensive field surveys, but did not discover any new populations outside the park boundary. However, in 1998 the New Mexico Natural Heritage Program conducted surveys north of Carlsbad Caverns National Park and found a single specimen, and in 1999, continued their survey efforts and found approximately 75 additional plants.

**Habitat:** This species generally occurs on north facing slopes in limestone hills at elevations ranging from 4,100-5,900. They grow in shallow soils on stair-step limestone cracks and shelves of broken terrain and steep slopes, in Carlsbad Caverns National Park. Vegetation ranges from short grassland brush to Pinion-Juniper. Similar habitat occurs on BLM lands surrounding the park.

**Recent Consultations:** Fire and Fuels Management Plan Amendment and Environmental Assessment for Public Land in New Mexico and Texas (Potter County), July 2004 (Cons. #2-22-03-I-680). The BLM made a "May Affect – Not Likely to Adversely Affect" determination and received concurrence from the U.S. Fish and Wildlife Service.

### **Effect Determination**

**Effects of the Proposed Action:** This species known distribution is limited to the Carlsbad Caverns National Park and vicinity which is outside the Planning Area boundary. Because this species does not occur within the Planning Area, any proposed actions would have no effects on this species.

**BLM Determination:** Based on the analysis that this species does not occur within the Planning Area, the BLM has determined that implementation of the Preferred Alternative identified in the DEIS for Chaves, Eddy, Lea and Roosevelt Counties would result in a "No Affect" situation for the Lee Pincushion Cactus.

### **Rationale:**

- This species does not occur within the Planning Area. The known distribution of Lee's Pincushion Cactus is within Carlsbad Caverns National Park and its immediate vicinity.

**Cumulative Effects:** Because the Preferred Alternative for Chaves, Eddy, Lea and Roosevelt Counties has a "No Affect" for the Lee Pincushion Cactus, there would be no increase in the existing or foreseeable future cumulative impacts within Chaves, Eddy, Lea and Roosevelt Counties for this species. The cumulative impacts presently existing (e.g., Federal, private, state activities) for this species would not change due to this action.

## CANDIDATE SPECIES

### **Lesser prairie chicken (*Tympanuchus pallidicinctus*)**

#### **Background**

**Status:** For the lesser prairie chicken the earliest systematic survey in Texas was conducted in 1940. At that time, the range of the lesser prairie-chicken encompassed portions of 20 counties. In addition to those counties, researchers reported that museum specimens existed for five additional counties, although there is uncertainty whether two of the five specimens were actually Greater Prairie-chicken and Attwater's prairie-chicken. Researchers considered the occupied range at that time to be a reduction from the historical range. In 1989, Texas Parks and Wildlife Department (TPWD) produced an occupied range map that encompassed portions of 13 counties, with an estimate range of 5,732 square kilometers (2213 square miles); a net loss of 7,931 square kilometers (3,062 square miles) since 1940. In 2001, TPWD reported that the estimated occupied range is unchanged from the 1989 estimate. Recognizing the severity of the threats to the lesser prairie chicken, the U.S. Fish and Wildlife Service determined that listing was warranted but precluded making it a candidate for listing with the highest priority for action a species can receive.

**Description of the Species:** Bailey (1928) describes the lesser prairie chicken as follows; "Male: wing 8.2-8.3 inches, tail 4-4.2. Female: wing 8-8.2 inches, tail 3.5-4. The legs are scantily feathered to toe, in front and on sides; sides of neck with erectile tufts of elongated feathers, 2.5 inches or more in length. Adult male: Head with a slight soft crest, neck with inflatable air-sacs, yellow on breeding season; upper-parts pale brownish, black barred in sets of threes, a wide brown bar enclosed by two narrow dusky bars, similarly barred. Adult female: Similar but neck tufts rudimentary. Young: under-parts yellowish-brown, feathers with conspicuous white shaft streaks and large black blotches; under-parts yellowish-white, with grayish brown bars."

#### **Distribution:**

**Range-Wide:** In Texas the lesser prairie-chicken is regarded as an upland game bird with a legal harvest season (requiring a special permit) for a limited number of days in October (TPWD 1993). In 2000, TPWD estimated that based on mail-in responses of 248 permitted hunters, approximately 244 lesser prairie-chickens were harvested, while 49 birds were shot but not recovered. No recent estimates of population size are published. Spring lek surveys in the Permian Basin and western panhandle of Texas indicate slight increases in the density of males per lek from 5.9 in 2000 to 6.6 in 2001. However, the long-term trend of lesser prairie-chicken populations in this region continues downward, and no information was provided regarding the number of leks surveyed or density of leks over a given area. In the northeastern panhandle of Texas, males per lek declined from 12.0 in 2000 to 10.5 in 2001, a decrease of 14 percent.

