



# CEHMM

*Conservation and Environmental Services*

## Candidate Conservation Agreements for the Lesser Prairie-Chicken and Dunes Sagebrush Lizard

Photo courtesy Mike Hill



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## INTRODUCTION

The Lesser Prairie-Chicken (*Tympanuchus pallidicinctus*) (LPC) (Figure 1) is a prairie grouse species native to the Southern Great Plains, including parts of Colorado, Kansas, New Mexico, Oklahoma, and Texas. The Dunes Sagebrush Lizard (*Sceloporus arenicolus*) (DSL) (Figure 2), also known as the Sand Dune Lizard, is a species native to a small area of southeastern New Mexico and west Texas. Both species were ruled warranted for listing as “threatened” or “endangered” by the U.S. Fish and Wildlife Service (FWS) under the Endangered Species Act of 1973 (ESA), as amended (16 U.S.C. § 1531, et seq.). The ESA provides for the conservation of species, and the conservation of the ecosystems on which they depend, that are endangered or threatened throughout all or a significant portion of their range. Section 9 of the ESA prohibits “take” (i.e., harass, harm, pursue, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct) of listed species on public and private lands. In addition to the Section 9 prohibitions, Section 7 requires federal agencies to ensure that their actions will not jeopardize the continued existence of the listed species.



**Figure 1: Lesser Prairie-Chicken (*Tympanuchus pallidicinctus*)**

For several years, the FWS, the Bureau of Land Management (BLM), and the Center of Excellence (CEHMM) worked together to develop a candidate conservation agreement to programmatically address both the needs of the LPC and the DSL and potential impacts a listing could have on land users. These landmark legal agreements were signed by federal and state authorities on December 8, 2008. The Candidate Conservation Agreement (CCA) and its companion



**Figure 2: Dunes Sagebrush Lizard (*Sceloporus arenicolus*)**

Candidate Conservation Agreement with Assurances (CCAA) provide a mechanism to conserve LPC and DSL habitats. These agreements allow FWS, BLM, and CEHMM to work in cooperation with private land owners and industry to support conservation while continuing to work on the land.

In June 2012, the FWS rule determined the DSL was not warranted to be listed as “threatened” or “endangered” under the ESA. This decision was based largely in part on the conservation efforts that the CCA/CCAA put into practice. In December 2012, a proposed listing for the LPC was published in the Federal Register. After a public comment period, on March 27, 2014, the FWS listed the LPC as threatened under the ESA in response to a rapid and severe decline of the

species. Under the law, a “threatened” listing means the species is likely to become in danger of extinction within the foreseeable future; it is a step below endangered under the ESA and allows for more flexibility in how the ESA protections are implemented. On September 1, 2015, the U.S. District Court for the Western District of Texas, Midland Division vacated the FWS Final Rule listing the LPC as threatened. Accordingly, the LPC was removed from the List of Endangered and Threatened Wildlife on July 19, 2016, in accordance with the court order. On September 8, 2016, WildEarth Guardians, Defenders of Wildlife, and Center for Biological Diversity petitioned the FWS to list LPC as “endangered” throughout its range. The FWS is currently assessing the status of the LPC by conducting a Species Status Assessment.

## CANDIDATE CONSERVATION AGREEMENTS

The CCA/CCAA will: (U.S. Fish and Wildlife Service 2008)

- Develop, coordinate, and implement conservation actions which reduce and/or eliminate known threats to the LPC and DSL in New Mexico on federal, state and private surface and minerals;
- Support ongoing efforts to re-establish and maintain viable populations of both species in currently occupied and suitable habitats;
- Encourage development and protection of suitable LPC and DSL habitat by giving Participating Cooperators incentives to implement specific conservation measures.

Under the CCA, federal lessees, operators, or permittees that join by voluntarily signing a Certificate of Participation (CP) receive a high degree of certainty that additional restrictions would not be placed on their otherwise legal activities if either species is listed.

The companion CCAA provides incentives for voluntary conservation of species-at-risk on non-federal lands. Under the CCAA, the lessee, owner or permittee voluntarily commits to implement specific conservation measures on non-federal lands for the species by signing a Certificate of Inclusion (CI). Under the CCAA, if either species is listed, private landowners receive assurances that additional restrictions would not be placed on their otherwise legal activities. Without regulatory assurances, landowners may be unwilling to initiate conservation measures for these species.

In both cases, signing up under the CCA/CCAA is voluntary. Through enactment of a voluntary program, enrollees can elect to continue participation at their discretion. This translates into enrollees' prerogative to opt out if they so desire.

Each certificate (CP or CI) addresses additional mitigation measures a participating cooperator agrees to implement on lands described in their certificate. The certificate also places conditions on activities (i.e., drilling permits, rights-of-way, grazing, seismic activity, etc.) that will be required on the cooperator's lands or minerals.

For oil and gas companies, their certificate requires funds to be contributed to assist in restoration or protection of habitat for the LPC and/or DSL. Based on the amount of contributed funds available, a team of wildlife biologists from the BLM, FWS, CEHMM, State Land Office (SLO) and the New Mexico Department of Game and Fish (NMDGF) work cooperatively to determine which habitat improvement and research projects are of the highest priority to benefit one or both of the species. Using available funds, the team of biologists ranks the proposals and selects the highest priority projects that improve habitat and reduce risk to either species (regardless of land ownership). CEHMM then uses the approved list and contracts with appropriate parties to implement the projects.

As the CCA permit holder, CEHMM is responsible for implementing, monitoring, and reporting on projects completed with CCA/CCAA funds. CEHMM is a 501(c)(3) nonprofit corporation based in Carlsbad, New Mexico. CEHMM participation allows for a federally approved, independently audited financial management system to provide for fund management and administration.

Government and private entities were vigilant in the structure of the candidate conservation programs by encouraging and accommodating public input by way of public forums convened in strategic locales. These were typically in geographic regions that allowed convenient attendance by participants either directly affected or with particular interest in the species of concern. Frequently asked questions (FAQs) from these forums provide an accurate indicator of public opinion and interest. The FAQs are provided in Appendix E.

Figure 3 shows the enrollments covered under the CCA and CCAA. Lands within this region can be divided into three general surface ownership categories: federal, state, or private. Specifically, the BLM has surface ownership of approximately 3 million acres (19%), the state of New Mexico has 2.8 million acres (19%), and private land-

owners have 9 million acres (59%). The BLM also has management responsibilities for an additional 10 million acres of mineral estate where the surface is either private or state owned. The U.S. Forest Service, National Park Service, and FWS combined have less than three percent of the lands within the covered area.

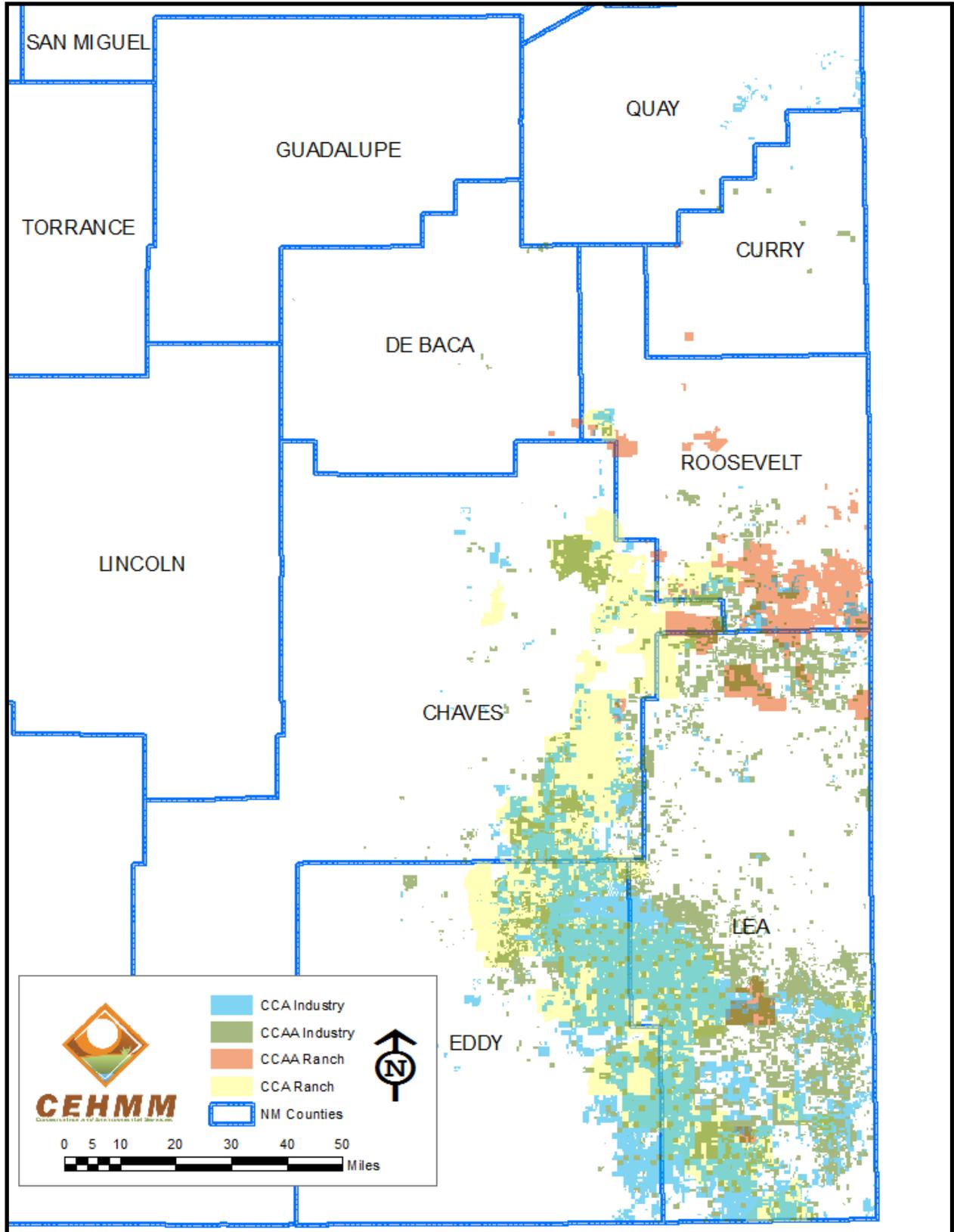


Figure 3: CCA/CAA enrollments

## **PARTICIPATING COOPERATOR'S NEED FOR THE CCA/CCAA**

Agricultural interests are concerned about restrictions that may be imposed on them when a species becomes listed. Although the FWS has de-listed the LPC and determined not to list the DSL at this time, both species remain as a state-listed species as well as candidates for an ESA listing. The ESA authorizes the FWS to prohibit activities on lands that may harm listed species. Activities that could be affected are duration or intensity of livestock grazing or stocking rates on rangeland, brush control to enhance livestock carrying capacity, and conversion of native rangeland.

Similarly, the oil and gas industry is concerned because they could experience increased regulatory burdens as well. For example, if a species is listed, it could add additional months to the process of approving development of new wells or facilities. Oil and gas development occurs throughout part of the range of the LPC/DSL in southeastern New Mexico.

## **RANCHING CONSERVATION MEASURES**

As stated under Candidate Conservation Agreements, in order to develop, coordinate and implement conservation actions to reduce and/or eliminate known threats to the LPC and DSL in New Mexico and to encourage development and protection of suitable LPC and DSL habitat, we offer Participating Cooperators incentive to implement specific conservation measures. The following ranching conservations are written for ranching operations, inclusive of state, federal and deeded lands. These ranching conservation measures will:

1. Improve or maintain conservation lands as suitable LPC and/or DSL habitat for the "Duration of Conservation" in the CP/CI. Lands can be enrolled under the CCA/A and the permit whether or not the Participating Landowner receives funding from CEHMM or other sources. Technical assistance is available from the Natural Resources Conservation Service (NRCS) and FWS to develop plans to improve and maintain habitat for the LPC and/or DSL. Financial assistance for the implementation of these plans may be available through conservation programs of the U.S. Department of Agriculture's National Food Security Act of 1985, as amended (Farm Bill) and/or the FWS's Partners for Fish and Wildlife Program (PFW) depending on annual funding. The CP/CI will identify, among other things, suitable LPC/DSL habitat to be maintained on the conservation lands and the duration that this habitat will be maintained.
2. Adhere to stipulations on surface activities required by the BLM Special Status Species Resource Management Plan Amendment (RMPA) (BLM 2008) on oil and gas lease developments on enrolled lands at a minimum.
3. Adhere to rangeland and grazing stipulations required by the BLM Special Status Species RMPA (BLM 2008) at a minimum for ranch operations.
4. Allow CEHMM, FWS, and/or NMDGF personnel, with prior notification, to survey enrolled lands for the presence of LPCs and/or DSLs and for habitat suitability for these species.
5. Allow CEHMM personnel or their designee access to the enrolled lands for purposes of monitoring LPC and/or DSL populations and habitat.
6. Allow CEHMM personnel or their designee access to the enrolled lands for purposes of compliance monitoring of conservation commitment.
7. Use herbicides for shinnery oak management only when habitat goals cannot be achieved by other means, including grazing system management.
  - a. No herbicide treatments will be applied in dune complexes (NRCS sand hills ecological sites) and corridors between dune complexes. Maintain an application buffer around dune complexes of 100 meters to ensure dunal stability.

- b. Prohibit tebuthiuron spraying within 500 meters of DSL habitat. In addition, for DSL, prohibit spraying in dune complexes or within corridors, which connect dune complexes that are within 2,000 meters of each other. All application of tebuthiuron will be applied by a licensed applicator and in accordance with the New Mexico supplemental label for wildlife habitat.
  - c. In conducting such treatments, the goal will be to temporarily reduce shinnery oak competition with grasses, allowing grass cover to increase naturally. Herbicides should be used at dosages that would set back (defoliate) shinnery oak, not kill it.
  - d. Large block and linear application of herbicides will be avoided. Application should follow the natural patterns on the landscape such that only patches needing treatment are treated.
  - e. For LPC, herbicide treatment should not be applied around large oak motts, and within 1.5 miles of active lek sites.
  - f. Post-treatment grazing management is essential to success. Grazing will be deferred through at least two consecutive growing seasons after treatment. If vegetation response to treatment has been hindered due to drought or other factors, additional deferments to ensure success of the treatment may be required.
  - g. Experimental treatments outside these guidelines may occur with the approval by FWS. Experimental treatments must be part of a quantitative research design to study vegetation response, viability of shinnery oak, drift, sub-surface spread, the interaction of herbicide treatment and/or grazing management, and the response of LPC and DSL to various treatments.
8. For livestock ranches, implement grazing management plans intended to move towards meeting specific habitat goals for the LPC and/or DSL as defined in the Collaborative Conservation Strategies for the Lesser Prairie-Chicken and Sand Dune Lizard in New Mexico (LPC/DSL Working Group 2005) on individual ranches. This may include adjustment of stocking rates, rest-rotation patterns, grazing intensity and duration, avoidance of nesting areas during nesting season, and contingency plans for varying prolonged weather patterns, including drought.
  9. No leasing of lands within the Participating Landowner's designated conservation lands to wind power development (including any appurtenant turbine towers, roads, fences, or power lines).
  10. No leasing of any lands within the conservation lands to oil and gas development (including roads, fences, or power lines), where the private land holder has discretion.
  11. No conversion of conservation lands to crop production (sod busting) or development as part of maintaining existing LPC and/or DSL habitat.
  12. Install fence makers along fences that cross through occupied habitat within 2 miles of an active lek.
  13. Avoid well pad construction within 1.5 miles of an active lek, (as defined in BLM 2008 and/or NM LPC/DSL Working Group 2005) unless reviewed and approved by CEHMM and FWS.
  14. Initiate control of shinnery oak only after coordinating with and gaining approval from CEHMM and FWS concerning control procedures so they will not be detrimental to LPC and/or DSL.
  15. Any trenches dug on enrolled property will have escape ramps placed at the ends and approximately every 500 feet to allow for LPC/DSL escape. Trenches may alternatively be covered to avoid entrapment and should be inspected three times a day.
  16. Avoid construction of new roads. If unavoidable, route and construct new roads, pipelines and power lines outside of occupied and suitable, unoccupied shinnery dune complexes as delineated by the FWS, BLM, NMDGF, and/or designees.
  17. Provide or allow provision for escape ramps in all open water sources.

In addition to the conservation actions described above, the enrollee must also agree to the following conservation measures:

#### *Lesser Prairie-Chicken*

- Install escape ramps in all open water sources.
- Remove invasive brush (non-shinnery oak).
- Maintain current grazing practices to continue to benefit LPC and livestock operation.
- Remove legacy well markers.
- Reseed or inter-seed disturbed areas.
- Allow LPC surveys.
- Install fence markers within two miles of an active lek.

#### *Dunes Sagebrush Lizard*

- Allow DSL surveys.
- Prohibit herbicide treatments in dune complexes (NRCS sand hills ecological sites) and corridors between dune complexes. Maintain an application buffer around dune complexes of 100 meters to ensure dunal stability.
- Prohibit tebuthiuron spraying within 500 meters of DSL habitat. Prohibit spraying in dune complexes or within corridors, which connect dune complexes that are within 2,000 meters of each other. All application of tebuthiuron will be by a licensed applicator and in accordance with the New Mexico supplemental label for wildlife habitat.
- Remove unnecessary development (non-functioning power lines, fences etc.) from dunes, as funding is available.

## **INDUSTRY CONSERVATION MEASURES**

Companies who sign up under the CCA/CCAA agree to a list of conservation measures detailed in their respective CP (for federal operations) and CI (for state and private operations). These measures include:

1. To the extent determined by the BLM representative at the plan of development stage, all infrastructure supporting the development of a well (including roads, power lines, and pipelines) will be constructed within the same corridor.
2. On enrolled parcels that contain inactive wells, roads and/or facilities that are not reclaimed to current standards, the Participating Cooperator shall remediate and reclaim their facilities within three years of executing the CP, unless the Cooperator can demonstrate they will put the facilities back to beneficial use for the enrolled parcel(s). If an extension is requested by the Cooperator, they shall submit a detailed plan (including dates) and receive BLM approval prior to the three-year deadline. All remediation and reclamation shall be performed in accordance with BLM requirements and be approved in advance by the Authorized Officer.
3. Allow no new surface occupancy within 30 meters of areas designated as occupied or suitable, unoccupied DSL dune complexes or within delineated shinnery oak corridors. The avoidance distance is subject to change based on new information received from peer reviewed science.
4. Utilize alternative techniques to minimize new surface disturbance when required and as determined by the BLM representative at the plan of development stage.
5. Provide escape ramps in all open water sources under the Participating Cooperator's control.
6. Install fence markings along fences owned, controlled, or constructed by the Participating Cooperator that cross through occupied habitat within two miles of an active LPC lek.
7. Bury new power lines that are within two miles of LPC lek sites active at least once within the past five years (measured from the lek). The avoidance distance is subject to change based on new information received from peer reviewed science. Bury new power lines that are within one mile of historic LPC lek sites where at least

one LPC has been observed within the past three years (measured from the historic lek). The avoidance distance is subject to change based on new information received from peer reviewed science.

8. Bury new power lines that are within one mile of historic LPC lek sites where at least one LPC has been observed within the past three years (measured from the historic lek). The avoidance distance is subject to change based on new information received from peer reviewed science.
9. Allow no 24-hour drilling operations or 3-D geophysical exploration during the period from March 1st through June 15th, annually, on lands enrolled by the Participating Cooperator that are located within Zone 1. Other activities that produce noise or involve human activity, such as geophysical exploration (other than 3-D operations) and pipeline, road, and well pad construction will be allowed during these dates except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Normal vehicle use on existing roads will not be restricted. Exceptions to these requirements would be considered in emergency situations, such as mechanical failures, but would not be considered for routine planned events.
10. Noise abatement during the period from March 1st through June 15th, annually. Noise from facilities (e.g., pump jack, compressor) under the control of the Participating Cooperator that service enrolled lands located within Zone 1 will be muffled or otherwise controlled so as not to exceed 75 decibals measured at 30 feet from the source of the noise.
11. Limit seismic exploration to area outside of occupied and suitable shinnery dune complexes to protect DSL habitat.
12. Submit a routine monitoring and schedule of inspection for oil, gas and produced water pipelines and facilities to ensure accidental pollution events are avoided in sensitive habitats for DSL.
13. Inside the DSL polygon as depicted in the BLM SSS-RMPA (BLM 2008), the following will apply:
  - a. Any trench left open for eight hours or less is not required to have escape ramps; however, before the trench is backfilled, an agency/CEHMM approved monitor shall walk the entire length of open trench and remove all trapped wildlife and release them at least 100 yards from the trench.
  - b. For trenches left open for eight hours or more, earthen escape ramps (built at no more than a 30-degree slope and spaced no more than 500 feet apart) shall be placed in the trench. The open trench shall be monitored each day by an agency/CEHMM approved monitor during the following three time periods: (1) 5:00 a.m. to 10:00 a.m., (2) 11:00 a.m. to 2:00 p.m., and (3) 3:00 p.m. to sunset. All trapped wildlife shall be released at least 100 yards from the trench.
  - c. One agency/CEHMM approved monitor shall be required for every mile of open trench. A daily report (consolidate if more than one monitor) on the wildlife found and removed from the trench shall be provided to CEHMM (email acceptable) the following morning.
  - d. This stipulation shall apply to the entire length of the project in the DSL habitat regardless of land ownership.
14. Management recommendations may be developed based on new information received from peer reviewed science to mitigate impacts from H<sub>2</sub>S and/or the accumulation of sulfates in the soil related to production of gas containing H<sub>2</sub>S on the DSL and LPC. Such management recommendations will be applied by the Participating Cooperator as Conservation Measures under this CI in suitable and occupied DSL/LPC habitat where peer-reviewed science has shown that H<sub>2</sub>S levels threaten the LPC/DSL.
15. Upon the plugging and subsequent abandonment of a well within Zone 1, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well unless otherwise precluded by law or private surface owner.

Through the implementation of these conservation measures, oil and gas wells are often relocated to limit the impacts to the habitat and species. Infrastructure, such as pipelines, roads, and power lines, are also assessed for their placement to limit further habitat fragmentation. As wells are drilled, they will be monitored to ensure that the conservation measures identified as terms and conditions of the pertinent certificate are followed.

When an oil and gas company becomes a Participating Cooperator, their certificate requires them to establish a habitat conservation fund, which is based on an amount per acre enrolled for a minimum of three years. Each time the oil and gas cooperator disturbs enrolled land, their habitat conservation fund is debited based on the amount of area disturbed. CEHMM is responsible for maintaining each Participating Cooperator's habitat conservation fund account and for debiting it when appropriate. Habitat conservation fees generated from activity on enrolled parcels (and for off-parcel activities needed to develop the enrolled parcels) are then used by the team that prioritizes proposals to improve habitat.

## **CCA/CCAA RANCHERS**

To date, 73 ranches have enrolled their surface or grazing operations in the CCA/CCAA. The enrolled ranches span the area of concern for both LPC and DSL habitat with acreage in Lea, Eddy, Chaves, Curry, De Baca, Quay and Roosevelt Counties. There have been a total of 890,909 acres of federal allotments (CCA) enrolled and 1,597,529 acres of state and private lands (CCAA) enrolled for a total of 1,946,908 acres in DSL and LPC habitat.

## **CCA/CCAA INDUSTRY**

Fifty-six companies are enrolled in the CCA/CCAA, with enrolled leases spanning the area of concern for both LPC and DSL habitat in Lea, Eddy, Chaves, Curry, De Baca, Quay and Roosevelt Counties. There are 1,005,236 federal acres enrolled by industry in the CCA/A and an additional 404,594 acres enrolled by the New Mexico State Land Office. Total mineral enrollments by oil and gas companies and the New Mexico State Land Office is 1,966,883. Refer to Table 4 for the itemization of acres among the enrolled companies.

## **PROJECTS**

Project proposals are submitted to the project ranking committee, which prioritizes each proposal using a ranking system developed by the committee (see Appendices A, B, C, D). Projects are separated into two groups: reclamation/restoration and research/education. Reclamation/restoration projects are those that improve habitat for the species, which include but are not exclusive to: caliche removal, reseeding, improved infrastructure relating to improved grazing management, and mesquite treatments. Research projects are any projects that help improve the knowledge of the species and their habitats, resulting in conservation of the species and their habitat. Education projects must promote the ecology of the southern shortgrass prairie and the flora and fauna of associated ecosystem with an emphasis to LPC and DSL. Both types of proposals have a unique ranking system. After the proposals are evaluated and scored, the committee convenes a meeting to assess the benefits of each proposal regarding the two species of concern and determines which projects should be funded. This methodology provides an objective, non-biased system of evaluation by biologists from different agencies (CEHMM, FWS, BLM, SLO, and NMDGF).

## **MESQUITE CONTROL**

Mesquite (*Prosopis* spp.) is universally accepted as an invasive and highly competitive shrub that may readily encroach onto landscapes that did not historically support the species and have experienced intense disturbance or changes in natural ecological processes over a significant period of time. Through interspecific competition with beneficial grasses, forbs, and shrubs, mesquite has increased in frequency and led to a transition of these grassland landscapes into shrub lands or shrub/grasslands which are less desirable to LPC. Chemically treating mesquite through hand and aerial applications are the primary methods that CEHMM has used to suppress mesquite in LPC habitat. By

removing mesquite, native grasses have the opportunity to become re-established, providing suitable habitat for nesting, forage, and cover for LPC.