**New Mexico:** In New Mexico, in the 1920s and 1930s, the former range of the lesser prairie-chicken was described as all of the sandhill rangeland of eastern New Mexico, from Texas to Colorado, and west to Buchanan in De Baca County. Ligon (1927) mapped the breeding range at that time as encompassing portions of seven counties, a small subset of what he described as former range. In the 1950s and 1960s, occupied range was more extensive, indicating reoccupation of some areas. Presently, the New Mexico Department of Game and Fish reports that lesser prairie-chicken are known in portions of seven counties, and that they

have apparently been extirpated from 3,346 square kilometers (1,292 square miles) of its original 22,390 square kilometer (8,645 square mile) range. In New Mexico the lesser prairie-chicken is an upland game bird, although the hunting season has been closed since 1996. Estimates of occupied range in New Mexico over the last century suggest a pattern of decline and increase, including reoccupation of former range. In the 1950s, the population was estimated at 40,000 to 50,000, and by 1972, at 6,000 to 10,000 individuals. No recent estimates of population size are available. However, survey data from 1971 through 1997 analyzed by the New Mexico Natural Heritage show a clear and substantial population decline after 1988, particularly in the southern periphery of their range.

Chaves, Eddy, Lea and Roosevelt Counties: For all intents and purposes, lesser prairie-chicken populations south of highway 380 (Eddy and Lea County) in New Mexico on Bureau of Land Management properties and surrounding areas are very near extirpation. Intensive spring 2001 lek surveys on the Carlsbad BLM Field Office detected only one remaining active lek populated by two males. Recent surveys have found small, scattered groups of birds near areas of historic lek sites.

**Habitat:** In southeastern New Mexico, lesser prairie chickens exist in the shrub-dominated High Plains Bluestem Subtype by using mixed stands of tall grass and shinnery oak (Riley et al. 1992). The climax vegetation in these areas was probably dominated by mid and tall grasses, including sand bluestem, big bluestem (*A. gerardi*), little bluestem, yellow Indiangrass (*Sorghastrum nutans*), prairie sandreed (*Calamovilfa longifolia*), and grama grasses, with smaller amounts of yucca (*Yucca* spp.), Harvard oak, sand sagebrush, mesquite (*Prosopis* spp.), and fragrant sumac (*Rhus aromatica*) (Morrissey, 1995). Lesser prairie chickens in shinnery oak eat mostly plant material except in summer, when insects, mainly grasshoppers predominate. An absence of acorns in the diet probably relates less to preference and more to the variability of shin-oak acorn production. Autumn diets primarily consisted of shinnery oak acorns, short-horned grasshoppers (Acrididae), broom groundsel (*Senecio spartioides*) leaves, and insect galls from shinnery oak. Foods consumed in the winter primarily consisted of shinnery oak acorns with lesser amounts of green vegetation and insect (Riley et al. 1996). Grasshoppers constitute by far the largest item in the animal diet. Beetles, bugs, and caterpillars comprise, for the most part, the balance.

**Recent Consultations:** Fire and Fuels Management Plan Amendment and Environmental Assessment for Public Land in New Mexico and Texas (Potter County), July 2004 (Cons. #2-22-03-I-680). The BLM made a "May Affect – Not Likely to Adversely Affect" determination and received concurrence from the U.S. Fish and Wildlife Service.

### **Effect Determination**

**Effects of the Proposed Action:** The Preferred Alternative is anticipated to result in an overall improvement of wildlife habitat conditions for the lesser prairie chicken within the planning area.

Core Management Area (CMA) - The CMA would be expanded to include the existing Mescalero Sands ACEC as one contiguous block. The CMA would be closed to new oil and gas leasing. Under certain limited exceptions, new oil and gas leasing may occur on a case-by-case basis; i.e., for pooling or drainage protection that does not impact suitable habitat. Within the CMA, no new mineral material sites will be authorized.

For existing leases, Plans of Development (PODs) and appropriate Conditions of Approval (COAs) would be required to ensure orderly development with a minimum of surface impact in lesser prairie-chicken habitat. Included in PODs and COAs would be specifications for various strategies for minimizing impacts associated with new development and for reclaiming developed areas.

Primary Population Area (PPA) - Areas designated as occupied, suitable, potentially suitable and unsuitable habitat within the PPA are shown on Map B-5 in the DEIS.

Occupied and suitable lesser prairie-chicken habitat in the PPA would be closed to new oil and gas leasing. However, certain exceptions would be considered on a limited, case-by-case basis when indicated due to presence of existing infrastructure, or as needed for pooling or drainage protection purposes; and if leasing and subsequent development would not impact habitat. In these cases, a no surface occupancy (NSO) stipulation would be applied to the lease. Within the PPA, no new mineral material sites will be authorized in occupied or suitable prairie-chicken habitat.

Areas designated as potentially suitable lesser prairie-chicken habitat would be available for new oil and gas leasing. If leasing and development in these areas would impact suitable habitat, then areas designated as potentially suitable habitat would be closed to new oil and gas leasing. Areas of potentially suitable habitat where lands can be used to "block up" larger surrounding areas of suitable habitat would also be closed to new leasing.