Benefits of hand application include:

- Can be performed year-round. This provides land managers the ability to respond to requests any time of year and is not constrained by seasonal leaf emergence as required with aerial applications.
- Has no negative impacts on non-target plants within a defined area. This alleviates any inadvertent harmful effects on non-target species from direct application or spray drift.
- Can be used effectively in close proximity to other sensitive areas such as agricultural crops or near resident livestock.
- Are so precise that mesquite occupied by resident wildlife including occupied (protected) bird nests can be protected by way of avoidance. This also applies to any sensitive insects, reptiles, mammals, or protected plants in the near proximity.
- Are effective. Initial observations indicate that hand sprays are over 95 percent effective. This is evidenced by chlorosis (yellowing) in leaves and other visible signs of stress within only days of prescribed treatments and when applied during the winter, a higher percentage of stressed and/or dying mesquite.
- More costly than aerial spray due to labor intensity. When determining cost, it is prudent to request bids on hours rather than on acres due to various density cover in even small acreage. As of July 2016, the average cost for application (labor, chemicals and taxes) was \$50 per hour. This does not include costs for requisite support personnel and administrative services.
- Chemicals and carriers are continually being upgraded, therefore, working with the applicator and the chemicals companies to determine proper mix and timing is essential.

Benefits of aerial applications include:

- Are less expensive than hand treatments. Costs typically range from \$20-\$40 per acre for electrostatic and conventional application. The costs for requisite support personnel and administrative services in support of aerial application are not included in the per acre cost.
- Although constrained by seasonal status of the target plant species, encompass much larger expanses of landscape in less time, with highly effective results.
- Electrostatic technology charges the spray particles as they leave the spray boom on the airplane. This charge causes the spray particles to be attracted to the plants and allows for more of the chemical to contact the target species, which improves the effectiveness of the treatment. Electrostatic application is not recommended in the denser vegetation/shinnery oak complexes that is found in District 2 as the surrounding flora will absorb the chemical resulting in decline of favored species. In these cases, conventional application is preferred.
- Chemicals and carriers are continually being upgraded, therefore, working with the applicator and the chemicals companies to determine proper mix and timing is essential.

To date, there have been 61,891 acres treated and 3,798.43 acres waiting for suitable spraying conditions through the CCA/CCAA program. Mesquite control of this nature improves habitat for LPC and mitigates mesquite encroachment into dunal areas that may be suitable for DSLs.

## REMOVAL OF DEAD STANDING MESQUITE

Historical and current research ( Boggie et. al., in press) indicates that LPCs avoid vertical structure and additionally LPCs avoid mesquite whether or not the shrub is foliated. It is recommended that all mesquite be removed 2 kilometers from historic and active leks. This reinforces our earlier decision on removal of dead standing mesquite (DSM). Erect skeletons have been a concern voiced by CEHMM, FWS, BLM and NRCS as sprayed mesquite cannot be effectively considered “removal of woody species or removal of vertical structures” until the skeleton is removed. Therefore, CEHMM has purchased a skid steer with tracks and a



Figure 4: Grapple/mulcher for dead standing mesquite removal



Figure 5: Pre-removal of mesquite

rotary cutter (Figure 4) attachment to remove dead standing mesquite (DSM) on the acreage that the ranking committee deems ready for removal. CEHMM staff has been safely trained to operate this machine, not only for their personal safety but to assure that the soil is not heavily disturbed through the actions of the operator. After hours of trial operation, it has been found that - on an average of heavy, medium and light infestation - our team can remove two acres of DSM in one hour (Figures 5, 6). Currently, we have one machine in operation in District 1 and have plans for another machine in District 2. CEHMM anticipates removing DSM in priority areas within one mile of active lek locations throughout the LPC current range.

## ESCAPE RAMPS

In 2007, the National Wildlife Federation (Di Sylvestro 2007) published concerns regarding the serious threat of livestock watering tanks on indigenous wildlife throughout the arid southwest. Additionally, the National Audubon Society, North American Grouse Partnership, and the U.S. Fish and Wildlife Service have expressed similar concerns regarding wildlife mortalities associated with livestock tanks. This threat is not exclusive to birds, but also includes insects and small mammals such as bats. Once an animal falls into a livestock tank while attempting to access water, they inherently struggle to the sides of the tank in an



Figure 6: Post-removal of mesquite

attempt to escape. Once a ramp is installed, it provides an available mechanism to facilitate the entrapped animals' escape (Figure 7). CEHMM escape ramps are modeled after proven BLM standard ramp design. In order to increase traction for an entrapped animal, and extend the ramp longevity, they are coated with a stable, non-toxic polymer textured material (similar to that sprayed on truck beds as liners) prior to installation. In 2016, CEHMM installed 39 escape ramps on five ranches. To date, 513 escape ramps have been installed in water troughs on ranches that have signed CIs (CCAA) and CPs (CCA). CEHMM changed the design of the escape ramps in 2014, adding a rubber hose around the perimeter of the ramp to keep the metal ramp from rubbing on the side and bottom of the tanks. So far, 55 of the previously installed ramps have been retro-fitted with the new design; however, CEHMM plans to upgrade all previously installed ramps to the new design. CEHMM will continue to install escape ramps on the ranches within LPC and DSL habitat.



**Figure 7: Escape ramp**

## SOLAR CONVERSION AND TROUGH REPLACEMENT

Water wells outfitted with windmills have been found to be an undependable water source due to age of the windmill and expenses in repair due to the age, parts, and a dying trade. Wind is not a constant force and usually subdues during the hottest time of the season, resulting in reduced water delivery into troughs with the use of windmills. While the initial investment in a solar pump is expensive, the maintenance, repair, and longevity of the product far outweighs the investment. Converting a water well to a solar pump also includes removal of the tower and associated windmill, as they are no longer necessary and are identified as potential threats (vertical structure) to LPCs (USFWS 2008). After the tower is removed, the solar panel (Figure 8) and associated submersible pump are installed. The pumps are very efficient due to the small amount of direct sunlight need-



**Figure 8: Solar pump installed (Enclosure by landowner)**



**Figure 9: Water trough installed**

ed to power them. In a three-year study, Grisham et al. (2014) documented 1,245 visits of LPCs at open water sources. This study illustrates the necessity to provide water sources for LPCs, especially in times of drought.

Over time, water troughs become degraded, fall into disrepair, and become unable to hold water, which eliminates a water source from the landscape that LPCs, other wildlife, and livestock have become dependent upon. Troughs of this nature are replaced with new fiberglass troughs (Figure 9) that are outfitted with escape ramps.

With adequate and reliable watering facilities, a rancher is able to manage their grazing operation in a fashion that leaves residual grasses and cover upon which the LPC depends.

## CALICHE REMOVAL AND RESEEDING

Oil and gas well pads and roads fragment LPC and DSL habitat. These pads and roads are constructed of caliche that is excavated from caliche pits in near proximity to the project. By removing the caliche pads and roads, fragmentation in LPC and DSL habitat is reduced or eliminated (Figure 10). Reseeding with native vegetation in the area where the caliche has been removed speeds up the process of rehabilitating the disturbed areas. To date, CEHMM has reclaimed 154 roads and pads and reclaimed and reseeded 148.7 acres under the CCA/CCAA.



**Figure 10: Reclaimed road**

## MITIGATION OF IMPACTS TO HABITAT

In 2016, in accordance with the CCA and the BLM RMPA (BLM 2008), BLM, CEHMM, and enrolled companies worked together to conduct onsites for 77 wells on federal lands (Table 1). Twenty-nine of those wells were moved during the onsite to avoid DSL habitat. In accordance with the CCAA, CEHMM and enrolled companies worked together to conduct onsites for 40 wells on non-federal lands. Twenty-three of these wells were moved during the onsite to avoid suitable DSL habitat. Through these relocations and re-routes, the impacts to DSL and LPC from the oil and gas industry have been minimized. To date, on enrolled acreage, a total of 824 wells have been moved during onsites between CEHMM, BLM, and enrolled companies.

In accordance with the CCA/CCAA companies submit their annual activities on enrolled acres to CEHMM; the following is a compilation of this information. Twenty companies permitted/drilled 198 federal wells and 12 companies drilled 80 state wells in 2016 on land enrolled in the CCA/A (Table 2). Of these wells, 52 were relocated out of DSL habitat to ensure compliance with the CCA/CCAA. Since 2012, 576 wells have been relocated to avoid DSL habitat. Twelve companies permitted/installed 67 right-of-ways on land enrolled in the CCA/A. Of these, 10 were relocated out of DSL habitat to ensure compliance with the CCA/A. Nine companies completed reclamation of roads and pads on land enrolled in the CCA/A, totaling 125.22 acres.

**Table 1. Onsites Completed 2016.**

<i>Company</i>	<i>Federal</i>	<i>Federal moved for CCA</i>	<i>Non-Federal</i>	<i>Non-Federal moved for CCAA</i>
Apache	32	8	3	0
COG	1	1	0	0
Conoco	30	10	27	22
Matador	0	0	3	0
McElvain	3	0	0	0
Nemo	0	0	7	1
Read and Stevens	11	10	0	0
<b>Total</b>	<b>77</b>	<b>29</b>	<b>40</b>	<b>23</b>

## FUNDING

CEHMM receives funding through industry’s participation in the CCA/CCAA program as referenced in the preceding table. Each time a surface disturbance occurs, the account of the responsible company is debited accordingly. A surface disturbance can include construction of well pads, roads, installation of power lines and pipelines, and geophysical operations.

**Table 2. Company Involvement 2016.**

<i>Company</i>	<i>Number of Federal Wells Drilled/ Permitted</i>	<i>Number of State/ Fee Wells Drilled/ Permitted</i>	<i>Number of Federal Wells Re-located</i>	<i>Number of State/Fee Wells Re-located</i>	<i>Number of ROWs (pipelines, roads, etc.)</i>	<i>Number of ROWs Re-located</i>	<i>Acres Re-claimed</i>
Apache	14	12	6	0	0	0	26
Armstrong	0	0	0	0	0	0	0
BOPCO	22	2	0	0	14	0	1.28
BTA*	0	0	0	0	0	0	0
Burnett	2	0	0	0	2	0	0*
Chevron	0	0	0	0	0	0	0
Cimarex	20	4	0	0	0	0*	0*
COG*	1	0	0	0	0	10	0
Conoco Phillips	44	18	20	14	3	0	11.62
Cross Timbers*	0	0	0	0	0	0	0
Devon	20	13	0	0	0	0*	0*
Endurance	4	0	0	0	2	0	0
Energex*	0	0	0	0	0	0	0
Enervest*	0	0	0	0	0	0	0
EOG*	0	0	0	0	0	0	0
EOR*	0	0	0	0	0	0	0
Fair oil	0	0	0	0	0	0	0
Fasken	2	1	0	0	2	0	0
Hanley Petroleum*	0	0	0	0	0	0	0
Hudson	1	0	0	0	0	0	1.75
Kaiser-Francis	2	2	0	0	0	0	0
Legacy	21	0	0	0	0	0	20
Linn*	0	0	0	0	0	0	0
Mack	2	0	0	0	2	0	2.2
McElvain	4	0	0	0	0	0	0*
Marshall & Winston*	0	0	0	0	0	0	0
Matador	0	3	0	1	3	0	0*
Mewbourne	10	0	0	0	0	0	0
Nearburg	4	0	0	0	1	0	0*
Nemo Fund	0	1	0	0	2	0	0*
OGX Production	0	0	0	0	0	0	0
OXY	2	13	0	0	25	0	52.87
Paladin	0	0	0	0	0	0	2
Primero*	0	0	0	0	0	0	0
R & R Royalty*	0	0	0	0	0	0	0
Read & Stevens	11	0	11	0	0	0	2
Regeneration*	0	0	0	0	0	0	0
Ridgeway Arizona*	0	0	0	0	0	0	0
RKI/WPX*	0	0	0	0	0	0	0
SDX*	0	0	0	0	0	0	0
Shackelford Oil*	0	0	0	0	0	0	0

\* Denotes company that did not submit well information in time to be included in this report. Totals are amounts debited from the habitat conservation funds for these companies in accordance with the CCA/CCAA.