New oil and gas leasing would be allowed in areas designated as unsuitable habitat subject to standard lease terms and appropriate timing and noise restrictions unless such habitat occurs inside the State Game Commission-owned Prairie-Chicken area or where development would extend an impact/avoidance zone into suitable lesser prairie-chicken habitat. BLM would determine if habitat is suitable or unsuitable prior to issuing a new oil and gas lease.

Sparse and Scattered Population Area (SSPA) - Occupied lesser prairie-chicken habitat (within 1.5 miles of the lek) would be closed to new leasing. New leasing with a No Surface Occupancy (NSO) requirement may be allowed, where this is determined to be appropriate, i.e., pooling or drainage protection that does not impact suitable habitat. Within the SSPA, no mineral material sites will be authorized in occupied prairie-chicken habitat.

Isolated Population Area (IPA) - Occupied lesser prairie-chicken habitat (e.g. within 1.5 miles from an active lek) would be closed to new leasing. New leasing with a No Surface Occupancy (NSO) requirement may be allowed, where this is determined to be appropriate, i.e., pooling or drainage protection that does not impact suitable habitat. Within the IPA, no new mineral material sites will be authorized within 1.5 miles of an active lek.

Isolated Population Area – Habitat Evaluation Areas - Habitat suitability analyses would be conducted in the 17 Habitat Evaluation Areas (HEAs) (See Map B-1 – in the DEIS). These areas would be prioritized for reclamation potential and for potential to re-established connectivity to adjacent isolated habitat blocks. Until the evaluation of an area is complete, new oil and gas leasing would be deferred. It may be determined, through the suitability analysis process, that these areas would be discretionarily closed

to future oil and gas leasing. Criteria for closing these areas or making these areas available for lease can be found in Appendix 8 in the DEIS. Areas determined to be lacking high conservation value would be managed according to the IPA prescriptions

BLM would consider new oil and gas leasing in occupied and suitable habitat throughout the Planning Area at such time the lesser prairie-chicken is no longer considered for listing as a threatened and endangered species. At that time if new leases are offered, conditions would be attached to new leases that would preclude the lesser prairie-chicken returning to a Special Status Species.

Based on the Reasonable Foreseeable Development, it anticipates the Preferred Alternative would have 49 wells (15-Gas and 34-Oil) drilled on an annual basis (245 acres of direct disturbance and 6,174 acres of indirect disturbance). Over the lifetime of this plan (20-Year projection) there would be approximately 4,900 acres of direct disturbance, however when compared to the acreage within the Planning Area (1,852,946 acres), the total direct disturbance over the life of this plan would be less than 1/2 of one percent.

Refer to the "Description of the Preferred Alternative" (Pages 2-17) for complete description of the beneficial measures incorporated in the Environmental Impact Statement. Based on the implementation of the following conservation measures, it is anticipated that there will be an overall improvement of wildlife habitat for the lesser prairie chicken.

**Conservation Measures/Stipulations to Minimize or Eliminate Effects (For a complete list refer to the Description of the Preferred Alternative Pages 2-17):**

- Within the Planning Area timing (March 1<sup>st</sup> to June 15<sup>th</sup>, from the hours of 3:00 a.m. to 9:00 a.m.) and noise stipulations would be applied. These stipulations are intended to prevent disruption of mating and nesting by activities associated with energy exploration and development.
- To reduce habitat fragmentation in occupied or suitable lesser prairie-chicken habitat, new distribution power lines, commercial or domestic, within two miles of occupied lesser prairie-chicken habitat (measured from the lek) would be buried. Under this requirement only distribution lines of less than 36 KV capacities would be buried. In addition, to avoid habitat fragmentation from height obstructions, low profile tanks would be required in occupied lesser prairie-chicken habitat.
- The Core Management Area and occupied habitat within the Primary Population Area would be designated as right-of-way avoidance areas. Lands acquired as habitat for Special Status Species would be added to the right-of-way avoidance areas. Rights-of-way for projects and facilities such as fences, range and wildlife water pipelines, power distribution lines, access to oil and gas facilities, or oil and gas collection or distribution pipelines would be considered in avoidance zones on a case-by-case basis.
- Within the Planning Area, the Core Management Area would be closed to new oil and gas leasing. Under certain limited exceptions, new oil and gas leasing may occur on a case-by-case basis; i.e., for pooling or drainage protection that does not impact suitable habitat.

- Within the Planning Area, occupied and suitable lesser prairie-chicken habitat in the Primary Population Area would be closed to new oil and gas leasing. Under certain limited exceptions, new oil and gas leasing may occur on a case-by-case basis; i.e., for pooling or drainage protection that does not impact suitable habitat.
- Occupied lesser prairie-chicken habitat would be closed to new oil and gas leasing within the Sparse and Scattered and Isolated Population areas.

**BLM Determination:** Based on the analysis that the Preferred Alternative is anticipated to result in an overall improvement of wildlife habitat conditions for the lesser prairie chicken, the BLM has determined that implementation of the proposed actions identified in the DEIS for Chaves, Eddy, Lea and Roosevelt Counties would result in a "May Affect – Not Likely to Adversely Affect" (Mostly Beneficial) situation for the lesser prairie chicken.

**Rationale:**

- Within the Planning Area timing (March 1<sup>st</sup> to June 15<sup>th</sup>, from the hours of 3:00 a.m. to 9:00 a.m.) and noise stipulations would be applied. These stipulations are intended to prevent disruption of mating and nesting by activities associated with energy exploration and development.
- Removal of roads and linear features would reduce fragmentation and create larger blocks of contiguous habitat which would benefit the species. Fewer roads would also reduce potential human disturbance in the reclaimed areas. In Addition, re-vegetation of reclamation sites would benefit lesser prairie chickens by creating additional suitable habitat.
- Removal of power lines would benefit the species by eliminating structures that are avoided by lesser prairie chickens.
- Closing large areas of the Planning Area (Core Management Area, Primary Population Area) to new oil and gas leasing and avoidance areas for Right-of-Ways would improvement habitat conditions for the lesser prairie chicken.

**Cumulative Effects:** The Preferred Alternative is anticipated to result in an overall improvement of wildlife habitat conditions within the planning area. Because the Preferred Alternative for Chaves, Eddy, Lea and Roosevelt Counties has a "May Affect-Not Likely to Adversely Affect" determination for the lesser prairie chicken, there would be no measurable incremental increase in the existing or foreseeable future cumulative impacts within Chaves, Eddy, Lea and Roosevelt Counties for this species. In fact, there is likely to be a decrease in the foreseeable future cumulative impacts within Chaves, Eddy, Lea and Roosevelt Counties for this species due to the implementation of beneficial actions to reduce in negative impacts on the lesser prairie chicken.

## Sand Dune Lizard (*Sceloporus arenicolus*)

### **Background**

**Status:** The Center for Biological Diversity and Chihuahuan Desert Conservation Alliance petitioned the U.S. Fish and Wildlife Service on May 28, 2002 to list the sand dune lizard as an endangered species under the Endangered Species Act. Recognizing the severity of the threats to the sand dune lizard, the U.S. Fish and Wildlife Service determined that listing was warranted but precluded making it a candidate for listing with the highest priority for action a species can receive.

**Description of the Species:** The sand dune lizard is a small, light brown (often yellowish brown) lizard lacking dorsal pattern except for faint grayish brown dorso-lateral stripe on each side extending from head to tail, that buries itself in sand to avoid predators and regulate its body temperature. Lizards are active from 0800 until dusk during May, June, and July (Sena, 1985), but confined their activity during midday (1200-1400) to shaded areas beneath vegetation. Individuals are extremely wary, and are quick to seek shelter in burrows, beneath leaf litter or by burrowing in loose sand.

Sand dune lizards' feed upon ants and their pupae, small beetles (including ladybirds) and their larvae crickets, grasshoppers, and spiders. Most feeding appears to take place within or immediately adjacent to patches of vegetation.

### **Distribution:**

**Range-Wide/New Mexico:** The sand dune lizard has the second smallest range of any lizard endemic to North America, only occurring in a narrow crescent shaped area of southeastern New Mexico and in Andrews, Crane, Gaines, Ward and Winkler Counties in western Texas.

**Chaves, Eddy, Lea and Roosevelt Counties:** It has been found mainly on the Mescalero Sands, which extend in a broad arc from the vicinity of San Juan Mesa in northeastern Chaves County southward and eastward through eastern Eddy County and southern Lea County (Sena, 1985).

**Habitat:** The Sand dune lizard is restricted to the vicinity of active and semi-stabilized sand dunes within the Mescalero Sands, an area of rolling dunes in southeastern New Mexico. Much of its habitat is found on lands administered by the Bureau of Land Management. These dunes occur to an elevation of 1190 m above sea level and support scattered stands of shinnery oak (*Quercus havardii*) and sand sage (*Artemisia filifolia*) as co-dominant plant species (Sena, 1985). Significant reductions of lizard population sizes are associated with removal of shinnery oak due to oil and gas development and herbicide spraying.

**Recent Consultations:** Fire and Fuels Management Plan Amendment and Environmental Assessment for Public Land in New Mexico and Texas (Potter County), July 2004 (Cons. #2-22-03-I-680). The BLM made a "No Affect" determination.

## **Effect Determination**

**Effects of the Proposed Action:** The Preferred Alternative is anticipated to result in an overall improvement of wildlife habitat conditions for the Sand Dune Lizard within the planning area. Refer to the “Description of the Preferred Alternative” (Pages 2-17) for an in-depth description of the beneficial measures incorporated in the DEIS.

Based on the Reasonable Foreseeable Development, it anticipates the Preferred Alternative would have 49 wells drilled on an annual basis (245 acres of direct disturbance). Over the lifetime of this plan (20-Year projection) there would be approximately 4,900 acres of direct disturbance, however when compared to the acreage within the Planning Area (1,852,946 acres), the total direct disturbance over the life of this plan would be less than ½ of one percent. However, based on the implementation of the following conservation measures, it is anticipated that there will be an overall improvement of wildlife habitat for the sand dune lizard.