SM Energy*	0	0	0	0	0	0	0
Stanolind	0	0	0	0	0	0	0
Strata	0	0	0	0	0	0	0
Tierra	0	0	0	0	0	0	0
V-F Petroleum	0	2	0	0	0	0	0
XTO	10	0	0	0	3	0	0
Yates	2	9	0	0	8	0	7.5
<b>TOTAL</b>	<b>198</b>	<b>80</b>	<b>37</b>	<b>15</b>	<b>67</b>	<b>10</b>	<b>127.22</b>

## FUNDED PROJECTS

On June 13, 2016, the CCA/CCA ranking team met and agreed to fund the following projects (Table 3) as they were determined to be of conservation benefit to either/or the LPC and DSL :

- Bud Bilberry Boundary Fence:** One and a half miles of existing boundary fence will be removed, disposed of properly and replaced with wildlife-friendly fencing. The conservation measure to be met is “improving habitat and increasing populations by coordinating vegetation treatments with ongoing activities.” Mr. Bilberry’s existing fence is in poor shape, resulting in trespass cattle and hunting. He has worked with BLM and CEHMM in developing a rotational grazing program and with NRCS on deferred pastures. Mr. Bilberry has populations of both DSL and LPC.
- Luman Boundary Fence:** Six and a half miles of existing boundary fence will be removed, disposed of properly and replaced with wildlife friendly fencing. The conservation measure to be met is “improving habitat and increasing populations by coordinating vegetation treatments with ongoing activities.” Mr. Peterson’s (lessee) existing fence is in poor shape, resulting in trespass cattle and hunting; he has worked with CEHMM and NRCS in developing a rotational grazing program with deferred pastures. This property is in CHAT 1 for LPC.
- G. Coombes Boundary Fence #2 Atlee:** Six and a half miles of existing boundary fence will be removed, disposed of properly and replaced with wildlife friendly fencing. The conservation measure to be met is “improving habitat and increasing populations by coordinating vegetation treatments with ongoing activities.” Mr. Coombes’ existing fence is in poor shape, resulting in trespass cattle and hunting. He has worked with CEHMM in developing a rotational grazing program with deferred pastures. This property is in CHAT 1 for LPC.
- Running N Interior Fence:** One and a half miles of interior fencing is intended to divide up a large pasture; watering facilities are already in place for rotational grazing. The conservation measure to be met is “improving habitat and increasing populations by coordinating vegetation treatments with ongoing activities.” Mr. Peterson (ranch manager) has worked with CEHMM and BLM in developing a rotational grazing program with deferred pastures. There are both historic and active leks on this property.
- Dave Thomas Water #3:** Installation of a pithouse, submersible pump, pitless adapter and a pressure tank will be installed on the ranch. Additionally, a 75-foot electric line for the pump will be installed and buried. Adding 1.75 miles of pipeline to an existing tank will allow Mr. Thomas the ability to improve upon his grazing system as his watering facilities have historically been limiting. The conservation measure to be met is “improving habitat and increasing populations by coordinating vegetation treatments with ongoing activities”. Mr. Thomas is making diligent efforts to improve upon his management by entering into programs with NRCS for managed grazing and concurrently working with CEHMM on grazing plans. Mr. Thomas has active leks on this property.
- Dave Thomas Boundary Fence:** Six and a half miles of boundary fence will be removed, disposed of properly and replaced with wildlife friendly fencing. The conservation measure to be met is “improving habitat and increasing populations by coordinating vegetation treatments with ongoing activities.” Mr. Thomas is making diligent efforts to improve upon his management by entering into programs with NRCS for managed grazing and concurrently working with CEHMM on grazing plans. Mr. Thomas has active leks on this property.

- **Smith Ranch Water:** Mr. Smith has a 500-acre pasture separated from the rest of his operation due to a highway with no water facilities. A 1.1-mile pipeline will be installed under the highway to this pasture with Mr. Smith supplying the tank with escape ramps. This watering facility will allow Mr. Smith to use this pasture as “shinnery free” during spring grazing rotation; this will take pressure off of his other pastures. This ranch has both DSL and LPC populations. The conservation measure to be met is “improving habitat and increasing populations by coordinating vegetation treatments with ongoing activities.” Mr. Smith is working with CEHMM personnel on a grazing plan.
- **Kelly James Wildlife Water:** Mr. James has one 10 section pasture on his ranch (state, federal and deeded) that is watered by two sources. A wildlife watering facility will be installed to allow ground water for LPC and other flora but will also be accessible to Mr. James for his cattle operation in drought conditions. Mr. James is working with CEHMM on his existing grazing management plan. His ranch is in the CMA and has historic leks. The conservation measure to be met is “improving habitat and increasing populations by coordinating vegetation treatments with ongoing activities.”
- **Audubon NM - Engaging Community in Conservation Education:** Audubon NM is focusing on education in the shortgrass prairie of eastern NM, targeting DSL and LPC. They will work with the school systems of Dora, Floyd, Elida, and Portales to establish a credited natural resource curriculum. Their plans are for two positions: coordinator and educator. Audubon and employees will also work with resource agencies and producers. This is a three-year program and the conservation measures to be met are multiple - preventing further habitat fragmentation for LPC and DSL.
- **NMACD - Support for Partner Biologists:** New Mexico Association of Conservation Districts has contracted with CEHMM for the assistance of two private land biologists on a part time basis. CEHMM will coordinate their efforts with these biologists in order to meet all conservation measures. This program will end in September 2017.
- **Pheasants Forever - Support for Partner Biologist:** Pheasants Forever (PF) has contracted with CEHMM for the assistance of one private lands biologist on a part time basis. CEHMM will coordinate their efforts with this biologist in order to meet all conservation measures. At this time, PF does not have an employee hired for this position.

#### Previously Funded/To be Completed projects are as follows:

- **Bud Bilberry Water:** Two-tenths of a mile of water pipeline and a 12-foot fiberglass drinker with a concrete access/escape ramp will be installed on the Bud Bilberry federal lease, which is located in the LPC core management area.
- **Grisham LPC:** Identification of the current and future conservation actions needed to preserve LPC populations in regard to land management practices and environmental variation will be studied. This study is being conducted by Dr. Blake Grisham of Texas Tech University. Dr. Grisham was granted an extension with the project culminating in December 2017.
- **LPC Research:** Consolidation of all historic New Mexico LPC data by Natural Heritage, including raw data yet to be validated or published, into an easily accessible database.
- **Riley Mesquite:** Aerial treatment is of 3,548.3 acres of mesquite. A breeding bird survey will be conducted prior to treatment in this area to ensure that there are no negative impacts to nesting birds. CEHMM will consult with the chemical company prior to spraying as to the condition of the mesquite.
- **Richardson Water:** The well was completed but produced saline water, which is unsuitable for livestock consumption. Subsequently, the well was capped and Mr. Richardson and CEHMM personnel are pursuing alternatives.

- **Bresenham Mesquite:** Aerial treatment is of 250 acres of mesquite. A breeding bird survey will be conducted prior to treatment in this area to ensure that there are no negative impacts to nesting birds. CEHMM will consult with the chemical company prior to spraying as to the condition of the mesquite.
- **TNC Mesquite Removal:** Removal of 1,720 acres of dead standing mesquite is to be completed on The Nature Conservancy ranch.
- **Pearce Water:** Two wells will be drilled. Six new storage tanks, seven solar pumps, and a half-mile of water pipeline will be installed. Four windmills will be removed. Work should commence in late 2016.
- **TNC Fence:** Replaced twenty-three miles of boundary fence.

**Table 3. Funded Projects 2016.**

<i>Project</i>	<i>Date Funded</i>	<i>Amount Funded</i>	<i>Units</i>
Bud Bilberry Boundary Fence	06/13/2016	\$32,438.38	1.5 miles
Luman Boundary Fence	06/13/2016	\$131,381.38	6.5 miles
G. Coombes Boundary Fence #2 Atlee	06/13/2016	\$115,201.88	6 miles
Running N Interior Fence	06/13/2016	\$26,715.52	1.5 miles
Dave Thomas Water #3	06/13/2016	\$27,658.67	1.75 miles pipeline, pit house
Dave Thomas Boundary Fence	06/13/2016	\$126,947.08	6.5 miles
Smith Ranch Water	06/13/2016	\$19,657.63	1.1 miles pipeline
Kelly James Wildlife Water	06/13/2016	\$20,641.34	1.25 miles pipeline, 1 wildlife water
Audubon NM-Engaging Community in Conservation	06/13/2016	\$440,000.00	N/A
NMACD-Support for Partner Biologist	06/13/2016	\$47,819.20	N/A
Pheasants Forever-Amended	06/13/2016	\$25,000.00	N/A
<b>2016 Funded Projects</b>		<b>\$1,013,461.08</b>	

## COMPLETED PROJECTS 2016

The following projects were completed in 2016 (Table 4, Figure 12):

- **Weaver Mesquite:** Mechanically removed 157.5 acres of mesquite in LPC habitat.
- **CCA/A Documentary:** Completed documentary by FWS on the New Mexico CCAs as an educational tool. This documentary highlighted the key habitats needed for the LPC and DSL, showed sites that have been restored, and outlined the benefits to the two species. The link to this documentary is <https://youtu.be/KVlfbJzZ2w0>.
- **LPC Research:** Consolidated all historic New Mexico LPC data by Natural Heritage, including raw data yet to be validated or published, into an easily accessible database.
- **Woody Water:** The following were installed and are in good working order: a solar pump, three 20-foot fiber-glass drinking tubs with ramps, two miles of pipeline, one storage tanks, and a new lid.

- **Mathis Water:** Installation of 1.1 miles of new pipeline and a 20-foot tank with escape ramp were placed on an abandoned well pad which allowed for better distribution of livestock grazing and more accessible water to wildlife.
- **Marjorie Williamson Water:** A new well house, major clean up on three watering facilities, two 20-foot fiberglass drinking tubs with escape ramps, a new pond, removal of old windmill tower and 2.2 miles of pipeline were all installed and are in good working order.

**Table 4. Completed Projects 2016.**

<i>Project</i>	<i>Date Funded</i>	<i>Project Cost</i>	<i>Units</i>	<i>Date Completed</i>
Weaver Mesquite	04/10/2012	\$52,098.88	157.5 acres	April 2016
CCA/A Documentary	02/07/2014	\$11,546.64	N/A	July 2016
Natural Heritage LPC	02/07/2014	\$41,389.99	N/A	January 2016
Woody Water	02/07/2014	\$90,721.68	1 solar, 3-12' tubs, 2 miles pipeline, 1 storage tank and new lid on old storage	September 2016
Mathis Water	08/19/2014	\$17,029.55	1.1 pipeline, 20' tub	February 2016
M. Williamson Water	08/19/2014	\$90,350.84	Well house, 2 20' tubs with ramps, new pond, tower down, major clean up, 2.4 miles of pipeline	March 2016
TNC Boundary Fence	08/19/2014	\$91,528.26*	23 miles boundary fence	*Project is complete but cost has not yet been finalized
M. Williamson Boundary Fence	08/19/2014	\$4,168.40*	16 miles boundary fence	*Project is complete but cost has not yet been finalized
<b>2016 Total</b>		<b>\$398,834.24**</b>		

\*\*May change once costs are finalized on two remaining projects

## MONITORING OF COMPLETED

In order to effectively administer the CCA/CCAAs, CEHMM implemented a Project Monitoring Plan to monitor current and past projects. CEHMM personnel monitored all past mesquite treatments, water projects, restoration and reseeding efforts, and fence developments to document project status and ensure that all projects are functioning properly. Records and photos are on file. If a problem (i.e., empty water trough) is noted during monitoring, a photo is taken and the producer is notified. CEHMM personnel will follow up to ensure that the issue is resolved.



**Figure 11: Completed boundary fence**

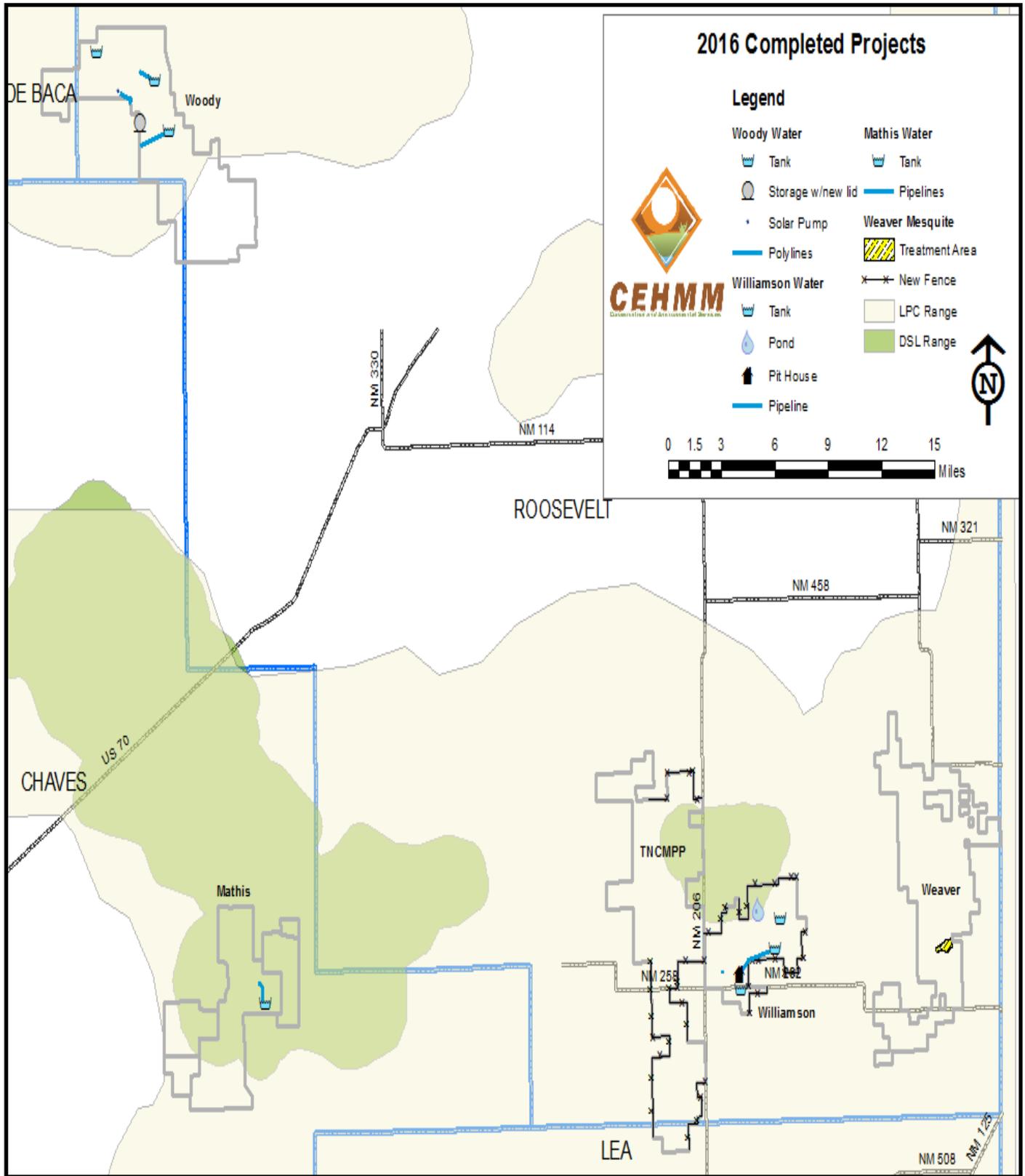


Figure 12: Completed projects 2016

## SPECIES MONITORING

In 2016, herpetologist Mike Hill conducted ten days of DSL walking surveys at four sites, all of which were within the current DSL polygon. Twelve DSLs were captured and photo vouchers were taken at these sites. During these surveys, Mike Hill also observed 136 lizards of four other species while performing the walking surveys: 82 Common Side-blotched Lizards (*Uta stansburiana*), 29 Lesser Earless Lizards (*Holbrookia maculata*), three Prairie Lizards (*Sceloporus consbrinus*), six Six-lined Racerunners (*Aspidoscelis sexlineata*), and sixteen unknown lizards.