### **Conservation Measures/Stipulations to Minimize or Eliminate Effects (For a complete list refer to the Description of the Preferred Alternative Pages 2-17):**

- Tracts not currently under lease within Sand Dune Lizard Habitat (see Map B-1 in the DEIS) would be closed to new oil and gas leasing until BLM determines that development of tracts nominated for leasing can be developed without impacting dune complexes. Depending on the results of that determination, the closure of a particular tract may continue, or be offered for lease with a No Surface Occupancy requirement or other appropriate stipulations, including standard stipulations.
- Lands acquired as habitat for Special Status Species would be added to the right-of-way avoidance areas. Rights-of-way for projects and facilities such as fences, range and wildlife water pipelines, power distribution lines, access to oil and gas facilities, or oil and gas collection or distribution pipelines would be considered in avoidance zones on a case-by-case basis.
- For existing leases in sand dune lizard habitat (see Map B-1 in the DEIS) surveys would be required prior to permitting surface disturbing activities and conducted by personnel approved by BLM. Depending on the results of the survey, proposed well sites may not be available to be developed and directional drilling may be necessary to develop all spacing units within a lease. Existing leases would require PODs which incorporate the results of the lizard surveys. The purpose of a POD is to assist the operator and BLM with planning for orderly development as a means to reduce or eliminate impacts to special status species habitat. A POD would also incorporate applicable best management practices and disclose all future well locations; the location and arrangement of well infrastructure (e. g., tank batteries, compressors, power lines and poles); road locations; and rights-of-way.

**BLM Determination:** Based on the analysis that the Preferred Alternative is anticipated to result in an overall improvement of wildlife habitat conditions for the Sand Dune Lizard, the BLM has determined that implementation of the proposed actions identified in the DEIS for Chaves, Eddy, Lea and Roosevelt Counties would result in a "May Affect – Not Likely to Adversely Affect" (Mostly Beneficial) situation for the Sand Dune Lizard.

**Rationale:**

- Tracts not currently under lease within Sand Dune Lizard Habitat (see Map B-1 in the EIS) would be closed to new oil and gas leasing until BLM determines that development of tracts nominated for leasing can be developed without impacting dune complexes.
- For existing leases in sand dune lizard habitat (see Map B-1 in the EIS) surveys would be required prior to permitting surface disturbing activities and conducted by personnel approved by BLM. Depending on the results of the survey, proposed well sites may not be available to be developed and directional drilling may be necessary to develop all spacing units within a lease.

**Cumulative Effects:** The Preferred Alternative is anticipated to result in an overall improvement of wildlife habitat conditions within the planning area. Because the Preferred Alternative for Chaves, Eddy, Lea and Roosevelt Counties has a “May Affect-Not Likely to Adversely Affect” determination for the sand dune lizard, there would be no measurable incremental increase in the existing or foreseeable future cumulative impacts within Chaves, Eddy, Lea and Roosevelt Counties for this species. In fact, there is likely to be a decrease in the foreseeable future cumulative impacts within Chaves, Eddy, Lea and Roosevelt Counties for this species due to the implementation of beneficial actions to reduce in negative impacts on the sand dune lizard.

### **Texas hornshell (*Popenaias popei*)**

**Background**

**Status:** This species was listed as a Candidate species on October 30, 2001. Status assessment of the Texas hornshell throughout its historic range is ongoing with inventory efforts being coordinated between the NMDGF, Texas Parks and Wildlife Department, U.S. Fish and Wildlife Service, and private land stewards.

**Description of the Species:** Like other freshwater mussels, this species is a filter-feeder--straining suspended organic particles from water pumped through the mantle.

**Distribution:**

Range-Wide: Historically, the Texas hornshell occurred in the lower Pecos River of New Mexico, downstream throughout the lower Rio Grande (Brownsville, Texas) and major tributaries in Texas, southward to the Río Pánuco drainage of San Luis Potosí, México (Metcalf 1982).

New Mexico/Chaves, Eddy, Lea and Roosevelt Counties: In New Mexico, this species was common in the lower Pecos River from North Spring River near Roswell in Chaves County (Cockerell 1902), including the Black and Delaware rivers, Eddy County (Metcalf 1982). The hornshell has declined notably throughout its historic range.

**Habitat:** This mussel occurs in sand and sand-cobble accumulated in travertine bedrock cracks and at the base of large boulders at depths of 0.25-1.38 m and at flow rates of 0.02-0.75 m/sec; often in colonies; often at the head or lower end of travertine runs (Lang et al. 1998). The species imbeds itself in softer bottoms, exposing only the siphonal areas in such situations. In rocky sites, it lodges itself in cracks and crevices. In the latter situation, the species is probably immobile, whereas it undoubtedly moves about in substrates such as mud and sand.

**Recent Consultations:** Fire and Fuels Management Plan Amendment and Environmental Assessment for Public Land in New Mexico and Texas (Potter County), July 2004 (Cons. #2-22-03-I-680). The BLM made a “No Affect” determination.