Mike Hill conducted five days of DSL training with 14 CEHMM employees. The training included a class session which consisted of proper identification of suitable DSL habitat methods for identification of each species, proper handling techniques, and proper techniques for photo vouchers. The training also consisted of field work where Mike demonstrated proper capture techniques which included utilization of a noose and pitfall traps, proper handling, and photo voucher techniques. The training conducted was to ensure that CEHMM employees have the knowledge of proper handling techniques for trench monitoring and conducting pitfall traps.

CEHMM conducted 15 trap days utilizing pitfall traps (Figures 13, 16) in an attempt to locate DSL outside of the current DSL polygon. Forty-eight individuals were captured in the pit fall traps: 45 Common Side-blotched Lizards (*Uta stansburiana*), and three Marbled Whiptails (*Aspidoscelis marmorata*) (Figure 14).

CEHMM conducted 55 days of LPC road surveys on 29 CCA/CCAA ranches in March, April, May, June and October 2016. Road surveys are also known as listening surveys.



**Figure 14: Marbled Whiptail captured in pitfall trap**

The surveyor shut off the vehicle and stood outside of the vehicle listening for ten minutes at each stop. The surveyor collected the following data at each stop: survey area (ranch name), presence of LPC, direction LPC are located, time, temperature, wind speed, cloud cover, noise sources, noise levels, and other wildlife observed. At the end of ten minutes, the surveyor returned to the vehicle and drove one mile down the road and repeated the above protocol. Surveys were initiated thirty minutes prior to sunrise and concluded at 9 a.m. If wind speeds exceeded fifteen miles per hour the survey was concluded the following day. Winds at those speeds inhibit the surveyor from hearing the LPC and thus may produce false negatives for the area. In 2016, there were 344 stops made on 29 ranches. LPCs were heard on seventy-four stops on fifteen of the twenty-nine ranches and 137 LPCs were observed (Figures 15, 17).



**Figure 13: Pitfall trapping**



**Figure 15: LPCs.**  
Photo courtesy Grant Beauprez

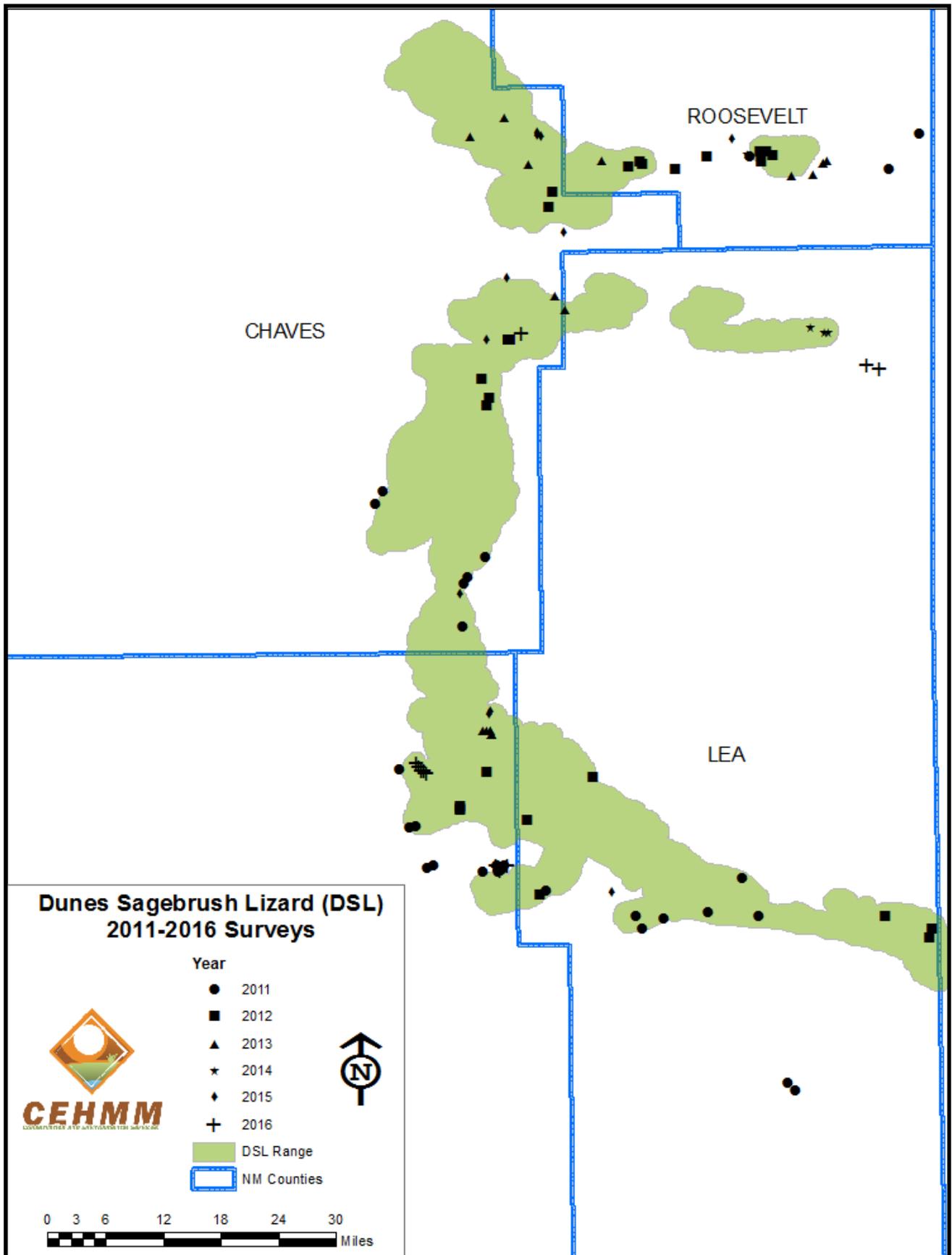


Figure 16: DSL surveys 2011-2016

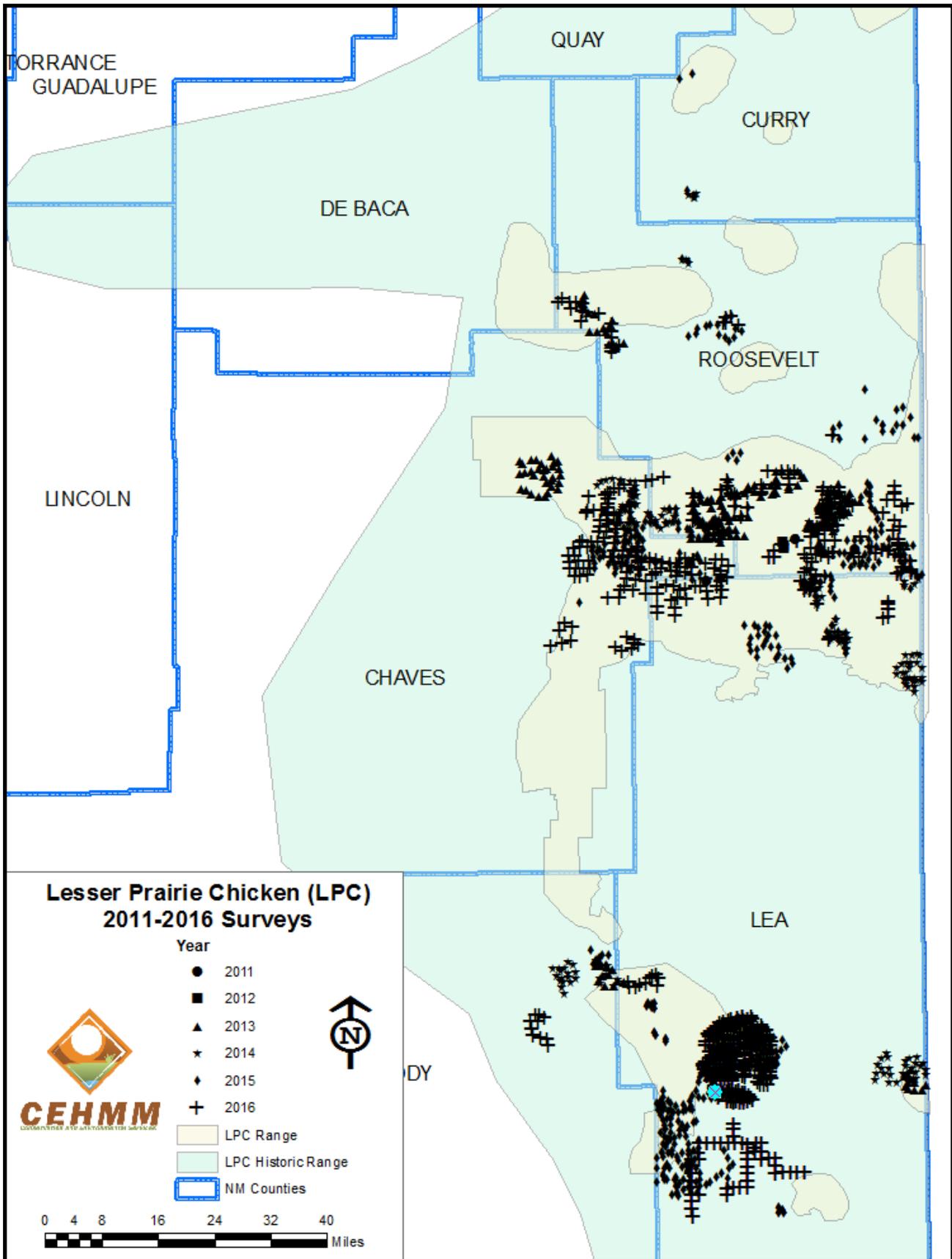


Figure 17: LPC surveys 2011-2016

## GRAZING MONITORING

Monitoring vegetative components of LPC habitat on livestock operations with acreage enrolled in the CCA and CCAA for LPC and DSL was a focal point for CEHMM in 2016. Conservation measures for grazing operations listed in each Certificate of Inclusion and Participation outline forage utilization and vegetation attribute goals and listed in the 2008 BLM RMPA and the Collaborative Conservation Strategies for the Lesser Prairie Chicken and Sand Dune Lizard in New Mexico (LPC/DSL Working Group, 2005). In order to assist Participating Cooperators with livestock grazing operations meet the goals listed in these documents, CEHMM continued to develop new forage utilization sites, began crafting a monitoring protocol to assess vegetative attributes listed in the aforementioned documents, and continued to work with livestock operators that have enrolled acreage in the program to develop grazing management plans geared toward creating and maintaining quality LPC and DSL habitat. In addition to habitat monitoring, U.S. HWY 380 was established as a boundary to establish two districts (District 1 is south and District 2 is north of the highway) with the intention of making monitoring efforts more efficient in terms of time and cost, and allowing CEHMM's range staff to spend more time with Participating Cooperators.

Ranchers with enrolled grazed acreage have agreed to a maximum forage utilization rate of 45 percent of the current year's growth by livestock on their operations as one of the conservation measures listed in their signed CIs and CPs. In 2015, CEHMM and partners including Participating Cooperators, the New Mexico Association of Conservation Districts, BLM, NRCS, and Pheasants Forever worked together to establish 188 sites to analyze forage utilization by livestock. Work continued by establishing 264 more sites in 2016 to monitor utilization. To date, 469 sites have been selected to monitor utilization on enrolled acreage in De Baca, Roosevelt, Chaves, Eddy, and Lea counties in New Mexico (Figure 19), including 17 sites already set up on The Nature Conservancy Milnesand Prairie Preserve. Achievement of this conservation measure allows residual forage to serve as cover for LPC from ground dwelling and aerial predators, provides thermal protection for nests, encourages vegetative reproduction of grasses prior to the New Mexico monsoon season, and improves soil quality by protecting it from wind erosion and helping retain soil moisture.