### **Effect Determination**

**Effects of the Proposed Action:** This species’ known distribution is limited to the Pecos, Black and Delaware Rivers, which are all outside the Planning Area boundary. Because this species does not occur within the Planning Area, any proposed actions would have no effects on this species.

**BLM Determination:** Based on the analysis that this species does not occur within the Planning Area, the BLM has determined that implementation of the Preferred Alternative identified in the DEIS for Chaves, Eddy, Lea and Roosevelt Counties would result in a “No Affect” situation for the Texas hornshell mussel.

### **Rationale:**

- This species does not occur within the Planning Area. The known distribution of the Texas hornshell mussel is within the Pecos, Black and Delaware Rivers in New Mexico.

**Cumulative Effects:** Because the Preferred Alternative for Chaves, Eddy, Lea and Roosevelt Counties has a “No Affect” for the Texas hornshell mussel, there would be no increase in the existing or foreseeable future cumulative impacts within Chaves, Eddy, Lea and Roosevelt Counties for this species. The cumulative impacts presently existing (e.g., Federal, private, state activities) for this species would not change due to this action.

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# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

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January 18, 2006

Cons. #22420-2007-TA-0033

### Memorandum

To: District Manager, Pecos District, Bureau of Land Management

From: Field Supervisor, U.S. Fish and Wildlife Service, New Mexico Ecological Services Field Office, Albuquerque, New Mexico

Subject: Special Status Species Draft Resource Management Plan  
Amendment/Environmental Impact Statement (DRMPA/EIS)

Thank you for submitting your Draft Special Status Species Draft Resources Management Plan Amendment and Environmental Impact Statement (DRMPA/EIS) and Biological Assessment for the U.S. Fish and Wildlife Service's (Service) review pursuant to section 7 of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. § 1531 *et seq.*) and the Fish and Wildlife Coordination Act of 1977. The Bureau of Land Management (BLM) Pecos District Office has prepared the DRMPA/EIS to address management prescriptions for the protection and enhancement of special status species and their habitats (i.e., the lesser prairie-chicken (*Tympanuchus pallidicinctus*) (LPC) and the sand dune lizard (*Sceloporus arenicolus*) (SDL)) within BLM lands in Chaves, Eddy, Lea, and Roosevelt counties. This document was received by the Service on September 28, 2006.

The objective of the Preferred Alternative proposed by BLM is to modify existing uses (e.g., Federal minerals development, livestock grazing, recreation-off highway vehicles) occurring on public lands to protect special status species (LPC and SDL) while sustaining the local economy. This alternative uses an ecosystem-level approach and adopts the concepts of the New Mexico Lesser Prairie-Chicken/Sand Dune Lizard Working Group, *Collaborative Conservation Strategies for the Lesser Prairie-Chicken and Sand Dune Lizard in New Mexico*, (Strategy) published in August 2005, and adds measures designed to provide greater protection of LPC and SDL habitat.

We have reviewed the subject DRMPA/EIS and support the BLM's selection of Alternative B as the Preferred Alternative. If implemented as described in the DRMPA/EIS, we feel that these activities will provide protections to LPC and SDL in occupied and suitable habitats; reclaim abandoned well sites; improve potentially suitable habitats; and provide additional improvements to grazing lands within the planning area. All of these activities could benefit the LPC and/or SDL, as well as many other species within the planning area, and we commend the BLM for this proactive plan to improve

the status of these candidate species. Specific benefits of the Preferred Alternative are attached to this letter.

In addition to the DRMPA/EIS, the BLM provided a Biological Assessment (BA) for this action. Nancy Riley and Patricia Zenone, of my staff, discussed the BA with Vicki Herren, Threatened and Endangered Species State Lead, on January 17, 2007. Based on that discussion, we are providing the following comments as technical assistance regarding the actions proposed in this DRMPA/EIS to benefit LPC and SDL habitat and populations:

1. Describe clearly BLM's continued commitment to the collaborative conservation process of the New Mexico Lesser Prairie-Chicken/Sand Dune Lizard Implementation Working Group. The Federal agencies (e.g., BLM, Service, Natural Resources Conservation Service (NRCS)) continue to act as technical advisors to a group of State agency (e.g. New Mexico Department of Game and Fish (NMDGF), New Mexico State Land Office (NMSLO)), non-governmental organizations, industry, and private landowners working together to implement the Strategy. The Strategy and its implementation is an adaptive management process and any new species information, techniques, or restoration/reclamation methods provided through this collaboration should be incorporated into the RMPA.
2. Update the FEIS with all available information regarding LPC and SDL survey results on Federal and State lands. The Service has been told verbally that the NMSLO recorded additional leks during 2006 surveys and that BLM has information regarding additional locations of occupied SDL habitat. Update the FEIS with the NMDGF, *FINAL INVESTIGATION REPORT: The Lesser Prairie-Chicken in New Mexico*, February 2006. This report presents the results of six-year investigation of the LPC in New Mexico and concludes that listing the bird as a State-listed species is not warranted.
3. Update the FEIS with information demonstrating BLM's accomplishments in implementing portions of the Strategy's Conservation Strategy Pathways. Such as:
  - a. **LPC Conservation Strategy - Pathway 1: Increase habitat quality and LPC recruitment on rangelands and CRP lands.**  
Include maps of sites surveyed using the Strategy's Standards for Vegetation (quality LPC habitat should have an average canopy cover of 30-50 percent grasses, 25-40 percent shrubs, and 3-10 percent forbs; with no more than 42 percent bare ground and litter) and Standards for Concealment Cover (at least 10 percent of all survey points should provide a Robel visual obstruction reading of at least 13 inches).
  - b. **LPC Conservation Strategy - Pathway 3: Consolidate and expand network of reserves and other areas managed for LPC conservation. 3.4: Develop Candidate Conservation Agreements with Assurances (CCAA) to promote conservation efforts on state and private lands.**  
The Service has been in the process of developing a CCAA in Eddy Lea, and Chaves counties for over two years. The BLM has been a beneficial partner in this process although assurances cannot be given on Federal lands. The Service continues to coordinate with the BLM to provide Federal lessees and permittees with a mechanism