**Figure 18: Grazing enclosure**

Wildlife biologists from the New Mexico Association of Conservation Districts assisted CEHMM in developing a rangeland monitoring protocol to help Participating Cooperators work toward specific goals of vegetative attributes. Data will be collected for vegetative and rangeland components listed in the working group document and RMPA that are accepted as critical habitat components for conservation of quality LPC habitat. The data collected will also help CEHMM analyze trends in LPC habitat to determine improvement, static levels, or decline in habitat improvement.

Because of their integral role in the CCA and CCAA program, Participating Cooperators are encouraged to join CEHMM staff when monitoring. In addition to analyzing rangeland trends and LPC and DSL habitat quality, monitoring data will be, as it has been this year and in past years, to assist ranch owners and managers develop grazing management plans and identify range improvement projects that will improve habitat through adaptive grazing management, brush control, and other management decisions related to grazing operations. This year's success and amount of work that was completed would not have been possible without the help and contributions from all of the partners previously listed.



## CONSERVATION MEASURE VIOLATIONS

In 2012, CEHMM developed a formal notification for enrollees who violate their respective conservation measures. This action, referred to as a Conservation Measure Violation (CMV), is modeled after the BLM's Incident of Non-Compliance (INC). As defined in the Conservation Agreements, enrollees who fail to comply with their voluntary measures receive formal notification from CEHMM pursuant to the violation in the form of a CMV. Respondents to the CMV work with CEHMM biologists to provide corrective actions to the infraction in order to mitigate or abate negative impacts to either species. However, once an enrollee is issued three or more CMVs for infractions, they may lose their respective assurances or other programmatic warranties as provided in accordance with their CCA or CCAA. In 2016, CEHMM issued one CMV for infractions by a company that was conducting 24-hour drilling activities during the LPC timing stipulations. The company shut down their activity until after June 15 to comply with their Conservation Measures. Five wells were found to be exceeding the 75 decibal noise level requirements while CEHMM was conducting LPC surveys. The companies were given ten working days to remedy the violation. All wells were corrected by the companies.

An example of a CMV is included as Appendix F.

## CEHMM UPDATES

CEHMM has opened a new field office, which will be the headquarters for District 2 Conservation operations. The address is 03 NM 258, Milnesand, NM 88125.

CEHMM has created a Facebook page that contains regular updates on the CCA/CCAAs. The site can be visited at [www.facebook.com/centerofexcellence](http://www.facebook.com/centerofexcellence).



Figure 20: District 2 field office

## SUMMARY

To date, a total of 1,946,908 acres of rangeland have been enrolled in the CCA/CCAA. A total of 1,966,883 acres of leased land in LPC and DSL habitat have been enrolled by oil and gas companies to date. In 2016, CEHMM completed eight projects, which included the following: mesquite mechanical removal of 157.5 acres, CCA/CCAA documentary, conversion of one windmill to a solar pump, six new water troughs with escape ramps, replacement of thirty-nine miles of fence with wildlife friendly fence, installation of 5.5 miles of water line, and drilling of a new water well.

## LITERATURE CITED

- Boogie, M., C.R. Strong, D.L. Lusk, S.A. Carleton, R.L. Howard, C. Nichols, M. Falkowski, and C. Hagen. In press. Impacts of mesquite distribution on lesser prairie-chicken season space use. *Journal of Rangeland Ecology and Management*, Grouse Special Issue.
- Bureau of Land Management. 2008. Special Status Species Proposed Resource Management Plan Amendment/ Final Environmental Impact Statement. Volume 1, November 2007. Pecos District Office, Roswell, NM.
- Di Sylvestro, R. 2007. Drinking on the Fly. *National Wildlife Magazine*. 6-01-2007.
- Grisham, B.A., P.K. Borsdorf, C.W. Boal, K. K. Boydston. 2016. Nesting ecology and nest survival of lesser prairie-Chickens on the Southern High Plains of Texas. *Journal of Wildlife Management* 78: 857-866.
- New Mexico LPC and DSL Working Group. 2005. Collaborative Conservation Strategies for the Lesser-Prairie Chicken and Sand Dune Lizard in New Mexico. Findings and Recommendations of the New Mexico LPC and DSL Working Group. August 2005.
- U.S. Fish and Wildlife Service. 2008. Candidate Conservation Agreement for the Lesser Prairie Chicken (*Tympanuchus pallidicinctus*) and Sand Dune Lizard (*Sceloporus arenicolus*) in New Mexico.

**APPENDIX A**  
**CCA Habitat Restoration Program Project Proposal Form**  
**Candidate Conservation Agreement Habitat Restoration Program**  
**Project Proposal Form**

Participant's Name: \_\_\_\_\_

Project Name: \_\_\_\_\_

Address: \_\_\_\_\_

Phone: \_\_\_\_\_

Number of acres included in project area: \_\_\_\_\_

Is participant enrolled in the CCA/CCAA (20 point bonus)? Project must be completely on enrolled lands to receive the entire bonus: \_\_\_\_\_

Estimated cost of project (Provide detailed budget utilizing CEHMM's budget template)

Project Overview/Narrative:

Project Duration:

Species that will benefit from project:

Dunes Sagebrush Lizard: YES \_\_\_\_\_ NO \_\_\_\_\_ How?

Lesser Prairie Chicken: YES \_\_\_\_\_ NO \_\_\_\_\_ How?

How will the project restore missing habitat components for feeding, breeding, shelter or water for the species?

Explain how/if the project is a component of an overall restoration plan or objective?

Does the proposal include surveying the project area for lizards or chickens, or are surveys already being conducted for each species in the project area? Explain.

Is the project in the Core Management Area (CMA) or Primary Population Area (PPA)? Provide map of project in relation to RMP Zones.

Is the project in a Habitat Evaluation Area (HEA)? Provide map of project in relation to RMP Zones.  
Is the project within the CHAT Focal Habitat zone habitat area? Provide map of project in relation to CHAT Zones.

Is the project within the CHAT connectivity zone habitat area? Provide map of project in relation to CHAT Zones.

Is project within three miles of an unoccupied historic lek? Provide map of project in relation to unoccupied historic leks.

Is project within three miles of an active lek? Provide map of project in relation to active leks.

Is project within the BLM DSL polygon? Provide map of project in relation to DSL habitat.

Will project remove infrastructure from suitable or occupied dune complexes? Explain.

Will project restore or create shinnery oak dunes? Explain.

Explain how project will remove invasive weeds or brush to increase beneficial plant species?

Will grazing be deferred for at least two consecutive growing seasons as part of a grazing management system for the property? Explain.

Will there be a Private, Federal or State cost share match (i.e., an NRCS grant)? Explain.

How many years will the project be maintained? How will maintenance occur?

Is the project within five miles of another restoration project for either species? Provide map of project in relation to other restoration projects.

If applicable, explain how the project will provide connectivity between two habitat patches for either species.

Will the project remove power lines, poles, or other vertical structures (> 15ft. tall) within three miles of an active lek?

Will the project remove fences, roads and pads and reduce habitat fragmentation?

Please provide a map to the proximity of the project to known locations of either species.

Does the project include re-introducing the species to the project area? If so, please include the following:

- Game and Fish permit for trapping and releasing
- Approved plan for relocating the species onto the property

*Both the preparer of the above proposal and the Participator agree to the terms of the project proposed within the attached proposal. Participator is aware that the proposal will be submitted to the CCA/A Ranking Team for review. Participator will be notified in writing by CEHMM upon acceptance or rejection of the proposed project. Upon acceptance, Participant will be required to sign a Project Agreement with CEHMM, detailing all aspects of the accepted project. Additional projects requested by Participator will be addressed by submission of a new project proposal to the CCA/A Ranking Team.*

Proposal Preparer: \_\_\_\_\_ (signature) \_\_\_\_\_ (date)

Landowner/Operator: \_\_\_\_\_ (signature) \_\_\_\_\_ (date)

**APPENDIX B**  
**CCA Habitat Restoration Program Ranking Criteria**  
**Candidate Conservation Agreement Habitat Restoration Program**  
**Ranking Criteria**

<b>Participant Name:</b>	<b>Enrolled in CCAA/CCA? (YES) (NO)</b>	
<b>Project Name:</b>	<b>Number of acres to be treated?</b>	
<b>Address:</b>	<b>Evaluator Name:</b>	
<b>Criteria</b>	<b>Max. Points</b>	<b>Score</b>
<b>1. Does project benefit Dunes Sagebrush Lizard?*</b>	10	
<b>2. Does project benefit Lesser Prairie Chicken?*</b>	10	
<b>3. Will the project restore missing habitat components for feeding, breeding, shelter or water for the species?*</b>	10	
<b>4. Is project a component of an overall restoration plan or objective?*</b>	10	
<b>5. Are lizard surveys included in the project plans?</b>	5	
<b>6. Are prairie chicken surveys included in the project plan/ area?</b>	5	
<b>7. Is the project in the CMA or PPA?</b>	10	
<b>8. Is the project in an HEA?</b>	5	
<b>9. Is the project within the CHAT Focal Habitat Zone?</b>	10	
<b>10. Is the project within the CHAT connectivity zone habitat area?</b>	5	
<b>11. Is project within three miles of an unoccupied historic lek?</b>	5	
<b>12. Is project within three miles of an active lek?</b>	10	
<b>13. Is the project within the BLM DSL Polygon?</b>	10	
<b>14. Will project remove infrastructure from suitable or occupied dune complexes?</b>	10	
<b>15. Will project restore or create shinnery oak dunes</b>	10	
<b>16. Will project remove invasive weeds or brush to increase beneficial plant species?</b>	5	
<b>17. Will grazing be deferred for at least one year (12 consecutive months) as part of a grazing management system for the property?</b> <ul style="list-style-type: none"> <li>• &gt; 640 acres deferred in one year</li> <li>• 160 – 640 acres deferred in one year</li> </ul>	(10 point max) 10 5	
<b>18. 20 Point CCA/CCAA Enrollment Bonus if project is entirely on enrolled lands.</b>	20	
<b>19. There is a Private, Federal or State cost share or will be used to match an NRCS grant?</b>	5	
<b>20. Number of years project will be maintained (1 point/year)</b>	10 points max	
<b>21. Is the project within five miles of another resto-</b>	5	

<b>20.</b> Number of years project will be maintained (1 point/year)	10 points max	
<b>21.</b> Is the project within five miles of another restoration project for either species?*	5	
<b>22.</b> Will the project provide connectivity between two habitat patches?	10	
<b>23.</b> Will the project remove power lines, poles, or other vertical structures (> 15ft. tall) within three miles of an active lek?	5	
<b>24.</b> Will the project remove fences, roads and pads and reduce habitat fragmentation?*	5	
<b>25.</b> Does the project include re-introducing the species to the project area?	5	
<b>26.</b> Does the project provide a map showing known locations of either species?	5	
<b>Total</b>	<b>210</b>	

Does this project warrant funding? Yes or No. Explain

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Additional clarification for the following criteria:

1. In order to have a benefit for Dunes Sagebrush Lizards, there must be suitable or occupied lizard habitat in the project area. The project must provide a direct benefit to the species, such as the removal of a fence, power line, or road in a dune; removing fragmentation around dunes, rebuilding a shinnery oak dune, or directly removing one or more threats to the species.
2. In order to have a benefit for the Lesser Prairie Chicken, suitable or occupied (or historically suitable or occupied) habitat must be present in the project area. Project must provide a direct benefit to the species by increasing or creating suitable habitat, removing fragmentation, or directly removing one or more threats to the species.
3. There must be an explanation of the habitat components that will be restored. For example:
  - Native seed (sand bluestem, giant drop-seed, little blue stem, etc.) will be inter-seeded or re-seeded to provide cover and feeding areas for LPC chicks.
  - Project will turn unsuitable (bald) dunes into suitable shinnery oak dunes for lizards.
4. The project proposal should describe the overall restoration objective/goal for the project, and how this project will help to accomplish this goal.
16. Project must create a corridor between two habitat patches that have been disconnected by infrastructure or unsuitable habitat.
19. Must be part of a NMDGF permitted/approved reintroduction project for either species.

APPENDIX C

Candidate Conservation Agreement Program  
Research/Monitoring - Project Proposal Form

*Fully describe the project, benefits, and location (include a project map with lizard and chicken habitat, known leks, and lizard localities). Be specific.*

Participant's Name: \_\_\_\_\_

Project Name: \_\_\_\_\_

Address: \_\_\_\_\_

Phone: \_\_\_\_\_

Estimated cost of project: \_\_\_\_\_

Estimated cost of monitoring and surveys: \_\_\_\_\_

Complete Project Description (include a clear description of the proposed outcome or product):

Project Schedule:

Explain how research will provide information that will have a conservation benefit for either/both species:

Dunes Sagebrush Lizard: YES \_\_\_\_\_ NO \_\_\_\_\_ How?

Lesser Prairie Chicken: YES \_\_\_\_\_ NO \_\_\_\_\_ How?

Explain how/if the project is a component of an overall research plan or objective.

Does the proposal include surveying for lizards or chickens, or are surveys already being conducted for each species in the project area? Explain.

Is the project within the CHAT Focal Habitat zone habitat area? Provide map of project in relation to CHAT Zones.

Is the project within the CHAT connectivity zone habitat area? Provide map of project in relation to CHAT Zones.

Is project within the BLM DSL polygon? Provide map of project in relation to DSL habitat.

Will there be a Private, Federal or State cost share match? Explain.

Explain how this project will coordinate with State/Federal agencies and other partners to accomplish common research goals.

Does the project include captive rearing or re-introduction of the species? If so, please include the following:

- Game and Fish permit
- Approved plan for rearing or relocating the species

Attach a detailed budget utilizing CEHMM's budget template.

*Both the preparer of the above proposal and the Participator agree to the terms of the project proposed within the attached proposal. Participator is aware that the proposal will be submitted to the CCA/A Ranking Team for review. Participator will be notified in writing by CEHMM upon acceptance or rejection of the proposed project. Upon acceptance, Participant will be required to sign a Project Agreement with CEHMM, detailing all aspects of the accepted project. Additional projects requested by Participator will be addressed by submission of a new project proposal to the CCA/A Ranking Team.*

Proposal Preparer: \_\_\_\_\_  
(signature)

\_\_\_\_\_  
(date)

Participator: \_\_\_\_\_  
(signature)

\_\_\_\_\_  
(date)

**APPENDIX D**

**Candidate Conservation Agreement Program  
Ranking Criteria for Research/Monitoring Projects**

<b>Participant Name:</b>	<b>Address:</b>	
<b>Project Name:</b>		
<b>Evaluator Name:</b>	<b>Total Score:</b>	
<b>Criteria</b>	<b>Max. Points</b>	<b>Score</b>
1. Does project benefit Dunes Sagebrush Lizard?*	10	
2. Does project benefit Lesser Prairie Chicken?*	10	
3. Will the project provide necessary information for conservation of either species?*	10	
4. Is project a component of an overall research plan or objective?	10	
5. Are lizard surveys/monitoring included in the project plan?	10	
6. Are prairie chicken surveys /monitoring included in the project plan?	10	
7. Is the project within the CHAT Focal Habitat Zone?	10	
8. Is the project within the CHAT connectivity zone habitat area?	5	
9. Is the project within the BLM DSL Polygon?	10	
10. Does the proposal define a clear outcome or product?	10	
11. Does the proposal include a timeline in which work will be completed?	10	
12. Will it provide information that is necessary to make conservation decisions?	10	
13. Is the proposal included in the CCAA Research Priority List?	10	
14. Is there a cost share provided?	10	
15. Does the proposal include partnership and coordination with agencies and NGO's?	15	
16. Is there a detailed budget included?	10	
<b>Total</b>	<b>160</b>	

Does this project warrant funding? Yes or No. Explain. \_\_\_\_\_

\*Additional clarification for the following criteria: \_\_\_\_\_

1. In order to have a benefit for Dunes Sagebrush Lizards, there must be suitable or occupied lizard habitat in the project area. The project must provide a direct benefit to the species, such as the removal of a fence, power line, or road in a dune; removing fragmentation around dunes, rebuilding a shinnery oak dune, or directly removing one or more threats to the species.
2. In order to have a benefit for the Lesser Prairie Chicken, suitable or occupied (or historically suitable or occupied) habitat must be present in the project area. Project must provide a direct benefit to the species by increasing or creating suitable habitat, removing fragmentation, or directly removing one or more threats to the species.
3. The project proposal should describe the overall objective/goal for the project, and how this project will help to accomplish this goal.



## **Frequently Asked Questions from the Oil and Gas Industry Lesser Prairie-Chicken & Dunes Sagebrush Lizard Candidate Conservation Agreement (CCA) & Candidate Conservation Agreement with Assurances (CCAA)**

### **Why are we doing this?**

One of the primary reasons the U.S. Fish and Wildlife Service (USFWS) and Bureau of Land Management (BLM) developed the Candidate Conservation Agreement (CCA) and Candidate Conservation Agreement with Assurances (CCAA) is to address concerns by land owners and federal lease holders about the potential regulatory implications of having a species listed under the Endangered Species Act (ESA) on their land or mineral lease.

If enough existing conservation measures are being implemented prior to a listing decision, increased regulation for protecting the species might be unnecessary. These agreements allow for voluntary participation by those whose operations would likely be impacted if the lesser prairie-chicken (LPC) or dunes sagebrush lizard (DSL, sand dune lizard) were to be listed under the ESA. Although the USFWS cannot guarantee that listing will not occur, the CCA/CCAA seeks to implement conservation measures which could preclude the need to list the LPC and DSL. The decision to list is a regulatory process and conservation agreements cannot predetermine the outcome. The actions and successes of this tool will be evaluated in accordance with USFWS Policy for Evaluation of Conservation Efforts (2003) during the listing process. This will then be factored into the five-factor analysis of the listing decision.

### **What is the CCA, and why do I need it?**

The CCA is an agreement between the USFWS, BLM, and Center of Excellence (CEHMM) for actions (such as oil and gas development and livestock grazing) occurring on lands or minerals administered by BLM. The Participating Cooperator (rancher or oil and gas producer) can volunteer to join the Agreement through a Certificate of Participation (CP). Participation in the CCA provides a high level of certainty that if the Cooperator implements conservation activities in their CP, they will not likely be subject to additional restrictions if LPC and/or DSL become listed under the ESA.

### **What is the CCAA, and why do I need it?**

The Candidate Conservation Agreement with Assurances (CCAA) is an agreement similar to the CCA that applies to non-federal lands and minerals. The land user (land owner or lessee) can volunteer to join the Agreement through a Certificate of Inclusion (CI). Participants agree to help reduce threats to candidate species by following the conservation measures in their CI. In return, they receive assurances that they will not be subject to additional restrictions if LPC and/or DSL become listed under the ESA.

### **What is the difference between a CCA and CCAA?**

In practice, there are few differences between the two Agreements. However, legally, the main difference is that participants in the CCAA receive “Assurances” that their operations will not be affected by a listing decision and participants in the CCA receive a “high degree of certainty” that operations will not be affected. The goal of the program is to implement conservation measures across the landscape in a consistent manner that improves the status for both LPC and DSL. CCA Certificates of Participation (CP) are signed and agreed on by both permittee (oil and gas or rancher) and BLM. CCAA Certificates of Inclusion (CI) are signed and agreed on by landowner/lessee.

### **How will I know if I have lesser prairie-chicken or dunes sagebrush lizard habitat on my property/lease?**

Lesser prairie-chickens can be found in shinnery oak, sand sage and bluestem prairies. Dunes sagebrush lizards can be found in shinnery oak sand dunes. When agency staffs are working with an interested party, they will utilize available location data to determine if the lease in question contains suitable habitat for either species.

### **Do I need to participate if I do not have lesser prairie-chicken or dunes sagebrush lizard habitat?**

No.

### **If the species gets listed, will it only affect activities on federal lands or minerals?**

No! If a species gets listed, it is listed and protected on all land ownerships (federal, state, and private).

### **Can I sign up state or private land that I am leasing?**

Yes. A “Participating Landowner” is defined in 50 CFR § 17.3 as a person with a fee simple, leasehold, or property interest, or any other entity that may have a property interest sufficient to carry out the proposed management activities.

### **What if I want to discontinue participation?**

The CCA and CCAA are voluntary agreements, so participants can choose to cancel enrollment at any time. If a participant chooses to cancel their agreement, the enrolled lands would no longer be covered if either species is listed under the Endangered Species Act.

### **What are the practices I would have to implement?**

A standard set of conservation measures were established in the BLM’s 2008 Special Status Species Resource Management Plan. Operators of Federal leases are already familiar with these stipulations/conditions of approval.

### **Where will my contributed funds go?**

Funds are sent to CEHMM, whose role is defined at the end of these FAQs. Projects and priorities are set by a team of biologists from CEHMM, the USFWS, NM Game & Fish Department, NM State Land Office, and BLM. CEHMM is responsible for implementing (contracting), monitoring and reporting on projects.

### **What are the advantages of a participant?**

If listing were to occur, Participating Cooperators would only be delayed about one to two months while the USFWS consultation on the Agreement (CCA/CCAA) is adopted as their final “opinion.” At that period, the companies could continue their operations. For those who have not participated, a delay up to three years would be anticipated on their permits since they will require analysis for impacts to the species. There could even be a situation where a permit would not be approved. An additional advantage to participating is that once the USFWS issues a final “opinion” of the Agreement, a provision for incidental take will be included. Without a Certificate, an operator, whether on federal or non-federal lands, would not have protection from take.

### **What is “take?”**

The ESA prohibits the take of endangered and threatened species without special exemption. “Take” is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such con-

conduct. Harm is further defined by the FWS as an act which kills or injures wildlife and may include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Harass is defined by the FWS as intentional or negligent actions or omissions which create the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding or sheltering.

**I have an approved APD for federal minerals, but have not drilled it yet. If the species gets listed before I drill the well, do I have to wait until an Endangered Species Act Consultation is completed?**

You will not have to delay new development if the APD is located on a lease enrolled in a Certificate. If the federal lease has not been enrolled, the action would have to go through formal consultation under the Endangered Species Act prior to new activities beginning.

**How long do I contribute funds?**

The Participating Cooperator will provide funds over a three-year period that begins with the execution of their Certificate.

The Participating Cooperator will make the first payment into the Habitat Conservation Fund Account at the date of execution of their Certificate. The second and third payments will be made on the first and second anniversary of the execution date of the Certificate. For each of the three years, the annual prepayment will be calculated at \$2 per gross acre for all parcels enrolled in the Certificate, with a minimum of \$20,000 deposited each year.

The Participating Cooperator may, at their sole option, pay more than the required amount into their Habitat Conservation Fund Account during any prepayment period but never less than the required amount of \$20,000 per year for the three-year period.

Prepayment of any new federal parcels added by addendum to a Certificate will be calculated at \$2 per gross acre and be due at the time the parcels are added to the Certificate. The total acreage enrolled in a Certificate, and the resulting annual prepayment, will be recalculated on the remaining anniversary dates of the three-year cycle.

**Where do I send the contributed funds?**

The Participating Cooperator will remit the Habitat Conservation Fee to CEHMM. CEHMM will maintain the funds in a Habitat Conservation Fund Account specific to each Certificate. The purpose of the Habitat Conservation Fund Account is to meet the Participating Cooperator's obligations under the CCA.

**Will activities not covered by a certificate be allowed to continue during the Section 7 consultation?**

No. Section 7 consultation only occurs after a species is listed for new activities that require a federal permit and would result in take. Those activities cannot begin until the consultation process is complete. However, a benefit of having a Certificate is that analyses will have already been performed, meaning an opinion has already been issued and Section 7 consultation would be unnecessary. Only projects addressed in the Certificate would be able to begin without consultation.

Properties without a Certificate in effect will require some level of consultation with the USFWS before the project begins. For any new actions on federal lands, Section 7 interagency consultation is the process. For any new actions on non-federal lands, the owner/lessee would need to contact the USFWS to address potential take issues from the operation through the Section 10 process before the project begins.

### **Cite the exact wording in the regulations for “Assurance” under a CCAA.**

Federal Register / Vol. 64, No. 116 / Thursday, June 17, 1999 / Notices/ Announcement of Final Policy for CCAA: On June 12, 1997, the Services issued a draft policy (62 FR 32183), and the FWS issued proposed regulations to implement the policy (62 FR 32189). Under the policy, non-federal property owners, who enter into a Candidate Conservation Agreement with Assurances that commit them to implement voluntary conservation measures for proposed or candidate species, or species likely to become candidates or proposed in the near future, will receive assurances from the Services that additional conservation measures will not be required and additional land, water, or resource use restrictions will not be imposed should the species become listed in the future. These assurances will be provided in the property owner’s Agreement and in an associated enhancement of survival permit issued under section 10(a)(1)(A) of the Act. This policy was effective July 19, 1999.

### **If we get “Assurances” under a CCAA, what do we receive under a CCA?**

Participants in the CCA receive a “high degree of certainty” that additional measures would not be required of Participating Cooperators. Should listing occur, the Conference Opinion for the agreement and associated incidental take statement would be adopted as a Biological Opinion if no significant new information is developed that would alter the content or determinations of the Conference Opinion. Having a robust CCA is the key to having a high degree of certainty that changes in activities or circumstances on federal lands would only be necessary if unanticipated and unusual circumstances develop that are not adequately addressed by the CCA.

### **What other requirements are included in my certificate?**

Besides contributed funding, terms of individual Certificates will be tailored to the Participants and specific parcels being enrolled. For projects involving federal minerals, many of the conservation measures are already applied as lease stipulations or conditions-of-approval for the permitted activity. Examples include planning locations to avoid sensitive habitats (e.g., staying out of dune complexes of dunes sagebrush lizards), routing infrastructure in corridors, and avoiding construction/drilling activities during the breeding season of the lesser prairie chicken. Other conservation measures are designed to further enhance or protect habitat as necessary on a case-by-case basis.