to address beneficial actions taken by the lessees and permittees on Federal lands should the LPC and/or SDL be federally listed as threatened or endangered.

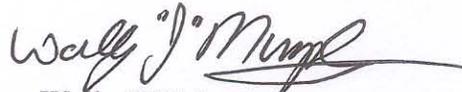
- c. LPC Conservation Strategy - Pathway 5: Reduce other causes of disturbance and mortality.**
- i. Predation – Install bird roost prevention devices (e.g., Nix-Alite (a wire product used on structures to discourage birds from roosting)) on all wooden fence posts and other structures where able within 1.5 miles of known lek sites. This product is used to prevent raptor perching within the boundaries of the Attwater Prairie Chicken National Wildlife Refuge to enhance reproductive success (see attached photographs). Disabling perches in the vicinity of leks and prime nesting habitat should reduce predation by raptors in these sensitive areas.
  - ii. Fence collision mortality – Consider the use of aluminum or latex house siding cut into short segments and affixed to barbed wire fences to reduce mortality of LPCs flying into fences. Fences can account for a significant portion of LPC mortality in some areas of their range.
  - iii. Fence collision mortality – Since fence collisions can represent a large percentage of adult mortality, strong consideration should be given before constructing additional standard barbed-wire fences in occupied LPC habitat, especially for areas less than 640 acres in size. Temporary fencing around reclamation sites and rest/rotation pastures might be conducive to the use of two-strand electric fencing. This fencing is lower to the ground and less likely to be struck by LPCs flushing from a site.

**d. Chapter Five: Recommendations For Sand Dune Lizard Conservation**

5.2 Landscape analysis and ongoing research – In occupied SDL habitat, strong consideration should be given to avoid any oil and gas industry practices that could impact the distribution and dispersal of SDLs. (e.g., trenches that could trap lizards moving from one area to another).

The Service appreciates the substantial amount of information and analysis contributed by BLM staff in preparing this comprehensive evaluation. We also commend the intent of the BLM to avoid adverse effects to candidate species, to protect and enhance grassland and shrubland habitats, and to provide benefits to other Federal trust species with this project.

In future communications regarding this memorandum or the proposed project, please refer to Consultation #22420-2007-TA-0033. If you have any questions concerning this memorandum, please contact Nancy D. Riley, of my staff, at (505) 761-4707.

  
Wally "J" Murphy  
Field Supervisor

cc:

Threatened and Endangered Species State Lead, BLM State Office, Santa Fe, New Mexico

Director, New Mexico Department of Game and Fish, Santa Fe, New Mexico

Director, New Mexico Energy, Minerals, and Natural Resources Department, Forestry Division,  
Santa Fe, New Mexico

**Actions described in the Preferred Alternative of this DRMPA/EIS that should provide benefits to the lesser prairie-chicken (LPC):**

- Institute a more active land tenure program that would result from prioritizing exchanges with the NMSLO. Consolidation of public land would improve management efficiency and effectiveness, reduce management cost, and block up key areas to provide improved protection of resources.
- The Core Management Area (CMA) would be expanded to include the existing Mescalero Sands Area of Critical Environmental Concern (ACEC) as one contiguous block. The CMA would be closed to new oil and gas leasing, with certain limited exceptions.
- In State Game Commission-owned Prairie Chicken Areas, new leasing of Federal minerals, in most cases, would not be permitted.
- For existing leases, Plans of Development (POD) and appropriate Conditions of Approval (COA) would be required to ensure a minimum of surface impact in LPC habitat.
- PODs and COAs would specify various strategies for minimizing impacts associated with new development and for reclaiming developed areas for LPC and SDL habitat.
- Occupied and suitable LPC habitat in the Primary Population Area would be closed to new oil and gas leasing, with certain limited, case-by case exceptions.
  - Any new leases would require a No Surface Occupancy (NSO) stipulation be applied to the lease.
- If leasing and development of potentially suitable LPC habitat would impact suitable habitat, then these potentially suitable habitats would be closed to new oil and gas leasing.
- In the Sparse and Scattered Population Area (SSPA) occupied habitat (within 1.5 miles of a lek) would be closed to new leasing unless it is determined that the lease with an NSO would not impact suitable habitat.
- In the Isolated Population Area (IPA) occupied habitat (within 1.5 miles of a lek) would be closed to new leasing unless it is determined that the lease with an NSO would not impact suitable habitat.
- Within the IPA, no new mineral material sites will be authorized within 1.5 miles of an active lek.
- In the IPA, 17 areas are being evaluated for LPC suitability. These areas would be prioritized for reclamation potential and for potential to reestablish connectivity to adjacent isolated suitable habitat blocks. New oil and gas leasing is deferred on these areas until the habitat suitability analyses are complete.

- Within the Planning Area timing and noise stipulations will be applied. These stipulations are intended to prevent disruption of mating and nesting activities associated with energy exploration and development, and recreational activities.
- New power lines constructed within two miles of occupied LPC habitat would be buried to minimize LPC avoidance distances and avian predator perches.
- A power line removal credit program (PLRC) would be developed. Applicants for power lines would be required to remove 1.5 miles of idle power lines (wire and poles) within the CMA, PPA, SSPA, or IPA in occupied, suitable, or potentially suitable habitat before receiving authorization to construct 1.0 mile of new power line.
- Low profile tanks would be required in occupied LPC habitat to minimize LPC avoidance distances.
- The CMA and occupied habitat in the PPA would be designated right-of-way avoidance areas. Lands acquired as LPC and/or SDL habitat would be added to the right-of-way avoidance areas.
- Abandoned well pads, roads, and power lines in occupied, suitable, and potentially suitable habitats will be removed as funding allows. The areas will be replanted with native grass and shrub species.
- Invasive brush control will be applied to as much as 640,000 acres within the Planning Area. This will improve or restore LPC habitat directly in suitable or potentially suitable habitat. It will benefit LPCs indirectly by improving range conditions in unsuitable LPC habitat for livestock grazing and provide rest to suitable and potentially suitable LPC habitat.
- Livestock grazing would be maintained at a level consistent with the seasonal nesting and brood-rearing habitat requirements of the LPC.

**Actions described in the Preferred Alternative of this DRMPA/EIS that should provide benefits to the sand dune lizard (SDL):**

- Tracts not currently under lease within SDL habitat would be closed to new oil and gas leasing until the BLM determines that development of tracts nominated for leasing can be developed without impacting dune complexes. Based on the determination, some tracts will remain closed, some developed with an NSO stipulation applied to the lease, and some developed with standard stipulations.
- Lands acquired as SDL and/or LPC habitat would be added to the right-of-way avoidance areas.
- For existing leases in SDL habitat, SDL surveys would be required prior to permitting surface disturbing activities and conducted by personnel approved by the BLM. Depending on the survey results, proposed well sites may or may not be developed. Existing leases

would require Plans of Development (POD) which incorporate the results of the SDL surveys. The POD would also incorporate applicable best management practices and disclose all future well locations; the location and arrangement of well infrastructure; road locations, and rights-of-way.

- Abandoned well pads, roads, and power lines in occupied SDL habitat will be removed and the areas reclaimed as funding allows. Areas with active dune complexes will not be replanted to benefit the SDL.
- New oil and gas well pads would not be placed in dune areas within occupied or suitable habitat, or within 200 meters of dune areas. Locating well pads exterior to dune areas would provide protection to SDL habitat.
- If shinnery oak is treated to improve vegetative composition for LPC, a 500-meter buffer will be applied around all occupied and suitable SDL habitat.
- Impacts associated with off-highway vehicle use would be decreased because available routes would be limited to designated roads and trails.

**In addition to the special status species, the BLM has also included measures to benefit the northern aplomado falcon (*Falco femoralis septentrionalis*) (non-essential experimental population):**

- Prior to initiating any projects during the raptor breeding season, the project area shall be surveyed for raptor nests. Surveys shall be conducted by individuals approved by the BLM. Specified time-of-year and disturbance distances have been incorporated into the DRMPA/EIS.
- Pre-project planning will ensure that the yucca component (large-branched specimens) within the Planning Area is not damaged or lost by protecting these yuccas from oil and gas activities (e.g., moving locations).
- Protection of lesser prairie-chicken and sand dune lizard habitats will ultimately help conserve grassland and other habitats within the Planning Area. These PODs and COAs would contain various strategies for minimizing impacts associated with new development and for reclaiming developed areas. These actions would be beneficial to any northern aplomado falcons which might move into the Planning Area.
- Within the Planning Area, coordinated efforts to reclaim and restore habitat in previously developed sites would be carried out when and where opportunities arise. These restored/reclaimed areas could be potentially suitable to the northern aplomado falcon.



Nixalite bird spikes installed on wooden fence posts at the Attwater Prairie Chicken NWR to decrease raptor predation on prairie chickens.