### **If I contribute funds, are the funds used for habitat improvement on my lease?**

Not necessarily. The funds will be used to complete the highest priority projects that benefit the species. Projects are identified and prioritized by the interagency team. CEHMM is responsible for keeping the list of prioritized projects for implementation.

### **What types of projects will be completed with the contributed funds?**

Specifically for LPC, projects would include invasive brush control, removal of abandoned structures, marking fences in order to minimize collisions, installing wildlife escape ramps in water troughs, and removing caliche from abandoned roads and well pads (where there is no responsible party).

### **Could an enrolled lease increase its value if I choose to sell the lease?**

While this is not the intent of the CCA/CCAA, it is possible because the new lessee/operator will retain the benefits of the agreement if the species is listed under the Endangered Species Act. Without a Certificate, new actions that would impact the species would require consultation with USFWS.

### **If we wait until right before the species is listed, can I come in at the last minute and sign up?**

Probably. However, the goal is to accomplish enough conservation to prevent the listing of the species. Waiting will only reduce the amount of time to implement conservation measures and will offer little to preclude the need to list. Furthermore, if you wait to come in at the last minute, you may not be able to get your leases signed up

since Certificates will be processed on a first-come-first-served basis and priority will be placed on proposed enrollments that best benefit the two species.

**If I have leases I want to consider signing up, but I'm not sure it is in candidate species habitat, how do I know?**

Agency specialists will meet with you and look at your specific lease(s) to determine if they are in candidate species habitat. If you are not, they will tell you that a certificate is not necessary.

**Is the cost the same for a Certificate of Inclusion (CI) on state or private lands as it is on federal lands?**

Yes. The goal is to approach conservation for LPC/DSL across all ownerships in the same manner since the primary goal of the agreements is to guide conservation measures and efforts that will make listing unnecessary.

**Can I cancel my Certificate at any time I want?**

Yes. However, by cancelling the Certificate, the enrolled lands would no longer receive the benefits described in the agreement.

**What is the risk of not participating?**

Permits for actions proposed on federal lands or minerals (actions that require a federal permit) that were approved prior to a listing decision become void where the proposed action would have an effect on the newly listed species. If there will be no impacts to the species or its habitat, the permit would not be affected. However, if impacts are anticipated, Section 7 interagency consultation between BLM and USFWS is required. Due to limited staffs and an anticipated abundance of applications that require consultations, this process may cause a significant delay in processing new permits. The benefit of participating is that a pre-listing consultation occurs as part of the enrollment process, resulting in the issuance of a Biological Opinion as a part of the Certificate. If a listing decision occurs, the Conference Opinion is then converted into a Biological Opinion, which is expected to take only 30-60 days. The risks of not participating include not knowing how long the consultation process will delay future development of the lease, and the risk of increased regulation, which may not allow the proposed action at all. Enrollment in the appropriate Agreement can highly reduce or eliminate these risks based on the agreement.

**If I participate, can I locate wells on my lease where I want to?**

If a proposed surface disturbing activity conflicts with the conservation goals for the lease, the proposed activity will have to be modified to avoid impacts to the species.

**Who is CEHMM?**

The Center of Excellence for Hazardous Materials Management (CEHMM) was established in May of 2004 as a 501 (c)(3) organization dedicated to the research, development, and implementation of environmentally sound programs. Since its inception, CEHMM has identified and pursued applied research projects that have nation-wide impact and are innovative, meaningful, and practical. CEHMM has created a wide range of cutting edge applied research programs including developing technology for using algae for biofuels, biomonitoring for the H5N1 (avian influenza) and West Nile viruses, and cooperative conservation of species listed as "warranted but precluded" on the federal endangered species list. CEHMM has had swift advances in these projects due to the varied talents of the CEHMM staff and directors, and the organization's success in developing strong partnerships with universities, national laboratories, and private industry.

## What is CEHMM's role?

CEHMM's role is to:

- implement and administer the Agreements;
- enroll participants in the program;
- provide technical assistance to participants;
- conduct compliance reviews of projects being implemented by participants;
- utilize contributed funds to contract and inspect projects;
- monitor projects using existing agency protocols in order to determine success and adaptations needed;
- conduct outreach and public education efforts to promote the conservation of both species;
- secure permission to complete projects on private and state lands;
- lead annual meetings with the USFWS, BLM, NMDGF, and interested participants to review progress from the previous year;
- seek potential solutions for factors that hamper conservation of LPC/DSL, and future projects;
- track expenditure of funds and prepare an annual report on implementation of projects;
- use no more than 10 percent of contributed funds for administrative responsibilities under the agreements;
- maintain a digital photo database to document project performance; and
- conduct audits annually, at CEHMM's expense.

## The following Conservation Measures are to be accomplished in addition to those described in the CCA:

1. To the extent determined by the BLM representative at the Plan of Development stage, all infrastructures supporting the development of a well (including roads, power lines, and pipelines) will be constructed within the same corridor.
2. On enrolled parcels that contain inactive wells, roads and/or facilities that are not reclaimed to current standards, the Participating Cooperator shall remediate and reclaim their facilities within three years of executing this CP, unless the Cooperator can demonstrate they will put the facilities back to beneficial use for the enrolled parcel(s). If an extension is requested by the Cooperator, they shall submit a detailed plan (including dates) and receive BLM approval prior to the three-year deadline. All remediation and reclamation shall be performed in accordance with BLM requirements and be approved in advance by the Authorized Officer.
3. Allow no new surface occupancy within 30 meters of areas designated as occupied or suitable, unoccupied DSL dune complexes, or within delineated shinnery oak corridors. The avoidance distance is subject to change based on new information received from peer reviewed science.
4. Utilize alternative techniques to minimize new surface disturbance when required and as determined by the BLM representative at the Plan of Development stage.
5. Provide escape ramps in all open water sources under the Participating Cooperator's control.
6. Install fence markings along fences owned, controlled, or constructed by the Participating Cooperator that cross through occupied habitat within two miles of an active LPC lek.
7. Bury new power lines that are within two miles of LPC lek sites active at least once within the past five years (measured from the lek). The avoidance distance is subject to change based on new information received from peer reviewed science.
8. Bury new power lines that are within one mile of historic LPC lek sites where at least one LPC has been observed within the past three years (measured from the historic lek). The avoidance distance is subject to change based on new information received from peer reviewed science.
9. Limit seismic exploration to areas outside of occupied and suitable shinnery dune complexes to protect dunes sagebrush lizard habitat.
10. Submit a routine monitoring and schedule of inspection for oil, gas and produced water pipelines and facilities to ensure accidental pollution events are avoided in sensitive habitats for dunes sagebrush lizard.

## Contributed Funds

The Habitat Conservation Fee for new surface disturbance associated with oil and gas development activities will be calculated using the following scales.

The scales also apply to third parties doing work for the Participating Cooperator either on or off the Participating Cooperator’s enrolled parcels, regardless of who constructs or operates the associated facilities. The Participating Cooperator must notify BLM prior to conducting any surface disturbing activities associated with this CP on or off the enrolled leases either by the Cooperator or third-party subcontractors. The Habitat Class of the new surface disturbance is determined by the location of the activity being developed, not the actual habitat found on site.

**1). New Well Location Fees<sup>1</sup>**

<u>Habitat Class</u>	<u>Conservation Fee</u>
Primary Population Area	\$20,000/location
Core Management Area	\$20,000/location
Habitat Evaluation Area	\$15,000/location
Scarce & Scattered Population Area	\$12,500/location
Isolated Population Area	\$10,000/location
Other areas <sup>2</sup>	\$ 3,000/location

<sup>1</sup> Includes well pad and associated access road

<sup>2</sup> Includes areas outside the RMPA planning area boundary but within historic range of LPC in New Mexico.

**2). New Surface Development Fees**

For other new surface disturbances associated with enrolled parcels, but not directly attributable to a new well pad<sup>3</sup> and associated road, the Habitat Conservation Fee will be based on the following scale:

<u>Habitat Class</u>	<u>Conservation Fee</u>
Primary Population Area	\$5,000/acre
Core Management Area	\$5,000/acre
Habitat Evaluation Area	\$3,750/acre
Scarce & Scattered Population Area	\$3,125/acre
Isolated Population Area	\$2,500/acre
Other areas <sup>4</sup>	\$1,000/acre

<sup>3</sup> Co-located wells that require an increase in the size of the existing pad will be assessed by new acres disturbed.

<sup>4</sup> Includes areas outside the RMPA planning area boundary but within historic range of LPC in New Mexico.

Note: All acreage calculation will be rounded up to the next whole acre.

New operations on previously disturbed land (e.g., co-located new well on an existing pad or new pipeline in an existing corridor, etc.) will incur no additional conservation fee, unless the area to be re-disturbed has been reseeded and/or reclaimed as part of reclamation. Fees will also be assessed for any new acreage disturbed.

The disturbed area will be calculated based on information received and/or on-the-ground observation. Habitat Conservation Fees are based on the total acres disturbed in each appropriate habitat class. Should the Participating Cooperator disagree with the estimate of the area disturbed, they have the right to challenge the estimate and provide supporting data. BLM will have the responsibility for the final determination of the area disturbed.

All above ground power lines will have a fee calculated using the above scale for New Surface Development. The acreage will be based on information provided in the permit application.

Habitat Conservation Fees will not be charged for buried power lines or surface pipelines in accordance with the BLM 2008 Special Status Species Resource Management Plan Amendment (RMPA).

**3). Fees associated with new seismic data acquisition**

<u>Habitat Class</u>	<u>3D Survey Conservation Fee</u>	<u>2D Survey Conservation Fee</u>
Primary Population Area	\$ <u>10.00</u> /acre	\$ <u>200.00</u> /linear mile*
Core Management Area	\$ <u>10.00</u> /acre	\$ <u>200.00</u> /linear mile*
Habitat Evaluation Area	\$ <u>7.50</u> /acre	\$ <u>150.00</u> /linear mile*
Scarce & Scattered Population Area	\$ <u>6.25</u> /acre	\$ <u>125.00</u> /linear mile*
Isolated Population Area	\$ <u>5.00</u> /acre	\$ <u>100.00</u> /linear mile*
Other areas <sup>5</sup>	\$ <u>1.50</u> /acre	\$ <u>25.00</u> /linear mile*

\* or any fraction thereof

<sup>5</sup> Includes areas outside the RMPA planning area boundary but within historic range of LPC in New Mexico.

The acquisition of seismic data on enrolled parcels may also disturb the surface of other land not enrolled in this CP. The Habitat Conservation Fee calculated for seismic activity includes disturbances occurring on both enrolled and non-enrolled land.

**Routine production operations**

Routine production operations are not considered new surface development and will not create the obligations to pay a Habitat Conservation Fee. Routine production operations are those which do not require an agency permit or approval, and those operations that require an agency approval but do not disturb the surface.

APPENDIX F

Conservation Measure Violation

**Center of Excellence for Hazardous Materials Management (CEHMM)  
Notice of Conservation Measure Violation**

<i>Authorized Organization</i> CEHMM	<i>Operator/Landowner</i>	<i>CI/CP Number</i>
<i>Address</i> 505 N. Main Street Carlsbad, NM 88220	<i>Address</i>	
<i>Telephone</i> 575-885-3700	<i>Attention</i>	

<i>Well/Site Name</i>	<i>API Number</i>	<i>Unit/Lot</i>	<i>Section</i>	<i>Township</i>	<i>Range</i>	<i>County</i>	<i>State</i>
<i>Well/Site Name</i>	<i>API Number</i>	<i>Unit/Lot</i>	<i>Section</i>	<i>Township</i>	<i>Range</i>	<i>County</i>	<i>State</i>
<i>Well/Site Name</i>	<i>API Number</i>	<i>Unit/Lot</i>	<i>Section</i>	<i>Township</i>	<i>Range</i>	<i>County</i>	<i>State</i>

The following condition(s) were found by CEHMM on the date and at the site(s) listed above

<i>Date</i>	<i>Time (24-hour clock)</i>	<i>Inspector</i>	<i>Corrective Action to be Completed by</i>	<i>Date Corrected</i>

*Description of Conservation Measure Violation with Corrective Action:*

**When the Written Order is complied with, sign this notice and return to the above address.**

*Company Representative:* \_\_\_\_\_ *Title:* \_\_\_\_\_

*Address:* \_\_\_\_\_ *Phone:* \_\_\_\_\_

*Signature:* \_\_\_\_\_ *Date:* \_\_\_\_\_

*Company Comments:* \_\_\_\_\_

**Warning**

The Center of Excellence is providing notice of deficiency to the Participating Operator/Landowner and is giving them the opportunity to cure this deficiency. If the deficiency is not corrected, or due diligence is not being shown to correct the deficiency within sixty (60) days of the receipt of the letter, the parcel(s) involved will be terminated from this CI/CP. If Participating Operator/Landowner has three (3) deficiencies within 365 consecutive days (excluding deficiencies cured as stated above), the entire CI/CP will be terminated.

*Signature of CEHMM Authorized Officer* \_\_\_\_\_ *Date* \_\_\_\_\_